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Making Time for What Matters Most i3 Development Project: Year 5 Evaluation Report

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Tara Donahue, Ph.D.
Hsiang-Yeh Ho, Ph.D.
Ashli Knotts, M.A.

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For information about McREL's research, products, or services, contact

4601 DTC Boulevard, Suite 500 • Denver, CO 80237 • 303.337.0990 •fax 303.337.3005
1003 Bishop Street, Suite 2200 • Honolulu, HI 96813 • 808.664.8175 • fax 808.664.8190
P.O. Box 1348, Charleston, WV 25325 • 304.347.0400 • 800.624.9120 • fax 304.347.0487
23 Queensberry Street, Carlton, Victoria, Australia 3053 • 011.61.390237206 (from the U.S.)
info@mcrel.org • www.mcrel.org

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Executive Summary

In October 2010, Jefferson County Public Schools (JCPS) was awarded a four-year,[1] five-million dollar development grant by the U.S. Department of Education through the inaugural Investing in Innovation (i3) program competition. JCPS' project, *Making Time for What Matters Most,* aims to improve student achievement, narrow achievement gaps, strengthen students' college readiness skills, and increase the percentages of students who graduate and go on to college. In order to achieve these overarching aims, JCPS defined three goals: (1) provide structures and supports to facilitate student mastery of academic material and successful completion for all core courses in one year or less; (2) provide a range of personalized supports to students to increase engagement in school and promote college readiness; and (3) improve teachers' pedagogical and student support practices to maximize the effectiveness of increased learning time.

JCPS' district high school leadership selected six persistently low-performing high schools for the project: Academy @ Shawnee, Fern Creek Traditional High School, Moore Traditional High School, Valley Traditional High School, Waggener High School, and Western High School. These schools were chosen because they serve higher proportions of minority and economically disadvantaged students relative to both the county and district overall. For the 2014-2015 school year, a mean of 56% of the students attending the i3 schools were racial/ethnic minority students, compared to 48% of high school students across the district. All of the i3 schools are Title I schools with the exception of Fern Creek Traditional High School. In addition, across the i3 high schools, 71% of students were enrolled in the free and reduced-price meal (FRPM) program, ranging from 65% to 79%, compared to 55% of high school students across the district.

McREL International serves as the external evaluator for the JCPS i3 project and is conducting comprehensive, mixed-methods process and outcome evaluations. The evaluations being performed by McREL incorporate data from surveys, interviews, extant documents, and student education data. The process evaluation provides feedback to JCPS and the targeted schools to enable quality improvement, identify successes and challenges, and document the structures and processes related to project implementation. The outcome evaluation examines the impact of the intervention components or strategies on proximal, intermediate, and long-term student and school outcomes.

This report focuses on the Year 5 evaluation of the project, which occurred between October 1, 2014 and September 30, 2015. When appropriate, data reported in the evaluation reports for Years 1 through 4 (Nixon et al., 2012; Donahue, Fryman, Ho, & Stone, 2012; Donahue, Ho, Fryman, & Stone, 2013; and Donahue, Ho, Stone, & Lane, 2014) are presented to show the i3 program's progress toward the end-of-project targets, compared to progress made in those grant years. This Year 5 report (1) provides an overview of the project's goals and objectives; (2) describes the evaluation design and methods; (3) reviews the progress of Year 5 implementation

[1] In fall 2014, the U.S. Department of Education approved a no-cost extension to the project to extend it for a fifth year.

based on specific indicators; and (4) provides conclusions and recommendations for each project goal.

Year 5 Project Conclusions and Recommendations

Conclusions pertaining to the six i3 schools' overall performance on the objectives in Year 5 are organized around the project's three goals and are derived from analyses of data collected during the fifth year of the project. Recommendations for each goal are based on a review of the data and the conclusions. The recommendations are offered for JCPS staff to consider as they make determinations regarding the sustainment of project components once the grant ends.

Project Goal 1: Student Mastery of Academic Material

The first goal of the project is to provide structures and supports to facilitate students' mastery of academic material and successful completion of core courses in one year or less. Progress on this goal is measured through interviews with the counselors to learn how they assign students to appropriate classes. The percentage of students who pass the core courses in which they are enrolled each year is also analyzed by the evaluation team to determine progress on this goal. Additionally, teachers and students were asked questions regarding their perceptions of the scheduling process on surveys administered by the evaluation team.

Course Assignment Protocol and Monitoring of Progress. Counselors have developed processes in their schools for making student placement decisions, including visiting middle schools to work with incoming freshmen. To place upperclassmen, the counselors use a variety of resources, including classroom grades, assessment data, and students' abilities and interests.

The counselors monitor student progress by engaging with teachers and students, and in some cases, parents. Students may move into a more or less challenging course upon their request or based on a recommendation by a teacher or parent. Counselors will review all student data to ensure that the new placement best meets the needs of the student.

While counselors see the benefits of providing time for struggling students to make up credits, they also see disadvantages for both struggling and accelerated students, such as fewer class choices because of the five-period schedule rather than a typical seven-period schedule. There are concerns that struggling students take advantage of the opportunity to have multiple chances to pass a course. Although the trimester was described as "irrelevant" for advanced students by one counselor because they are primarily enrolled in year-long courses, another counselor was concerned that the trimester does not allow accelerated students the opportunity to take electives or career pathway courses. Based on the evaluation findings, McREL evaluators make the following recommendations:

- Request that counselors and other affiliated school personnel document their scheduling and monitoring processes. From these submissions, create a "Best Practices" resource

that will provide a multitude of ideas that schools can adapt to fit into their own contexts.

- Bring schools together to share their successes and challenges. During this time, have district staff present information on who can address questions that master schedulers and counselors may have that relate to scheduling (e.g., Infinite Campus) or student placement.
- Develop case studies of specific programs (e.g., Schools of Study) which may warrant further study and be of interest to the schools throughout the district.
- Have the counselors facilitate meetings with the faculty at their schools to learn more about why teachers indicated on the teacher survey that the schools may not always have the best placement strategies for students.
- Create time for school staff to discuss how the current scheduling process impacts both struggling and accelerated students as they were divided on whether the current processes benefitted these students. Listening to different perspectives may encourage and create new ideas that can benefit all students, regardless of their academic status.

Core Course Pass Rates. Overall, approximately 82% of i3 students passed their core courses. Across the subject areas, the pass rates were higher in English (86%) and social studies (84%) than in math (79%) and science (77%). Although student pass rates varied across different subjects and core courses, one school (i.e., Moore Traditional High School), in particular, had higher pass rates than did others. While the majority of schools struggled to meet the Year 5 targets, Moore Traditional High School exceeded the Year 5 target (1% above the target) in social studies and was only 0.6% shy of the science target.

Findings of subgroup analyses revealed that trimester scheduling seemed to have positive effects in English, math, social studies, and some sub-areas of science (i.e., life science and earth/space science) in comparison with the traditional two-term courses. Additionally, achievement gaps measured by course pass rates continued to be observed among the subgroups. In particular, female students had higher passing rates as compared to male students across all subject areas and across the majority of the core courses. Nevertheless, consistent with national trends, students from certain racial/ethnic (i.e., Black/African American) and socioeconomically disadvantaged (i.e., those with FRPM status) groups fell behind their counterparts. Such differences were more pronounced between White students and Black students and between students from middle- and upper-income families (i.e., students with paid meal status) and low-income families (e.g., students with FRPM status). These gaps have been well documented in the literature as well as in the previous project reports. Yet, it is interesting to observe that in Year 5, Hispanic students demonstrated higher pass rates in math, science, social studies, and the majority of the core course areas than they have in past years. Based on the evaluation findings, McREL evaluators make the following recommendations:

- Identify, develop, and implement strategies to close achievement gaps among the subgroups, specifically the ethnicity/race and FRPM subgroups.

- Examine why specific courses (e.g., Geometry, Physical Science, and Earth/Space Science) tend to have lower pass rates than other core courses. Determine which strategies teachers may need to utilize to help increase pass rates. Provide professional development for teachers to learn how to effectively implement these instructional strategies in their teaching.
- Study the variations of the pass/fail rates across the schools to determine why some schools seem to have higher pass rates than others. Use data from this report and/or school data to create individual school profiles to look at trends, ask more in-depth questions, and gain a full understanding of what is happening at each school, specifically in terms of the achievement gaps. Develop an action plan based on these findings to support the school in closing the achievement gaps.

Academic Challenge, Self-Efficacy, and Support of Learning from Teachers.

Overall, the i3 schools showed a slight increase (2%) in the mean percentage of students' perceptions of academic challenge from Year 4 to Year 5. When compared to the end-of-project target, i3 schools, on average, were 8% below the goal of 75% agreement. The examination of variations across the i3 schools revealed that four schools (i.e., Fern Creek Traditional High School, Moore Traditional High School, Valley High School, and Waggener High School) showed minor increases from Year 4 to Year 5; yet, the other two schools (i.e., Academy @ Shawnee and Western High School) showed minor decreases from Year 4 to Year 5. Further, results of subgroup analyses revealed that students' perceptions of academic challenge differed by their limited English proficiency (LEP) status, grade level, and race/ethnicity.

Teachers tended to agree that the school provided students with academic challenge. A majority of teachers agreed that the students seemed to enjoy school and that high grades are viewed as an indicator of mastering high standards. However, a third also agreed that students were bored at the school and just over half agreed that students do well at their school.

Responses regarding student engagement were also positive. Teachers agreed that they challenge their students academically and help disenfranchised students feel more connected to school. They also tended to agree that the teachers in their school encourage students to go beyond stated expectations and involve the students in setting those expectations. However, a majority of teachers disagreed that they involve students in developing criteria for assessing their assignments and that they work to involve students in planning lessons. Thus, it appears that teachers still struggle with ways of encouraging student voice in the classroom. Based on the evaluation findings, McREL evaluators make the following recommendations:

- Investigate variations across the schools to identify strategies and practices that are working in some schools but not working in other schools. Experiment with modifying strategies and practices for the respective schools.
- Conduct focus groups with small groups of students across the grade levels to learn more about what a "challenging" curriculum means to them, and what they believe constitutes "meaningful" homework assignments.

- Facilitate conversations with the leadership at each of the i3 schools to review the data regarding students' perceptions of academic challenge, which differed across the schools and may suggest that some schools need more support than others. Develop an action plan with each school to improve students' perceptions of academic challenge.
- Encourage building leadership to have conversations with teachers about how to develop an engaging and challenging curriculum. If possible, allow students to join in those conversations in order to have their voices heard and to establish a new type of relationship with teachers and administrators.

Project Goal 2: Student Engagement in School and College Readiness

The second project goal is to provide a range of personalized supports to students to increase engagement in school and promote college readiness. The primary strategy is to create College Access Time (CAT) advisory periods for students that are designed to focus on college readiness. In addition to CAT implementation data, 10th grade ACT PLAN® (hereafter referred to as PLAN) scores and 11th grade ACT® scores were analyzed to measure students' college preparedness. Postsecondary transition rates were examined through StudentTracker data. Students' perceptions about their own engagement were measured through the Comprehensive School Survey (CSS) and 2015 Student Survey data.

CAT Implementation. To support college readiness for JCPS students, all project schools hired a College Access Resource Teacher (CART) to design and plan the CAT advisory periods to increase students' understanding and interest in attending college. Being that the CARTs have the autonomy to plan and design CAT advisory periods within each project school, they have implemented projects and have curricula planned out for the school year. However, they still struggle with having 100% of the teachers buy into the process and engage students. Further, a few of the CARTs mentioned that student apathy is an issue. The CARTs also had limited time and opportunity to provide training to their own staff, and there were limited opportunities for them to receive training for themselves. Based on the evaluation findings, McREL evaluators make the following recommendations:

- Allow time for the CARTs at the i3 schools to visit other i3 schools (or other district schools) to monitor, assess, and provide feedback on how to strengthen each other's programs. This would allow for the creation of a community of learners to be built within the i3 project schools, which could be expanded to other CAT programs in the district.
- Provide training at the district level for all advisors so those assigned as advisors can continue to see the value of the program and increase their buy-in.
- Encourage building administrators to allow time for the CARTs to provide training to advisors at their schools. This may also help administrators who have not fully bought into the program to become more aware of its value and to help build support for CAT.

- Create more structured guidelines for what a CAT advisory period should look like. Although the CARTs appreciate the autonomy afforded to them, structure and CAT standards would help them reach targeted goals.
- Share information with the CARTs on funding resources, particularly for schools where the CART position may not be full-time in the future.

Students' Knowledge and Use of College Readiness Skills and Postsecondary Transition. Based on students' ACT and PLAN outcomes, a finding from this evaluation was that the majority of i3 students are not college ready, using ACT and PLAN benchmarks as an indicator of college readiness. Compared to Year 4 findings, the performance of the i3 schools declined in all subject areas in Year 5. Although the schools still have not reached the project targets, the gaps were reduced across all subject areas. Gaps between performance and the end-of project goals range from 13 to 19 percentage points.

The percentage of i3 students meeting or exceeding the ACT benchmarks decreased in English and reading from Year 4 to Year 5 but increased in math. Overall, the gap to the end-of-project target ranges from 6% to 14%, with the largest gap in reading, followed by science, math, and English.

In regards to postsecondary transition, there was an overall increase in the percentage of students enrolling in a postsecondary institution from 2013 (38%) to 2014 (45%). Although the target goal of 55% was not reached, there was an increase of 4% from the baseline to 2014. It should also be noted that of those students who did enroll in postsecondary institutions, 86% attended public institutions, 53% attended four-year institutions, and 90% attended an institution in Kentucky. Based on the evaluation findings, McREL evaluators make the following recommendations:

- Review instructional practices to determine why student scores are still not reaching the PLAN and ACT benchmarks, specifically in the areas of math and science. Provide professional development to teachers who may benefit from new pedagogical instruction.
- Establish a time for i3 school administrators, teachers, and CARTs to share their lessons learned or best practices of what has or has not worked in their schools to improve academic achievement. Some schools have made more progress than others. Start with a team at those schools to learn more about what they have done to achieve their current accomplishments.
- Strategize to further reduce achievement gaps among subgroups, particularly racial/ethnic groups and students qualifying for FRPMs.
- Continue to examine postsecondary transition data and address questions regarding how rates can continue to increase.
- Encourage the CARTs to conduct exit interviews with seniors to find out why they made particular choices. CAT should be a time for students to set goals and work with their

advisor to ensure that they achieve those goals. Track the progress of students; if students have developed relationships with their advisors over the course of the school year, encourage both the advisor and student to send an e-mail in late summer or early fall to track what the student is doing and why that student chose the path that he or she did.

Student Perceptions of School Climate. Multiple CSS items were used to examine students' perceptions of (1) support for learning (1 item), (2) adult social support (5 items), (3) peer social support (1 item), and (4) school connectedness (3 items). Overall, students reported more positive than negative perceptions across all constructs. Two items were also selected from the CSS to assess student engagement. About one third of students indicated that they were engaged in sports or clubs at school.

Student perceptions also varied by school. Overall, Fern Creek Traditional High School reported higher levels of support for learning, adult social support, peer social support, and school connectedness than did all other i3 schools. Student perceptions also differed by students' demographic characteristics. For example, male students reported higher levels of peer social support and school connectedness than did female students; yet, female students reported a higher level of adult social support than did male students. Students from higher grade levels reported higher levels of support for learning, adult social support, and school connectedness. Students with LEP also reported higher levels of support for learning, adult social support, peer social support, and school connectedness than did students without LEP. Based on the evaluation findings, McREL evaluators make the following recommendations:

- Review the school culture data with the i3 schools. Develop action plans on how the staff at each school can continue to improve their climate.
- Continue to develop a culture within the schools that provides peer-to-peer support to ensure there is a respectful culture between students as well as adults.
- Work with building administrators to develop stronger relationships with families and community members. Continue to emphasize afterschool programs and activities while ensuring that all students have access.
- Investigate why grade levels differed across the various CSS constructs. For example, why do 12th graders believe there is more support for learning than ninth graders? If there are certain activities happening at a particular grade level to make them feel more supported, how can those activities be replicated in other grade levels?
- Explore why students with LEP tend to have more positive perceptions of school culture. If it is because of special services they receive, brainstorm ways in which other students can receive more personalized services to meet their individual needs.

Fidelity. No schools on this component reached a threshold of implementation. However, it should be noted that the indicators are based upon JCPS' original proposal on what they thought was achievable. Once the i3 schools began to implement the CAT advisory periods, they found that

adjustments had to be made to fit CAT within the school schedule. For example, not all of the schools could implement a 55-minute CAT period due to scheduling conflicts. Other schools decided that they only wanted to offer CAT biweekly in order to increase academic time. Thus, the goals originally set for CAT in the proposal were not feasible for all participating i3 project schools. Based on the evaluation findings, McREL evaluators make the following recommendations:

- Discuss the fidelity components with school leaders and teachers so they have a clear understanding of the expectations of CAT (e.g., how many times per week the advisory periods should be held and how many minutes they should last).
- Provide relevant, useful, and timely professional development sessions for CARTs, especially on ways in which they can provide training to advisors in their schools. Focus on how they can train advisors to engage and motivate students.
- Develop a common walkthrough tool and provide guidance to the CARTs on how to provide feedback to the advisors after they have been observed by the CART. Establish a continuous improvement model for CARTs to use with their advisors in order to strengthen the relationships between advisors and students.

Project Goal 3: Teacher Pedagogical and Student Support Practices

The third project goal is to improve teachers' pedagogical and student support practices to maximize the effectiveness of increased learning time. The strategy to reach this goal is to ensure that content-based and cross-disciplinary professional learning communities (PLCs) meet regularly during the school year. The increase in PLCs should lead to improvements in teachers' perceptions of collaboration and self-efficacy. In terms of instructional practice, teachers' perceptions of how their own instructional practices increase student academic engagement and challenge should improve, as well as their perceived ability to identify and appropriately respond to students' unique academic and social needs.

PLC Meetings. Findings showed that more time is allocated to content-based PLCs than cross-disciplinary PLCs. Based on survey responses, on average, the content-based PLCs met weekly across the project schools while the cross-disciplinary PLCs met less frequently. Survey results showed that half of the i3 project schools hosted cross-disciplinary PLCs monthly while the other three schools met once a trimester. Principals reported that they were pleased with the implementation of both types of PLCs at their schools. Typical challenges that were shared included lack of time and monetary resources to continue to support the PLCs. Based on the evaluation findings, McREL evaluators make the following recommendations:

- Provide continued assistance to schools to help them find funding for the provision of stipends to teachers for participating in activities outside of their normal duties or to pay for substitutes so teachers can participate in "data days".
- Allow principals and teacher leaders to visit other high schools to observe their PLCs and other effective collaboration practices.

- Communicate with principals and teachers to let them know how the PLCs will be continued without the support of the i3 grant as concerns were raised about this issue.
- Review the target benchmarks to determine if modifications need to be made to better reflect how the PLCs operate in practice.
- Establish districtwide guidelines on how often content-based and cross-disciplinary PLCs should meet. Ensure that each school understands how JCPS defines a PLC so school personnel consistently record meetings.
- Systemically collect information about the how schools facilitate PLCs. Create a "Best Practices" document that describes effective practices across schools. Facilitate a meeting with the schools to share "Best Practices" and help them learn from one another.

Increase Teachers' Perceptions of Collaboration. Teachers tended to have higher levels of agreement on survey items regarding teachers supporting one another, collaborating, and working together. This may be a result of the PLCs, where time is devoted for teachers to work collaboratively to discuss students' progress and challenges in a supportive environment. Teachers were less likely to agree on items regarding resources and time. A large percentage of teachers disagreed with the statements about having enough time to collaborate with colleagues to improve instruction and the ability to access expertise and sufficient resources in a timely fashion. Another survey item that did not have a high level of agreement was "Teachers in this school trust each other." However, it takes time to develop trust and a truly collaborative culture, and it seems that the schools are continuing their work in building a trusting culture within their schools. Based on the evaluation findings, McREL evaluators make the following recommendations:

- Continue to provide professional collaboration opportunities for teachers with the inclusion of trust exercises. Although collaboration is building within the schools, results for this area indicate that trust issues remain within the schools.
- Work with building administrators to ensure that the schools have adequate time and resources for collaborative planning and PLCs. The district can provide ideas and strategies to help the schools meet the scheduling needs of both students and teachers.
- Survey teachers and building administrators to learn more about what resources may be lacking or what resources they believe will help them improve their teaching practices.
- Communicate with the schools about how collaboration will continue to be supported by the district once the i3 funding is gone.

Improve Teachers' Perceptions of Their Own Self-Efficacy with Respect to Content-Based Knowledge for Teaching. In general, teachers tended to have high levels of self-efficacy as over 80% of them responded positively to survey items related to this construct. The items that did not score as highly were about pressure to achieve immediate results. Only a quarter of the teachers responded that they *never* or *seldom* worry about being criticized if positive results are not readily available and over half (59%) are *sometimes* or *almost always* discouraged from trying new

approaches because of the emphasis on success. Based on the evaluation findings, McREL evaluators make the following recommendations:

- Provide training sessions for school staff to help them look more positively at data so they can measure progress by the "smaller" successes and look at trends over time rather than immediate results.
- Document innovative teaching strategies being used with success. Build time into schedules to allow teachers to share innovative practices that have led to student success.
- Work with administrators on ways to motivate staff and develop a culture that does not include fear of being criticized and one that promotes innovative techniques, as long as results are being measured and continuously improved.

Improve Teachers' Perceptions of Their Instructional Practices in Order to Increase Student Academic Engagement and Challenge. Teachers tended to rate survey items that focused on challenging students and working with disenfranchised students higher than items related to students being actively involved in planning lessons, setting expectations, and developing criteria for lessons. It appears that teachers have fewer tendencies to actively involve students in planning lessons, although teachers perceived themselves to be challenging students academically and setting high expectations for them. Based on the evaluation findings, McREL evaluators make the following recommendations:

- Continue to work with staff to encourage students to go beyond the expectations set by teachers. Provide training to help motivate students who may have apathetic tendencies.
- Encourage classroom teachers to collaborate with the students' advisors to encourage and motivate them to go beyond classroom expectations.
- Assist teachers in developing lesson plans that will encourage an increase in students' involvement (i.e., student voice) within the classrooms.
- Develop protocols that teachers can use in the classroom as they work to increase student voice. Because this may be a different teaching model than what teachers are typically used to, the district may need to expend time and resources to gain buy-in from teachers in understanding how this type of teaching strategy may improve student outcomes.
- Conduct focus groups with a small sample of students to collect their input on how best to increase their voice and active engagement in terms of lesson implementation. Have a pilot group of teachers implement those strategies to document what works and share their successes and challenges with other teachers in their building and throughout the district.

Improve Teachers' Perceptions of Their Ability to Identify and Appropriately Respond to Students' Unique Academic and Social Needs. Overall, school personnel reported feeling more positive than negative about the adult social support and support for learning

items. However, one item, in particular, received a much lower rating as compared to all other items, "Teachers at my school assign meaningful homework on a regular basis" (55% positive responses). Additionally, school personnel's ratings of adult social support and support for learning differed by school. School personnel ratings also differed by the demographic characteristics of the staff; however, the patterns are inconsistent across the two different subscales. Specifically, in terms of support for learning, male and White staff members reported higher ratings than did female staff and staff from racial/ethnic minority backgrounds. Regarding adult social support, staff with more than two years of teaching experience perceived a higher rating than did staff with less than one year of teaching experience. Based on the evaluation findings, McREL evaluators make the following recommendations:

- Observe teachers using the district observation protocol to determine if they are effectively differentiating instruction for all students.
- Provide professional development on differentiated instruction and how to personalize instruction for individual students to teachers who may be struggling in this area.
- Conduct focus groups or interviews with students to learn more about how they think teachers could provide individualized support for them.
- Encourage dialogue between classroom teachers and students' assigned advisors to further explore how instruction can be individualized for each student.

PLC Implementation Fidelity. No schools on this component reached a threshold of implementation. However, the indicators are based upon the original proposal. Project staff may want to reconsider whether or not these are appropriate targets given how the schools ended up structuring their PLC sessions. Based on the evaluation findings, McREL evaluators make the following recommendations:

- Create a feedback mechanism to monitor the extent to which teachers implement instructional strategies discussed within the PLCs. This may be accomplished through the use of an administrator observation form or a district feedback form to gather more data about how the work of the PLCs are being implemented in the classroom.
- Continue to support cross-disciplinary PLCs by providing staff with time to participate and resources. Document how the cross-disciplinary PLCs are functioning by conducting focus groups or interviews with leaders of those PLCs. Share the findings with the i3 schools that may be struggling to implement this component.

Project Overview

Goals and Objectives

In October 2010, Jefferson County Public Schools (JCPS) was awarded a four-year[2] development grant, totaling five-million dollars across the four years, by the U.S. Department of Education (ED) through the inaugural Investing in Innovation (i3) program competition.[3] JCPS' project, *Making Time for What Matters Most,* aims to improve student achievement, narrow achievement gaps, strengthen students' college readiness skills, and increase the percentage of students who graduate and the percentage who go on to college. In order to achieve these overarching aims, JCPS defined the following project goals and objectives:

Goal 1: Provide structures and supports to facilitate student mastery of academic material and successful completion for all core courses in one year or less.

Objective 1A: Develop assignment/reassignment protocols such that students are provided options of acceleration, remediation, credit recovery, and increased time for study based on individual students' progress and needs.
Objective 1B: Improve ongoing monitoring of student course progress to enable rapid response to individual students' academic needs.
Objective 1C: Increase students' perception of academic challenge.
Objective 1D: Increase students' academic self-efficacy.
Objective 1E: Increase the number of students who successfully pass core courses in one year.
Objective 1F: Increase students' perceptions of support for learning from teachers.

Goal 2: Provide a range of personalized supports to students to increase engagement in school and promote college readiness.

Objective 2A: Ensure focused, evidence-based use of College Access Time (CAT) to advance college-ready skills, monitor student progress, and increase students' sense of affiliation with adults and peers.
Objective 2B: Increase students' knowledge of and use of college-ready skills and habits.
Objective 2C: Improve students' sense of affiliation with adults and peers.
Objective 2D: Strengthen peer-to-peer relations and perceptions of peer support, particularly within career themes.

[2] In fall 2014, JCPS was awarded a no-cost extension by ED to continue the project for a fifth year.

[3] The project was submitted for funding as an i3 development project under Absolute Priority 4, "Innovations that Turn Around Persistently Low-Performing Schools." In addition, the district specified one of four competitive priorities, Competitive Preference Priority 6: Support College Access and Success.

Goal 3: Improve teachers' pedagogical and student support practices to maximize the effectiveness of increased learning time.

Objective 3A: Increase collaboration among teachers within and across content areas in school.
Objective 3B: Increase teachers' perceptions of self-efficacy with respect to content-based knowledge for teaching.
Objective 3C: Improve teachers' instructional practices with respect to engagement and challenge level in core content instructional time.
Objective 3D: Increase teachers' knowledge and attention to unique student needs and support during instruction and CAT.

A logic model designed to graphically display how the components of the intervention work to impact student achievement is provided in Figure 1. Overall, a large percentage of JCPS students have been dropping out of high school, and, of those who do graduate, too few have been adequately prepared for higher education. The i3 project proposed three interventions that, when taken individually, have minimal impact, but when implemented simultaneously have the potential to make substantial high school changes. These interventions included expanding learning time by developing a master schedule based on a trimester system, increasing the preparation of students for postsecondary education by implementing schoolwide advisory periods with trained staff to provide guidance, and increasing collaboration among teachers. As depicted in the logic model, the intermediate outcomes of integrating the three interventions in the six JCPS high schools that were selected to receive i3 funds are to develop, implement, and sustain a district model that provides structured time for student acceleration, remediation, and college advising, as well as time and support for teachers to plan and learn together. The long-term goal of JCPS is to prepare all students in the district to graduate from high school and be adequately prepared for college or postsecondary careers. The logic model defines the inputs, outputs, and outcomes for each intervention and defines how the interventions will ultimately lead to a decrease in the achievement gap, a decrease in the drop-out rate, and an increase in college-ready graduates.

Target Population

The project is situated within JCPS, a large urban district with roughly 100,000 students, making it among the largest 30 districts in the nation. According to 2010 census data, Jefferson County's total population was 741,096. Approximately 73% of the county's residents were White, 21% Black, and 9% Other. Moreover, approximately 21% of all families with children and 25% of all children younger than 18 years of age in the county lived below the poverty line. During the 2014-2015 school year, JCPS' high school students were 44% White, 44% Black, 8% Hispanic, and 4% Other. In addition, nearly three quarters (71%) of the students were enrolled in the free and reduced-price meal (FRPM) program, which serves as an indicator of those students who are of low socioeconomic status. Relative to the county as a whole, the school system serves higher proportions of minority and economically disadvantaged students.

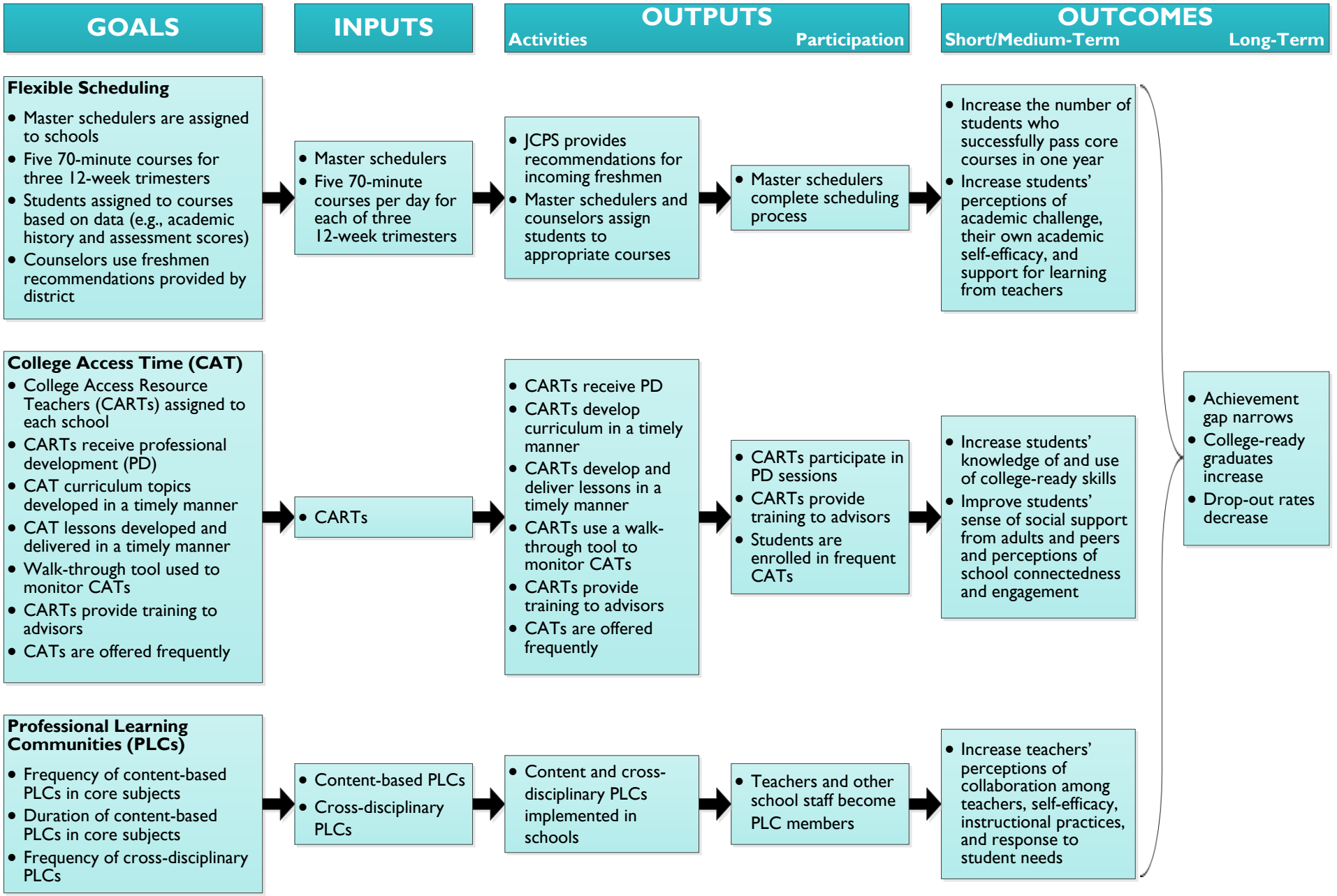


Figure 1. Logic model.

JCPS' district high school leadership selected six of its persistently low-performing high schools to participate in the project: Academy @ Shawnee, Fern Creek Traditional High School, Moore Traditional High School, Valley Traditional High School, Waggener High School, and Western High School. The project schools varied in enrollment from 504 to 1,546, with a mean of approximately 959 students. Further, these schools serve higher proportions of minority and economically disadvantaged students relative to both the county and district overall. For the 2014-2015 school year, a mean of 56% of the students attending the i3 schools were racial/ethnic minority students. All schools are Title I schools with the exception of Fern Creek Traditional High School. Furthermore, across the i3 high schools, 71% of students were enrolled in the FRPM program, ranging from 65% to 79%. Table 1 summarizes the characteristics of the six high schools participating in the JCPS i3 grant for 2014-2015 school year.

Table 1. Project School Characteristics for 2014-2015

School [a]	Academy @ Shawnee	Fern Creek	Moore	Valley	Waggener	Western	Mean
Total # of Enrollment	504	1,546	1,028	1,100	766	810	959
% White	43.8%	46.4%	47.2%	60.1%	40.1%	24.8%	43.7%
% Black	44.9%	37.3%	33.2%	32.8%	46.0%	68.4%	43.8%
% Hispanic	7.9%	8.8%	14.6%	4.2%	9.7%	4.1%	8.2%
% Other	3.4%	7.5%	5.0%	2.9%	4.3%	2.7%	4.4%
% Enrolled in FRPM	77.8% [b]	64.7%	64.5% [b]	69.2%	68.7%	78.5%	70.6%
Graduation Rate (2014) [c]	72.5%	82.8%	87.8%	77.9%	88.0%	81.6%	81.8%
Transition to Adult Life (2014) [d]	98.9%	92.8%	98.2%	58.0%	81.5%	91.7%	86.9%

[a] Data for all characteristics are from the JCPS School Profiles, available at http://www.jefferson.k12.ky.us/Departments/AcctResPlan/Profiles/index.html.

[b] Because the Academy @ Shawnee and Moore Traditional High School serve students in grades 6-12, this percentage represents all grade levels and is not disaggregated by middle and high school.

[c] This is the latest available data for the graduation rate in JCPS.

[d] The Successful Transition Rate includes percentages of students who enrolled in college or a vocational/technical school, enlisted in the military, became employed, or are employed and going to school.

Evaluation Overview

McREL International is conducting external process and outcome evaluations for JCPS' *Making Time for What Matters Most* i3 project. McREL evaluation staff have actively engaged key JCPS stakeholders in the design, implementation, and interpretation of evaluation findings to increase (a) buy-in of school personnel (i.e., teachers and administrators); (b) reliability, validity, timeliness, and relevance of data; (c) use of findings for decision-making purposes; and (d) infrastructure development for sustainability after funding ends.

In the first year of the project (2010-2011), McREL designed and implemented a comprehensive evaluation protocol that employs a mixed-methods approach with process and outcome components that capitalizes on multiple sources of information and provides for the triangulation of findings. The evaluation incorporates data from a variety of collection strategies such as surveys, interviews, and reviews of extant documents and student education data. These data collection procedures continued, with modifications, in the second, third, fourth, and fifth years of the project (2011-2012, 2012-2013, 2013-2014, and 2014-2015).

This report presents the evaluation findings from the fifth and final year of the project along with the findings from Years 1 through 4 when appropriate. Initial evaluation efforts emphasized the project's implementation and short-term outcomes in order to provide opportunities for project improvement and feedback on the progress being made toward project goals. As the project progressed and data for effectively demonstrating the project's impact have become available, the annual reports have increased the emphasis on the outcome evaluation.

Process Evaluation

The primary aims of the process evaluation are to provide feedback to JCPS and the targeted schools to enable quality improvement, identify successes and challenges, document the structures and processes related to project implementation, and adjust evaluation protocols based on experience and stakeholder input. The research questions for the process evaluation include the following:

1. To what extent are the intervention components being implemented as planned (i.e., prototyping plans and progress on goals/objectives) and with fidelity (i.e., consistent with evidence-based practice)? What is the status of reaching JCPS' goals and objectives?
2. What are the adaptations or deviations from the original plan, why, and what are the antecedents and consequences? How can barriers be minimized and best practices shared?
3. Are interim student outcomes related to contextual, student, and implementation characteristics and activities? How do these data inform rapid prototyping and improvement?
4. How do teacher-to-teacher relationships change within and across content areas and relate to interim student outcomes?

Specifically, the process evaluation includes a multilevel (i.e., school, teacher, and student) mixed-method analysis of the primary strategies of reform specified in the i3 application and revised by JCPS over time. Examples include the use of time for acceleration, immersion, and remediation; CAT; professional learning communities (PLCs); and master scheduling. Multiple methodologies are used to collect a range of proximal indicators that have been shown to correlate positively to key long-term educational outcomes such as student achievement and college readiness. Data sources include interviews, surveys, and extant data.

Outcome Evaluation

The outcome evaluation examines the effectiveness of the intervention components or strategies that impact proximal, intermediate, and distal outcomes for students, such as raising achievement for all students and narrowing achievement gaps. It also highlights any disparities in outcomes as well as best practices. The primary outcome research questions include the following:

1. What are the average effects on key school intermediate and long-term outcomes (e.g., pass rates, achievement rates, college readiness, and postsecondary enrollment rates)?
2. What differential outcomes are experienced by students in the target schools? Do discrepancies relate to contextual, student, and implementation characteristics and activities?
3. Is a best practice model identifiable that is scalable to other settings?

Since the targeted schools were predetermined (i.e., categorized as persistently low-performing schools) and the intervention is schoolwide, the research design is non-experimental and relies on econometric modeling (Heckman, 2008). The outcome evaluation relies on the data collected in the process evaluation as well as data collected by the district (e.g., achievement rates, school climate perceptions by multiple respondents, and postsecondary enrollment rates). Core course pass rates are used as proximal achievement indicators; long-term achievement and college readiness are operationalized as students' performance on the ACT®-related tests for English, math, science, and reading, including the ACT PLAN® (hereafter referred to as PLAN) for 10th graders and the ACT for 11th graders. These data from national tests provide more stable measures over multiple years than the state's high-stakes accountability test, which has undergone multiple revisions during this project period.

Data Collection

As mentioned previously, the evaluation utilizes multiple sources of data and incorporates a variety of stakeholder perspectives. Data are collected using teacher and student surveys; semi-structured interviews with principals, College Access Resource Teachers (CARTs), and school counselors; and secondary analyses of district data (e.g., student demographics, grades, and ACT and PLAN data). The following sections provide detailed information about the data collection methods that are part of the evaluation.

Interviews

Although all principals, CARTs, and counselors were asked to participate in phone interviews between April and June 2015, response rates were low during Year 5 of the grant. Only one principal out of six (17%) and one CART out of six (17%) completed a phone interview. Response rates from counselors were slightly better with three counselors responding (50%). Additionally, the project director was interviewed in the summer of 2015 to gather the perspective of the overall project from district leadership.

Protocols for these 30- to 45-minute interviews consisted of structured and semi-structured questions. Principal interview protocols addressed all three areas of the grant (i.e., scheduling, advisory, and PLCs) and the progress that was made on the grant interventions over the course of the year while the CART protocols focused on how the teachers had implemented and sustained CAT advisory periods throughout the school year. Master scheduler/counselor protocols, which were approximately 30- to 45-minutes, consisted of structured and semi-structured questions. For the complete interview protocols, refer to Appendix A.

Surveys

Multiple surveys were given throughout the 2014-2015 school year. JCPS administered the Comprehensive School Survey (CSS) to teachers and students in the spring of 2015. Additionally, separate surveys developed by the evaluation team were administered to principals, CARTs, teachers, and students.[4] The following sections provides details about each of the administered surveys.

Principal and CART Implementation Surveys. In spring 2015, principals and CARTs were each asked to complete and submit their responses to an online survey via Qualtrics regarding implementation practices at their respective schools. The purpose of the surveys was to capture fidelity information regarding how the interventions were being implemented at each school. Three principals and three CARTs completed the surveys. See Appendix B for a copy of the surveys.

Comprehensive School Survey (CSS). As mandated by the Jefferson County Board of Education, JCPS administers a districtwide CSS annually. The CSS assesses school characteristics and multiple dimensions of school climate with established reliability and validity. Students, teachers, and parents are asked to complete parallel versions of the survey each spring. Survey administration is overseen at the school level by a coordinator appointed by the principal.

It should be noted that in past years, JCPS had used the Comprehensive School Climate Inventory (CSCI) developed by the National School Climate Center to measure indicators of school climate and culture. In Year 5 of the grant, JCPS decided to not pursue the CSCI in order to reduce costs and because the student-version of the CSS covered similar measures. To align the two instruments, evaluators conducted a crosswalk between the CSCI items and the CSS items. Data on

[4] The Student Survey replaced the student interviews in Year 3 in order to better capture perceptions from the full student population.

the CSS items that were similar to CSCI items were requested from JCPS. As shown in Table 2, across the i3 schools, the response rates for the student version of the CSS varied considerably, ranging from 64% to 94% with a mean of 79%.

Table 2. Student CSS Response Rates Across the i3 Schools in Year 5 (2014-2015)

School	Student Enrollment [a]	# of Surveys Completed	Response Rate
Academy @ Shawnee	504	351	69.6%
Fern Creek Traditional High School	1,546	1,381	89.3%
Moore Traditional High School	1,028	806	78.4%
Valley Traditional High School	1,100	871	79.2%
Waggener High School788	766	718	93.7%
Western High School	810	518	64.0%
Total Across i3 Schools	**5,745**	**4,645**	**79.0%**

In Year 5, a total of 4,645 students responded to the student CSS. Of those, 53% were male; 46% were White; 41% were Black; 8% were Hispanic; 3% were Asian; 68% were students with free meal status; 7% were students with reduced-price meal status; 26% were students with paid meal status; and 4% were students with limited English proficiency (LEP). Additionally, 29% of the students were in the ninth grade, 26% were in the 10th grade, 25% were in the 11th grade, and 20% were in the 12th grade.

The CSS for School-Based Certified Staff Employees was used in Years 3, 4, and 5 to measure teachers' perceptions of their ability to identify and appropriately respond to students' unique academic and social needs. Items from this survey were also used to replace the CSCI during Year 5. Table 3 presents the Year 5 response rates across the i3 schools.

Table 3. School Personnel CSS Response Rates Across the i3 Schools in Year 5 (2014-2015)

School	# of Professional Staff [a]	# of Surveys Completed	Response Rate
Academy @ Shawnee	53	48	90.6%
Fern Creek Traditional High School	95	87	91.6%
Moore Traditional High School	136	125	91.9%
Valley Traditional High School	112	115	100.0%[a]
Waggener High School	67	70	100.0% [a]
Western High School	62	47	75.8%
Total Across i3 Schools	**525**	**492**	**91.6%**

Note. School personnel data were obtained from the JCPS website (http://www.jefferson.k12.ky.us/departments/acctresplan/Profiles/index.html)

[a] When the number of surveys received was greater than the total number of school personnel counted, 100% response rate was reported.

As shown in Table 3, the response rate for the school personnel survey ranged from 76% to 100% with a mean of 92%. School personnel respondents were also asked to provide demographic information. Of those with valid survey responses, 58% were female; 74% were White; 42% had at less than one year of teaching experience; and 20%, 22%, 7%, and 9% had two, three, four, and five years of teaching experience, respectively.

Student Survey. During Years 1 and 2 of the project, student involvement (i.e., student voice) was captured through student focus groups. However, the evaluation and project team decided that a small subsample of students interviewed at each school did not accurately represent the entire school population. Furthermore, evaluators were limited in their findings due to attrition. For Years 3 through 5, the evaluation team created a survey to capture students' perceptions regarding the core courses (i.e., English, math, science, and social studies) and their self-efficacy as students. The survey also asked a number of questions regarding CAT. The student surveys were distributed by the CARTs during advisory time at each school. The survey was estimated to take approximately 15 to 20 minutes to complete. Table 4 shows the response rates by school for the 2015 Student Survey. See Appendix C for a copy of the survey.

Table 4. Student Survey Response Rates Across Schools in Year 4 (2014-2015)

School	# of Students	# of Surveys Completed	Response Rate
Academy @ Shawnee	504	0	0.0%
Fern Creek Traditional High School	1,546	874	56.5%
Moore Traditional High School	1,028	144	14.0%
Valley Traditional High School	1,100	498	45.3%
Waggener High School	766	411	53.7%
Western High School	810	403	49.8%
Total Across i3 Schools	**5,745**	**2,330**	**40.6%**

Teacher Survey. The 2015 Teacher Survey, which can be found in Appendix D, contained a series of questions to examine teacher collaboration related to teaching and instruction. The survey asked detailed questions about the schools' implementation of the three i3 interventions (i.e., CAT, PLCs, and trimester scheduling) and school context.

The online survey was administered in April 2015 to core content teachers from each of the six i3 schools. In general, the survey took respondents about 20 minutes to complete. The survey was voluntary; participants were not required to respond to any question and could opt out of the survey at any point.

Before analyses were conducted, survey data were screened for missing response patterns. To ensure scale validity, cases with more than 75% of items with missing responses were omitted. Final sample sizes for each scale analysis are reported in the Findings section of this report. For the analyses, descriptive statistics were calculated to describe teachers' perceptions of the project interventions and school context.

Core content teachers from each of the six i3 schools were given the opportunity to participate in the 2015 Teacher Survey (n = 94). As shown in Table 5, across the i3 schools, the response rates for the survey varied, ranging from 16% to 24% with a mean of 18%.

Table 5. Teacher Survey Response Rates Across the i3 Schools in Year 5 (2014-2015)

School	# of Core Content Teachers [a]	# of Surveys Completed	Response Rate
Academy @ Shawnee	53	11	20.8%
Fern Creek Traditional High School	95	15	15.8%
Moore Traditional High School	136	18	13.2%
Valley Traditional High School	112	26	23.2%
Waggener High School	67	16	23.9%
Western High School	62	8	12.9%
Total Across i3 Schools	**525**	**94**	**17.9%**

Extant Data and Artifact Review

In addition to the CSS data described previously, JCPS' Accountability, Research, and Planning Department provided several administrative datasets to McREL evaluators containing student data. Student-level data included 2014-2015 demographic information, ACT and PLAN scores, and postsecondary enrollment and involvement.

ACT and PLAN Data. Datasets containing students' ACT and PLAN scores were provided by JCPS to McREL evaluators for analysis. The ACT and PLAN exams cover four content domains including English, mathematics, reading, and science. The college readiness benchmarks, established by ACT, are the minimum ACT and PLAN test scores required for students to have a high probability of success in credit-bearing college courses. PLAN scores range between 1 and 32 and the established benchmarks for English, math, reading, and science are 15, 19, 17, and 21, respectively. ACT scores range between 1 and 36 and the benchmarks for English, math, reading, and science are 18, 22, 21, and 24, respectively. During the 2014-2015 school year, a total of 1,404 students in 10th grade and 1,318 students in 11th grade from the i3 project schools took the PLAN and ACT exams, respectively.

In this report, evaluators examined the extent to which students in the i3 schools met ACT and PLAN benchmarks. State and district-level data and findings from the project reports in Years 1, 2, 3, and 4 (2010-2011, 2011-2012, 2012-2013, and 2013-2014) are included in this document to show i3 schools' progress over time. In addition, school differences in relation to the

ACT and PLAN outcomes are investigated by using chi-square tests.[5] Cramer's *V*[6] is reported as an indicator of effect size.

Subgroup analyses (e.g., student demographic characteristics) were conducted to investigate whether the percentages of students meeting or exceeding the ACT and PLAN benchmarks differed by student attributes. Since students were nested within schools (i.e., within a multilevel structure), and the percentages of students meeting or exceeding the benchmarks seemed to differ by school (Nixon et al., 2012), a series of hierarchical generalized linear models[7] and subsequent analyses were conducted. The goal was to examine the associations between student attributes (i.e., gender, race, FRPM status, and LEP status) and the percentages of students passing the benchmarks for each subject area.

Core Course Pass Rates. With assistance from JCPS program staff, evaluators identified and grouped all of the core courses into 10 categories:

1. English
2. Algebra
3. Geometry
4. Senior Math
5. Life Science
6. Earth/Space Science
7. Physical Science
8. Social Studies
9. U.S. History
10. World Civilization

Within each core course domain, three types of classes were identified: (1) comprehensive; (2) honors; and (3) others (e.g., Advanced Placement [AP], advanced, and dual credit). Additionally, the core courses are subsequently grouped into four subject domains: (1) English; (2) math; (3) science; and (4) social studies (see Appendix E for the core course classifications). For this report, the analyses were conducted at the subject and core course level.

Postsecondary Involvement. JCPS agreed to provide data from the National Student Clearinghouse's StudentTracker database to assess students' postsecondary attendance. To create an end-of-project target, 2010 StudentTracker data served as the baseline. According to the 2010 StudentTracker data, 44% of students who graduated in May 2010 from the i3 project schools were enrolled in postsecondary institutions. The district mean for high schools for the same period was 55%; hence, the end-of-project target for the student transition outcome was set at 55%. This report indicates to what extent each i3 project school has made progress on attaining the 55% end-of-project target.

[5] Base on chi-square cell distributions, pairwise chi-squares were conducted to determine school differences in percentages of students meeting or exceeding the benchmarks.

[6] To interpret Cramer's *V*, Ferguson (2009) suggests that a value of 0.20 was the recommended minimum effect size representing a "practically" statistically significant effect for social science data; a value of 0.50 presents a moderate effect size; and a value of 0.80 presents a strong effect size.

[7] When between-school variations in student outcomes are evident, multilevel modeling is a preferred approach because it adjusts for these variations.

Fidelity

To measure the extent of implementation of the intervention components in the i3 schools and to meet Government Performance Results Act (GPRA) reporting requirements, the evaluation must include a measure of fidelity for the project. Based on guidance provided by Abt Associates, the national evaluator of the i3 grant program, the fidelity instrument must align with the project's logic model and consist of the following:

- one or more indicators for each key component that defines the construct if implemented as planned;
- operational definitions of the indicators, evidence needed to assess implementation of the component, and data sources and a schedule of data collection;
- construct-level score across the indicators;
- construct-level score categorized into levels of implementation fidelity; and
- a definition of threshold for "adequate implementation."

A fidelity measure was designed for each of the three components of the grant. The six project schools were scored individually on each measure. Once calculated, the scores were aggregated across the schools to calculate one project score for each component. The fidelity measure for each component is included in the findings section.

Findings: Project Implementation Progress

Several objectives were established to monitor the progress toward reaching each goal of the *Making Time for What Matters Most* project. The next few sections describe indicators of progress made toward those objectives during the fifth year of the i3 grant (2014-2015). When appropriate, findings from the Year 1, 2, 3, and 4 reports are presented for comparison purposes.

Project Goal 1: Student Mastery of Academic Material

The first goal of the project is to provide structures and supports to facilitate student mastery of academic material and successful completion of all core courses in one year or less. Table 6 outlines the objectives for Project Goal 1 and the yearly or end-of-project target, when appropriate.

Table 6. Project Goal 1 Objectives, Performance Measures, and Targets

	Objective	Performance Measure	Target
A	Develop assignment protocols for core courses such that students are provided with options of acceleration, remediation, credit recovery, and increased time for study based on individual students' progress and needs	NA	NA
B	Improve ongoing monitoring of students' progress in core courses to enable rapid response to students' academic needs	NA	NA
C	Increase students' perceptions of academic challenge	CSS	75% of students agree
D	Increase students' positive perceptions of their own academic self-efficacy	NA	NA
E	Increase the number of students who successfully pass core courses in one year	Percentage of students who pass core courses during the academic year	English Year 5 Target=94.0% Math Year 5 Target=87.5% Science Year 5 Target=88.4% Social Studies Year 5 Target=90.6%
F	Increase students' perceptions of support for learning from teachers	CSCI Support for Learning Scale[8]	3.41

[8] This was the project goal for Years 1 through 4. In Year 5, the CSCI was no longer utilized. Instead, the CSS was used as a measure for this objective to continue to monitor progress on these indicators. Because it was the first year in which the CSS had been used as a performance measure for the objectives, no end-of-project target was set.

As noted previously in the logic model (see Figure 1), this goal is accomplished by schools assigning master schedulers to develop a trimester schedule that strategically offers courses to assist students in acquiring enough credits to graduate on time. As students are more likely to pass their core courses, students' perceptions of academic challenge, their own academic self-efficacy, and support for learning from teachers should also increase.

Additionally, the project is designed to improve procedures to determine how student progress is monitored in real time so that appropriate remediation or acceleration modifications can occur or students can be moved to more appropriate course assignments. For example, school counselors may need to make decisions about remedial course interventions for students at risk of failing core courses.

Other project strategies for this goal include increasing students' perceptions of academic challenge, their own academic self-efficacy, and support for learning from teachers, as measured by the CSS and Student Survey. The following sections summarize the progress that the i3 project schools made in reaching the objectives of Goal 1 throughout Year 5.

Objective A: Core Courses Assignment Protocol and Objective B: Ongoing Monitoring of Student Course Progress

Objectives A and B include developing assignment protocols for core courses so that students are provided options of acceleration, remediation, credit recovery, and increased time for study based on individual students' progress and needs. In spring 2015, evaluators conducted interviews with three of the counselors at the i3 schools to learn how they have placed students in courses and created their master schedules. The counselor interview had three objectives: (1) to determine how school counselors assign students to courses, including how freshmen placement differs from upperclassmen placement; (2) to determine if the trimester schedule meets students' needs in terms of course placement (e.g., appropriate remediation or acceleration); and (3) to determine whether student progress (for the purpose of class placement) is monitored throughout the year, and if so, how it is monitored.

The Teacher Survey also asked teachers questions regarding their perceptions of the school's course assignment process. Additionally, students were asked on their respective survey to comment on whether they thought opportunities were available to make up courses in which they had failed previously and whether opportunities were provided for expanded learning experiences. Principals were also asked a set of questions regarding student course placement and scheduling on the spring 2015 principal survey and follow-up interview. Additionally, project staff were asked to reflect on the end-of-project results and lessons learned. Findings are presented in this section.

Changes to the Trimester System. A primary goal of the grant was to establish more time for learning through the development of the trimester system[9]. Instead of having six to seven

[9] The type of schedule a school has is determined by school leadership. During the 2014-2015 school year, one of the i3 schools chose to return to a semester schedule. It is anticipated that more of the i3 schools will likely return to a semester schedule during the 2015-2016 school year.

courses per day, students had five 70-minute courses. On a trimester system, the courses end every 12 weeks so classes can repeat more times throughout the year. This allows students who failed or struggled within a class to repeat the course, which allows them another opportunity to pass it within the same school year. If the student needs the course to graduate, students can earn the needed credit and graduate on time.

Due to changes in the district, however, the distinction between the trimester and semester schedules became less clear in most schools. JCPS adopted end-of-course exams in English and math so the majority of English and math classes were offered every trimester making them full-year classes. Another issue that counselors commented on regarding trimesters is that if a student takes the first part of a sequenced course during first trimester, the second portion may not be available until the third trimester. For example, the first part of a foreign language class may be offered during the first trimester, but the second part may not be offered again until the third trimester. Thus, students may have 12 weeks without any instruction in that particular content area making learning continuity difficult.

Although trimesters did not work out as envisioned for students, project staff credit the trimesters with fostering the PLC intervention by allowing for "parallel scheduling" so teachers of common courses have planning time together. The project director used the example that when two Algebra II teachers have the same planning time, they can immediately review student diagnostics. As a team, the teachers can then help each other. One might say, "My kids got this and yours didn't. I'll take these five kids tomorrow, and you take these five kids from my room." This way, the teachers can work with different students, and ideally, the students may learn the lesson when it is presented in a different way from another teacher.

For project staff, trimesters made a difference throughout the district because they allowed staff to realize the value of time and how being flexible with time and scheduling can benefit both teachers and students. One project staff member said,

> *Trimesters have been the vehicle that has moved us further along with professional learning, moved us further along with standards-based assessments, and it's moved us further along with the concept of time and using time creatively to increase student achievement.*

Course Assignment Approaches and Monitoring. At the high school level, counselors are responsible for assigning incoming freshmen as well as upperclassmen to courses. In previous years, for incoming ninth graders, JCPS district staff were involved in this process by providing data to the schools to assist them in assigning incoming ninth graders to appropriate classes (e.g., AP, honors, or comprehensive-level courses). However, JCPS received feedback from schools indicating that the counselors would prefer to schedule their own students so JCPS stopped providing the schools with the data. However, during the counselor interviews, one interviewee said that the district spreadsheets "were incredibly helpful," and they missed the support provided by the district.

When asked to explain their process for scheduling the ninth graders, the counselors all explained that they used data, such as student scores from EXPLORE and the Kentucky

Performance for Education Progress assessment, along with students' grades. Typically, at least one counselor from the high school also goes to the middle schools to meet with the students and discuss the high school requirements.

Each school determines how many counselors will visit the middle school, and how the counselors will meet with the middle school students. For example, one of the counselors commented that when the four counselors from the high school visited the middle schools, they met with large groups of middle school students so the ratio was approximately four counselors to 200 students. In the future, they plan on meeting with students in smaller groups so the ratio will be closer to one counselor to 30 or so students.

To schedule upperclassmen, the counselors used similar processes. One counselor explained,

> *We go to classrooms and explain the graduation requirements. Then, we meet individually with students to discuss the classes they need and their career goals. We try to schedule electives and extra academic classes to align with their career goals.*

As far as monitoring students and making adjustments to their schedule, counselors said that the changes are made on a regular basis throughout the year. If a teacher thinks that a particular course is too easy or too difficult for a student, they may make a recommendation that a student be placed in a course that could be more or less challenging for students. Parents and students may also request their child be placed in another classroom. When this happens, counselors will review the student data to make sure that the data supports moving the student before a final decision can be made.

An interviewed principal also commented that moving students up to more challenging courses is considered a "celebration" at the school. Although it does not happen frequently, when teachers make the recommendation and a student is recognized for his or her hard work, it is seen as a success for everyone.

Once the schedule has been established and students have been placed in courses, it becomes the teachers' responsibility to provide instruction to the students. Thus, the teachers were asked to report on their perceptions of the course assignment process on the 2015 Teacher Survey. The Course Assignment Process scale gauges teachers' perceptions of the course assignment process, which is how students are assigned to particular classes at their school. Items on the Course Assignment Process scale were as follows:

- My school has a course assignment process that results in the best placement for students.
- My school has a clear process for identifying students early when they are struggling.
- My school has effective practices in place to successfully intervene with students who are struggling in a course.
- My school has effective practices in place to move students up to a higher level course when they have been successful.

The internal consistency reliability (Cronbach's α) estimate of teachers' perceptions of the Course Assignment Process scale was strong at 0.86. Respondents selected answer choices on a 4-point Likert scale (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Moderately agree*, and 4 = *Strongly agree*). The items were summed to generate a scale score.

Across the core content teachers at JCPS i3 schools (n = 94), 59% of the respondents reported more positive than negative perceptions about the effectiveness of the course assignment process (M = 10.39, SD = 2.79). For data display purposes, item ratings were grouped into negative and positive response categories (i.e., those responses rated at a 1 or 2 were considered "negative" while those rated at a 3 or 4 were considered "positive"). Figure 2 displays the percentage average across the i3 schools of teachers with negative and positive responses for the Course Assignment Process scale.

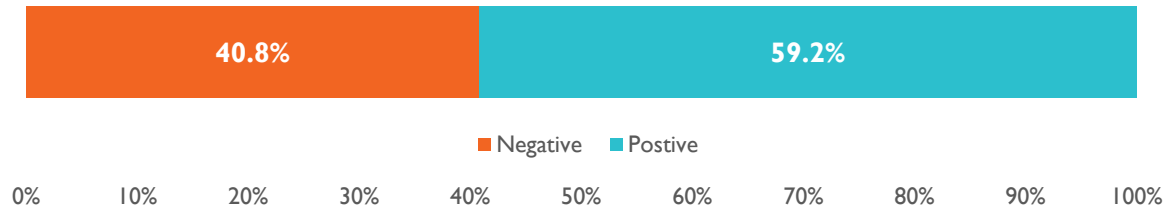


Figure 2. Distribution of teacher responses for the Course Assignment Process scale.

Although the majority of respondents (59%) reported positive views about the course assignment process within their schools, differences existed in ratings across the individual items making up the Course Assignment Process scale. On average, teachers had positive views about the following statements: "My school has effective practices in place to successfully intervene with students who are struggling in a course" (63%); "My school has effective practices in place to move students up to a higher level of course when they have been successful" (62%); and "My school has a clear process for identifying students early when they are struggling" (60%). Although over half (52%) had a positive response to the item, "My school has a course assignment process that results in the best placement for students," 48% had negative responses to the item. These findings suggest that teachers believe their system effectively identifies and intervenes when students are struggling, but students may not be assigned to the correct course based on the process.

Impact of Trimester Scheduling on Struggling and Advanced Students. When asked to comment on how the trimester affected struggling and advanced students, interviewed counselors indicated that they could not see a major impact on struggling students, and one shared that the trimester system was actually a disadvantage for advanced students. A counselor said that the trimester schedule did not help students in preparing to take the ACT exam and that the upperclassmen were primarily taking year-long classes. This counselor also added that she feared some teachers may not be able to make adequate lesson plans for a 70-minute period. This counselor explained, however, that the trimester schedule has allowed for "flexibility and change" because it "allows us to meet students' needs on an immediate basis." Although, because of that

flexibility, she added that the master schedule changed every trimester, which caused many logistical challenges. The other counselors concurred with those statements.

One counselor also stated that because of the schedule changes, a student could end up with three different teachers for the same subject in one year, which again, causes inconsistency for the students. For struggling students, a counselor said that she thought the opportunity to retake courses multiple times actually increased students' opportunities to fail. Their expectation is now that they have multiple times to pass the class, they do not need to work as hard. While the reverse seems to be true for advanced students as one counselor said that these students were "penalized" by the trimester schedule because they have fewer opportunities for electives or to take classes from the career pathway courses offered by the school. Another counselor said the trimester was "irrelevant" for advanced students because they were in year-long courses.

In terms of the graduation rate, one counselor said that the trimester allowed students to earn additional credits, which they may not have had the opportunity to earn before, but there were many interventions happening at the school so changes in the graduation rate could not be attributed solely to the trimester schedule. Similarly, another counselor explained that everything changed once end-of-course exams were implemented, and the exams had more of an impact on the graduation rate than the schedule.

Similarly, teachers on the 2015 Teacher Survey were asked if they thought that the trimester schedule addressed the needs of struggling students in their school. Of the 87 respondents, teachers' perceptions were that the trimester schedule was not meeting the needs of struggling students with 61% (n = 34) indicating that it did not address the needs of those students while 39% (n = 53) reported that it did meet their needs.

Students were also asked questions on the 2015 Student Survey about the extent to which they believed they had opportunities to change courses if they were struggling and whether they could make up credits for courses they may not pass. Over three quarters (82%) of the students agreed to some extent that there were opportunities available to them to make up credits for courses that they do not pass. Just over half (56%) agreed that they are able to switch to different classes if they are struggling. Thus, it seems that the majority of students perceive that their schools are providing support for them if they are struggling. Table 7 provides student responses to these items.

Table 7. Student Perceptions of Support if They are Struggling

Items	Disagree a Lot	Disagree a Little	Agree a Little	Agree a Lot
In general, if I am struggling in class, I have the opportunity to change to a different course.	17.0%	27.1%	43.5%	12.3%
If I do not pass a class, there are opportunities for me to make up the credit for that class.	5.1%	12.6%	51.0%	31.3%

Teachers on the 2015 Teacher Survey were asked if they thought that the trimester schedule addressed the needs of advanced or accelerated students in their school. Of the 87 respondents, 63% (n = 55) indicated that the trimester schedule did not address the needs of advanced or accelerated students while 37% (n = 32) reported that it did meet their needs.

Students were also asked questions on the 2015 Student Survey regarding opportunities to take classes outside their core courses (e.g., foreign languages, music, art, and theater) as well as opportunities to take honors or advanced classes. The majority (81%) of the student respondents agreed either a little or a lot that opportunities exist to take classes outside of the core courses and 80% agreed a little or a lot that they have the ability to take honors or advanced courses. Thus, it seems that students perceive that their schools offer expanded and accelerated opportunities for them. Table 8 shows student responses to these items.

Table 8. Student Perceptions of Expanded or Accelerated Learning Opportunities

In general, . . .	Disagree a Lot	Disagree a Little	Agree a Little	Agree a Lot
I have opportunities to take classes outside my core classes (e.g., foreign language, music, art, and theater).	5.7%	13.8%	46.6%	33.9%
I have opportunities to take honors or advanced classes.	7.4%	12.7%	40.7%	39.2%

Principals were asked on the implementation survey to describe success factors and challenges that have helped address the needs of all students in their schools, which are listed in Table 9. The successes and challenges were similar across the i3 schools. Collaboration, including PLCs and time, were listed as success factors as well as extended learning opportunities and standards-based grading. In regards to challenges, most of the comments related to the student body: students who are below grade level, truancy issues, and student transiency. One comment related to teacher experience and efficacy with the principal sharing that many staff members were nontenured and had alternative certifications.

Table 9. Success Factors and Challenges in Addressing the Needs of All Students

Success Factors	Challenges
PLCs	Different levels of students make it challenging to teach and reach all students
Time for teachers to plan	Students [who are] multiple grade levels beneath [the] standards
Weekly formative assessment data to assist with progress monitoring and interventions	Truancy
Collaborative efforts	Students are transient; about 250 students come and go each year.
Extended learning opportunities	Teachers' experience level and efficacy due to many nontenured staff members and alternative certifications.
Hired interventionists	
Professional development for teachers	
Standards-based grading	
Tier II instructions	

Objective C: Student Perceptions of Academic Challenge

Student perceptions of academic challenge were assessed by the CSS and the 2015 Student Survey. Additionally, teachers were asked to respond to questions regarding students' academic challenge and academic engagement on the 2015 Teacher Survey. Academic challenge is defined as how easy or difficult a course is perceived by students and how motivated teachers think their students are to succeed.

CSS Index on Student Perceptions of Academic Challenge. The evaluators and JCPS research staff selected an index consisting of three items from the student CSS to serve as an indicator of student perceptions of academic challenge. Table 10 shows the percentages of students who agreed or strongly agreed with the index items. Overall, about 67% of students agreed that they were academically challenged, which was about a 2% decrease from Year 4, and was 8% below the end-of-project target (75%).

At the item level, findings from the Year 5 data were consistent with the findings from previous years. The item, "My teachers provide academically challenging content" received the highest levels of agreement (81%), followed by "Teachers at my school assign meaningful homework on a regular basis" (65%), and "I think school is fun and challenging" (56%). The item, "I think school is fun and challenging" received the lowest rating in Year 5 as compared to previous years.

Table 10. Student Responses (*Agree* or *Strongly Agree*) on the Academic Challenge Item Index

CSS Academic Challenge Items	School Mean				
	Year 1	Year 2	Year 3	Year 4	Year 5
I think school is fun and challenging.	56.9%	59.4%	60.8%	54.9%	56.1%
My teachers provide academically challenging content.	76.0%	77.4%	78.8%	78.4%	80.6%
Teachers at my school assign meaningful homework on a regular basis.	66.1%	61.5%	65.7%	62.7%	64.8%
Mean % of Agreement	**66.3%**	**66.1%**	**68.4%**	**65.3%**	**67.1%**

Figure 3 shows the mean of the percentages of students who agreed or strongly agreed with the item index across all six i3 schools. Overall, all of the project schools were still below the end-of-project target by the end of Year 5. As compared to previous years, the progress made from Year 2 to Year 3 disappeared in Year 4. This decrease was largely contributed by the significant drop observed within Western High School between Years 3 and 4 (21% decrease).

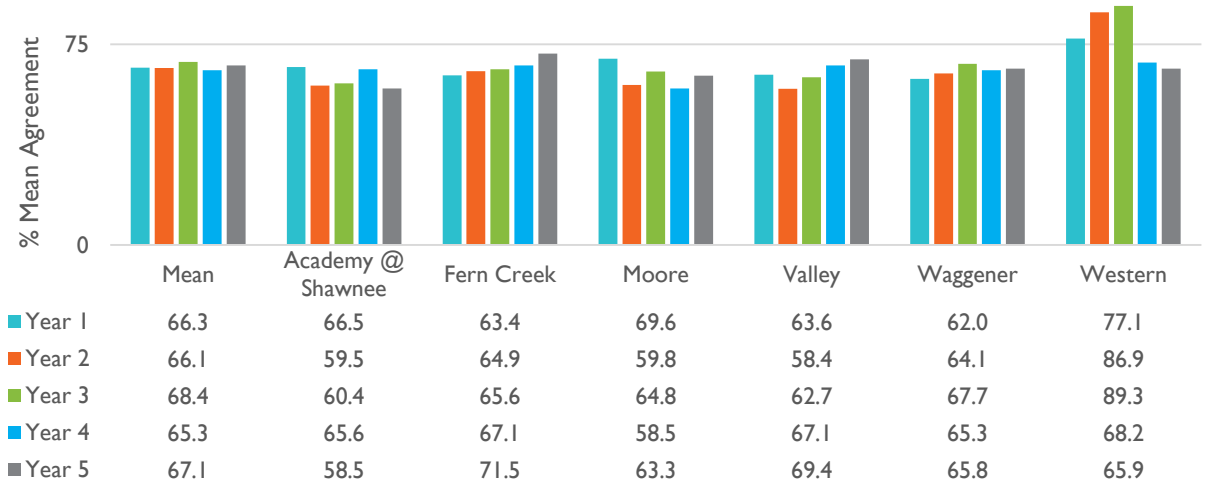


Figure 3. Mean percentage of student perceptions of the Academic Challenge Item Index by school.

Table 11 shows the mean of the index ratings of students' perceptions of academic challenge. The analysis of mean differences by using a one-way ANOVA confirmed that schools did differ in ratings on student perceptions of the Academic Challenge Item Index, $F(5, 4637) = 13.16$, $p < 0.001$, $\eta^2 = 0.01$.[10] Post hoc comparisons were conducted to compare the mean ratings across all schools. Fern Creek Traditional High School, Valley Traditional High School, Waggener High School, and Western High School had a similar level of academic challenge reported, while Academy @ Shawnee had a significantly lower mean rating as compared to all of the other i3 schools, except Moore Traditional High School ($p < 0.05$). The means and standard deviations at the item-level for each i3 school are reported in Appendix G.

Table 11. Mean Ratings of Student Perceptions of the Academic Challenge Item Index by School

School	*n*	*M*	*SD*
Academy @ Shawnee	351	2.56	0.63
Fern Creek Traditional High School	1,380	2.76	0.52
Moore Traditional High School	805	2.63	0.60
Valley Traditional High School	871	2.78	0.60
Waggener High School	718	2.70	0.57
Western High School	518	2.68	0.54
Across All i3 Schools	**4,643**	**2.71**	**0.57**

[10] To interpret η^2, Ferguson (2009) suggests that a value of 0.04 was the recommended minimum effect size representing a "practically" significant effect for social science data; a value of 0.25 presents a moderate effect size; and a value of 0.64 presents a strong effect size.

Subgroup analyses using one-way ANOVAs and independent sample *t*-tests were conducted to examine whether the mean ratings of student perceptions of the Academic Challenge Item Index differed across the students' demographic characteristics. Specifically, evaluators examined differences in perceptions by gender, LEP[11] status, grade level, FRPM status, and race/ethnicity. Several demographic variables moderated students' perceptions of academic challenge. Post hoc comparisons were conducted when appropriate. In summary, the analyses revealed the following results:

- Male students and female students did not differ in their perception of academic challenge, $t(4641) = -0.387$, $p = 0.698$, Cohen's $d = 0.00$.[12]
- LEP students perceived a higher level of academic challenge than did non-LEP students, $t(4641) = -5.895$, $p < 0.001$, Cohen's $d = 0.52$.
- Students from higher grade levels perceived a higher level of academic challenge than did students from lower grade levels, $F(3, 4626) = 5.97$, $p < 0.001$, $\eta^2 = 0.004$. Specifically, 12th graders reported a higher level of academic challenge than did 10th graders ($p = 0.032$); and 11th graders reported a higher level of academic challenge than did ninth and 10th graders ($p = 0.011$ and $p = 0.002$, respectively).
- Student perceptions of academic challenge did not differ by their FRPM status, $F(2, 4640) = 0.37$, $p = 0.690$, $\eta^2 = 0.000$.
- Student perceptions of academic challenge did differ by students' race/ethnicity, $F(4, 4638) = 9.82$, $p < 0.001$, $\eta^2 = 0.008$. Specifically, Asian students reported higher levels of academic challenge than did students from other racial/ethnic backgrounds, including White, Black, and Hispanic students, as well as students categorized as having "other" racial/ethnic backgrounds ($p < 0.001$, $p < 0.001$, $p = 0.005$, $p < 0.001$, respectively). Additionally, Hispanic students reported a higher level of academic challenge than did White students ($p = 0.026$).

Table 12 shows the changes in students' perceptions of academic challenge over time by subgroups. From Year 1 to Year 5, the mean increased for females; students receiving reduced-price meals and students with paid meal status; White and Asian students; and 11th and 12th graders.

[11] JCPS' policy is that any student who does not pass an English proficiency test is considered a LEP student, which includes English as a Second Language students.

[12] Cohen's *d* is a common effect size estimating the magnitude of the mean differences. In practice, 0.3 is a small effect size, 0.5 is a medium effect size, and 0.8 is a large effect size (Tavakol & Dennick, 2011).

Table 12. Changes in Student Perceptions of Academic Challenge Over Time by Subgroup

Subgroups	Y1		Y2		Y3		Y4		Y5	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Gender										
Male	2.73	0.65	2.71	0.58	2.74	0.58	2.68	0.60	2.71	0.59
Female	2.69	0.61	2.75	0.61	2.72	0.62	2.68	0.57	2.71	0.56
Limited English Proficiency (LEP) Status										
LEP	2.95	0.62	2.94	0.50	2.94	0.52	2.87	0.56	2.96	0.46
Non-LEP	2.70	0.63	2.72	0.60	2.72	0.60	2.67	0.58	2.70	0.58
Meal Status										
Students receiving free meal status	2.74	0.63	2.77	0.60	2.75	0.60	2.69	0.59	2.71	0.58
Students receiving reduced-price meal status	2.65	0.66	2.69	0.58	2.70	0.63	2.68	0.57	2.74	0.55
Students with paid meal status	2.68	0.62	2.67	0.59	2.68	0.58	2.64	0.57	2.71	0.57
Race/Ethnicity										
White	2.66	0.65	2.65	0.61	2.67	0.61	2.65	0.58	2.69	0.58
Black	2.76	0.61	2.80	0.59	2.79	0.59	2.70	0.59	2.70	0.58
Hispanic	2.81	0.56	2.77	0.53	2.72	0.55	2.71	0.55	2.79	0.53
Asian	2.93	0.53	2.65	0.61	2.93	0.43	2.89	0.47	2.99	0.47
Grade Level										
9th grade	2.75	0.62	2.76	0.58	2.79	0.57	2.70	0.58	2.68	0.59
10th grade	2.69	0.63	2.67	0.61	2.69	0.60	2.68	0.54	2.67	0.59
11th grade	2.68	0.63	2.80	0.61	2.70	0.62	2.65	0.89	2.76	0.56
12th grade	2.71	0.63	2.69	0.60	2.73	0.61	2.98	0.63	2.74	0.54
Overall	**2.71**	**0.63**	**2.73**	**0.60**	**2.73**	**0.60**	**2.68**	**0.58**	**2.71**	**0.57**

On the 2015 Student Survey, students were asked to reflect on the extent to which their core courses (i.e., English, math, science, and social studies) motivated them to learn. Figure 4 shows how the core courses compared to each other and how student responses differed from Years 3 and 4. In Year 5, nearly three quarters of the students (74%) agreed that English motivated them to learn more about the subject, which increased from 64% in Year 3 and 65% in Year 4. Math and science were fairly similar in the percentage of students who were motivated to learn more about those subjects (54%). Although math decreased by about 4%, science stayed relatively stable. However, less than half the students (47%) agreed that social studies motivated them to learn more, but the percentage remained relatively stable from Year 4 and still showed an increase from Year 3 (45%).

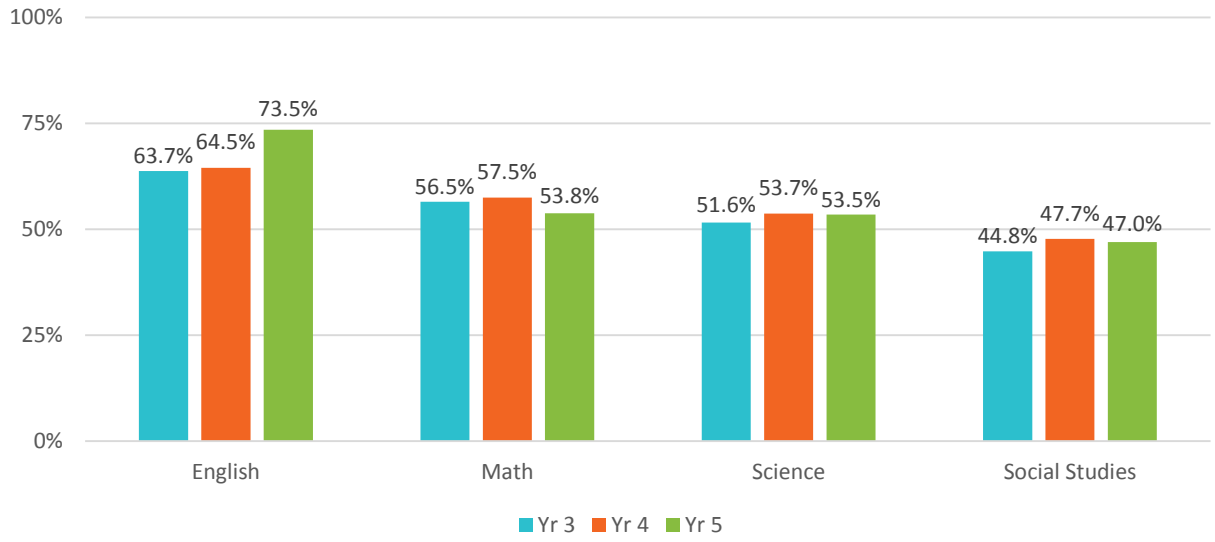


Figure 4. Extent to which the core content courses motivate students to learn more about the subject

To learn more about which courses were found to be difficult or challenging, students were asked how much they agreed or disagreed that the core content areas were too hard for them. Figure 5 shows students' level of agreement that their core content courses were too hard in Years 3, 4, and 5. Across all of the content areas, the percentage of students reporting that the classes were too hard increased from Year 4 to Year 5. Approximately a fifth of the students reported that English (21%), science (22%), and social studies (20%) were too hard while 32% reported that math was too hard.

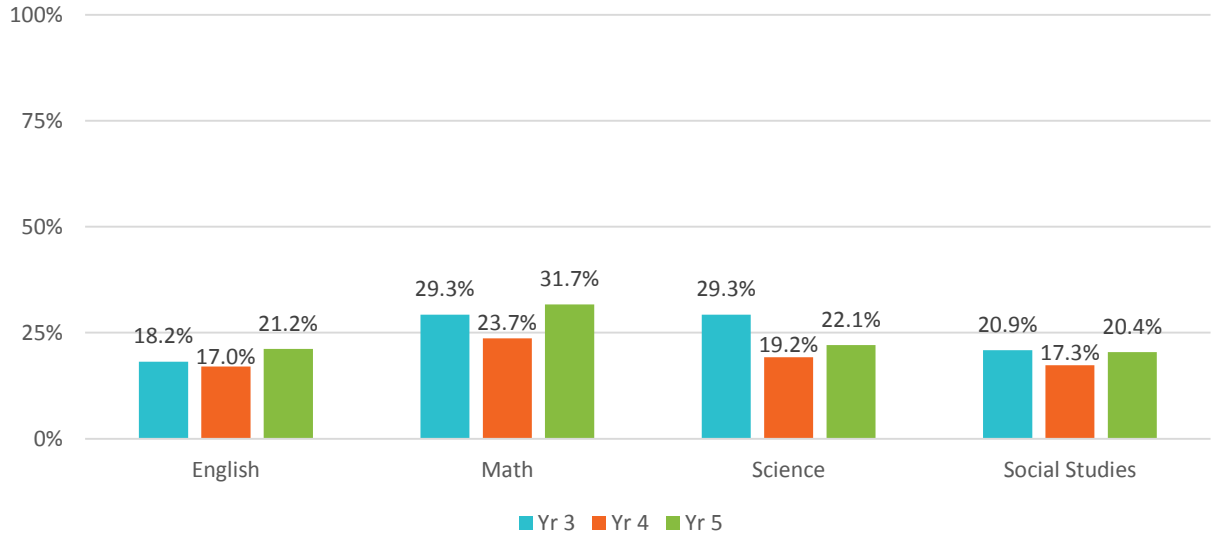


Figure 5. Extent to which the core content courses are perceived as being too hard by students

Teacher Perceptions of Student Academic Challenge. The Student Academic Challenge scale on the 2015 Teacher Survey consisted of six items that measured teachers' perceptions of the extent that students are challenged in their schools. Items in this section include:

- In general, students seem to enjoy my school.
- In general, high grades at my school are viewed as an indicator of easy course work.
- In general, students seem to be bored at my school.
- In general, students at my school perceive challenge as a way to go beyond expectations.
- In general, high grades at my school are viewed as an indicator of mastering high standards.
- In general, students do well in my school.

The internal consistency reliability (Cronbach's α) estimate of the Student Academic Challenge scale was 0.53. Respondents selected answer choices on a 4-point Likert scale (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Agree,* and 4 = *Strongly agree*).

Several items on the Student Academic Challenge scale tended to have high teacher perception ratings, including "In general, students seem to enjoy my school" (69%) and "High grades at my school are viewed as an indicator of mastering high standards" (76%). Furthermore, nearly three-quarters of the teacher respondents disagreed or strongly disagreed with the statement, "High grades at my school are viewed as an indicator of easy course work" (67%). This indicates that teachers perceive the courses as rigorous and that grades are not a reflection of coursework which has been designed to be easy for students.

However, over a third (36%) of the teachers agreed that "In general, students seem to be bored at my school." Similarly, only 34% of the teachers responded that "Students at my school perceive challenge as a way to go beyond expectations." Interestingly, the teachers were split when asked if students do well at their schools with just under half (44%) disagreeing to some extent with that statement while 56% agreed to some extent (see Table 13 for teachers' perceptions of student academic challenge).

Table 13. Teacher Perceptions of Student Academic Challenge by Item

In general, . . .	*N*	*M*	*SD*
students seem to enjoy my school.	86	2.72	0.64
high grades at my school are viewed as an indicator of easy course work.	86	2.34	0.59
students seem to be bored at my school.	86	2.38	0.58
students at my school perceive challenge as a way to go beyond expectations.	86	2.24	0.72
high grades at my school are viewed as an indicator of mastering high standards.	86	2.84	0.67
students do well in my school.	86	2.55	0.61

Minor variations also existed among the i3 project schools (see Table 14 to see how the schools compared to one another on the Student Academic Challenge scale). Because of the small sample size for each school, these findings should be interpreted with caution, but subgroup analyses reveal that teachers' perceptions of student academic challenge differed significantly by school. Post hoc comparisons suggested statistically significant differences between Fern Creek and Moore Traditional High Schools ($p = 0.010$) and Waggener and Moore Traditional High Schools ($p = 0.022$). Specifically, Fern Creek ($M = 16.38$, $SD = 3.07$) and Waggener ($M = 15.80$, $SD = 1.01$) Traditional High Schools reported higher ratings than Moore Traditional High School ($M = 13.75$, $SD = 1.61$).

Table 14. Teacher Perceptions of Student Academic Challenge by School

School	*N*	*M*	*SD*
Academy @ Shawnee	10	15.10	1.91
Fern Creek Traditional High School	13	16.38	3.07
Moore Traditional High School	16	13.75	1.61
Valley Traditional High School	24	14.63	1.81
Waggener High School	15	15.80	1.01
Western High School	8	15.50	2.07
Across All i3 Schools	**86**	**15.19**	**1.58**

Teacher Perceptions of Student Academic Engagement. The Student Academic Engagement scale, consisting of six items, measures teachers' perceptions of the extent that students are academically engaged in their school. Items included in this section are:

- Teachers at my school challenge students academically.
- Teachers at my school encourage students to go beyond stated expectations.
- Teachers at my school involve students in setting expectations.
- Teachers at my school involve students in planning lessons.
- Teachers at my school involve students in developing criteria for assessing their assignments.
- Teachers at my school work with disenfranchised students to help them feel more connected to school.

The internal consistency reliability (Cronbach's α) estimate of the Student Academic Engagement Scale was 0.81. Respondents selected answer choices based on a 4-point Likert scale (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Agree,* and 4 = *Strongly agree*) with a summed scale range of six to 24 points.

Core content teachers at JCPS i3 schools ($n = 86$), on average, responded more positively than negatively about student academic engagement ($M = 16.31$, $SD = 2.72$). For data display

purposes, item ratings were grouped into negative and positive response categories (i.e., those responses rated at a 1 or 2 on the Likert scale were considered "negative" while those rated at a 3 or 4 were considered "positive"). Figure 6 displays the percentage average across the i3 schools of teachers who had negative or positive responses on the Student Academic Engagement scale.

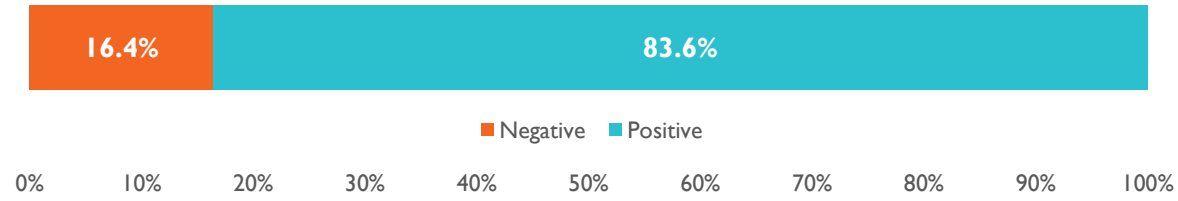


Figure 6. Distribution of teacher responses for the Student Academic Engagement scale

Overall, nearly two thirds (63%) of the respondents demonstrated positive agreement on the Student Academic Engagement scale. The percentage of teachers responding with a rating of *agree* or *strongly agree* for students' academic engagement is more than 80% on two items: "Teachers at my school challenge students academically" (81%) and "Teachers at my school work with disenfranchised students to help them feel more connected to school" (86%). Additionally, nearly 80% of teachers agreed with the item, "Teachers at my school encourage students to go beyond stated expectations" (79%) and over 60% agreed with the item "Teachers at my school involve students in setting expectations" (65%).

For the other two items, teachers' perceptions of students' academic engagement tended to be more negative. For example, 56% of teachers disagreed with the item, "Teachers at my school involve students in developing criteria for assessing their assignments," while nearly three quarters (76%) disagreed with the statement, "Teachers at my school work to involve students in planning lessons."

Minor variations also existed among the i3 project schools (see Table 15 to compare schools on the Student Academic Engagement scale). Because of the small sample size for each school, these findings should be interpreted with caution, but subgroup analyses reveal that teachers' perceptions of students' academic engagement differed significantly by school. Post hoc comparisons suggested statistically significant differences between the Academy @ Shawnee and Moore Traditional High School ($p = 0.046$) and Valley Traditional High School ($p = 0.026$). Specifically, the Academy @ Shawnee ($M = 17.50$, $SD = 2.07$) reported higher ratings than Moore Traditional High School ($M = 15.38$, $SD = 3.18$) and Valley Traditional High School ($M = 15.29$, $SD = 2.53$).

Table 15. Teacher Perceptions of Student Academic Engagement by School

School	*N*	*M*	*SD*
Academy @ Shawnee	10	17.50	2.07
Fern Creek Traditional High School	13	17.38	3.12
Moore Traditional High School	16	15.38	3.18
Valley Traditional High School	24	15.29	2.53
Waggener High School	15	16.93	1.91
Western High School	8	16.88	2.64
Across All i3 Schools	**86**	**16.56**	**2.58**

Objective D: Student Perceptions of Academic Self-Efficacy

Objective D seeks to increase students' positive perceptions of their academic self-efficacy. This was measured on the 2015 Student Survey by asking students questions about how well they are doing in school. The majority of students (88%) reported that they are good students, while 28% responded that they were not doing well in school. Therefore, some students indicated that while they perceived themselves to be good students, they were not doing well in school. This could be due to a number of factors, including interpretations of what being a "good student" means (i.e., staying out of trouble or getting good grades), or students may try hard but still find that they are not doing well.

To examine student perceptions more deeply, a series of items were asked regarding their academic self-efficacy. Table 16 shows the extent to which students were sure "things would work out" on the items related to this construct. Less than a fifth of the students were *very sure* about any of the items. However, over 70% were *mostly* or *very sure* on two of the items: (1) "When you have to learn something new at school" (80%), and (2) "when you have to do an activity for the first time (73%)." Students were less likely to be sure of items related to public speaking (39% were *not sure at all* or *mostly not sure*) or when they were having trouble with their school work (42% were *not sure at all* or *mostly not sure*).

Table 16. Student Perceptions of Academic Self-Efficacy

How sure are you that things will work out . . .	Not Sure at All	Mostly Not Sure	Mostly Sure	Very Sure
when you have to learn something new at school?	4.7%	15.8%	62.4%	17.1%
when you have to give a talk in class?	13.3%	26.1%	45.1%	15.4%
when you have to do an activity for the first time?	5.7%	19.2%	59.2%	15.9%
when you are having trouble with your school work?	8.9%	32.7%	48.6%	9.9%
when you have to figure out something by yourself?	7.0%	25.4%	53.1%	14.5%

Objective E: Student Core Course Completion Rates

As mentioned previously, all of the core courses were grouped into 10 categories:

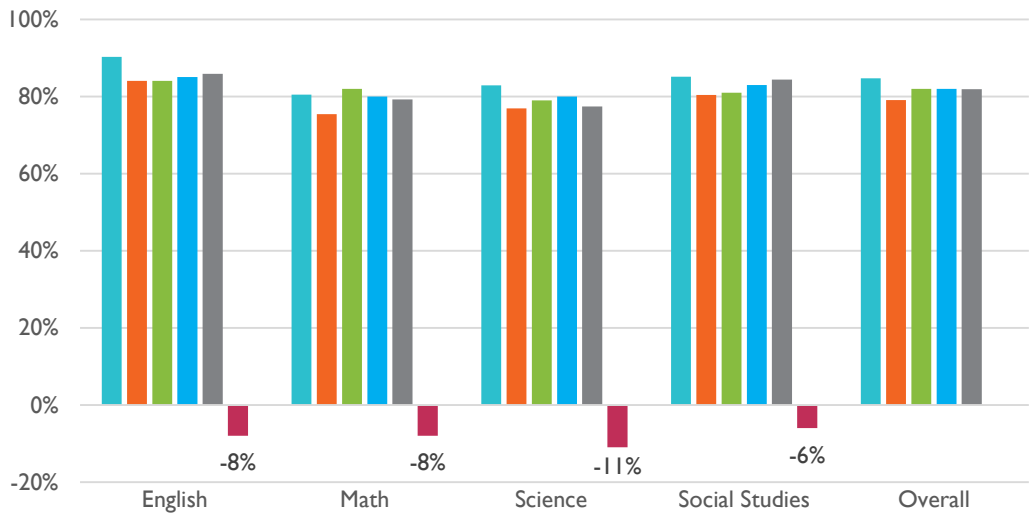
1. English,
2. Algebra,
3. Geometry,
4. Senior math,
5. Life science,
6. Earth/space science,
7. Physical science,
8. Social studies,
9. U.S. history, and
10. World civilization

Within each core course domain, three types of classes are identified: (1) Comprehensive, (2) honors, and (3) others (e.g., AP, advanced, and dual credit). Additionally, the core courses are subsequently grouped into four subject domains: (1) English, (2) math, (3) science, and (4) social studies (see Appendix E for a listing of the core course classifications). For this report, the analyses were conducted at the subject and core course level. The yearly project targets were defined by JCPS based on the Year 1 pass rates and are used to examine i3 schools' status in terms of meeting project targets (see Table 17).

Table 17. Project Yearly Course Passing Targets

Subject	Year 1 Pass Rate (Baseline)	Yearly Increase Targets	Year 2 Target	Year 3 Target	Year 4 Target	Year 5 Target
English	90.0%	1.0%	91.0%	92.0%	93.0%	94.0%
Math	80.5%	2.0%	82.5%	84.5%	86.5%	87.5%
Science	82.9%	1.5%	84.4%	85.9%	87.4%	88.4%
Social Studies	85.1%	1.5%	86.6%	88.1%	89.6%	90.6%

With regard to the analysis, since students were nested within schools, a series of Generalized Linear Mixed Models (GLMM) were conducted to examine whether student pass rates varied across subgroups after considering school-level variation. Figure 7 and Table 18 shows the pass rates for subjects, core courses, and subcategories. The overall pass rate across the i3 schools was approximately 82%; the same as the past two years. Specifically, the pass rates for English, math, science, and social studies were 86%, 79%, 77%, and 84%, respectively. As compared to project's yearly targets, i3 students did not reach the targeted levels in Year 5 (6% to 11% below the targets). As compared to Year 4 findings, i3 students showed one percentage point increase in English and social studies, but exhibited one and three percentage point decreases in math and science, respectively.



	English	Math	Science	Social Studies	Overall
Year 1	90%	81%	83%	85%	85%
Year 2	84%	75%	77%	80%	79%
Year 3	84%	82%	79%	81%	82%
Year 4	85%	80%	80%	83%	82%
Year 5	86%	79%	77%	84%	82%
Difference from the Y5 performance target	-8%	-8%	-11%	-6%	

Figure 7. Longitudinal trend of student core course pass rates from Year 1 to Year 5

When examining all 10 core courses, similar to what were found in previous years, students continued to struggle the most in their Geometry courses (73%, 75%, 75%, and 75% pass rates for Year 2, 3, 4, and 5, respectively). As compared to Year 4, students showed noticeable regression in their Life Science courses (a decrease of 6 percentage points). Across the core courses, similar to those reported in previous years, student pass rates were higher for students taking honors (80%) and other (94%) classes relative to students enrolled in comprehensive (79%) classes. These findings are not surprising as students enrolled in honors courses are more likely to pass their courses than students taking general courses.

Table 18. Percentages of Students Passing Core Courses by Subcategories

Subject	Core Course	All		Core Course Subcategory					
				Comprehensive		Honors		Other	
		N	%	*n*	%	*n*	%	*n*	%
English	***Overall English***	6,936	85.9%	3,765	83.0%	1,797	85.0%	1,374	95.3%
Math	*Geometry*	1,757	74.2%	848	65.0%	562	76.7%	347	92.5%
	Algebra	2,828	78.0%	1,566	73.4%	961	79.6%	301	96.7%
	Senior Math	966	92.0%	450	89.6%	116	96.6%	400	93.5%
	Overall Math	5,551	79.2%						

Subject	Core Course	All		Core Course Subcategory					
				Comprehensive		Honors		Other	
		N	%	n	%	n	%	n	%
Science	*Life Science*	2,647	75.3%	1,042	73.1%	961	68.5%	644	88.8%
	Earth/Space Science	1,611	78.3%	930	71.4%	580	86.0%	101	98.0%
	Physical Science	1,144	81.0%	832	77.2%	133	88.0%	179	93.9%
	Overall Science	5,402	77.4%						
Social Studies	*Social Studies*	1,431	78.8%	848	77.7%	244	66.8%	339	90.3%
	U.S. History	1,271	88.2%	597	85.6%	373	87.1%	301	94.7%
	World Civilization	1,472	86.5%	834	86.6%	387	78.8%	251	98.4%
	Overall Social Studies	4,174	84.4%						
OVERALL		**22,063**	**81.9%**	**11,712**	**78.5%**	**6,114**	**80.2%**	**4,237**	**93.8%**

Student Pass Rates by School

The results of the chi-square tests[13] suggest that some schools had higher pass rates than others, χ^2 (5) = 373.24, $p < 0.001$, Somer's $d = 0.04$. For instance, as shown in Table 19, Moore Traditional High School had the highest overall pass rate (88%), while Western High School had the lowest overall pass rate (72%). As compared to the Year 5 project targets, Moore Traditional High School was 0.6% shy from the target in science and was 1% above the target in social studies. The detailed descriptive data for each core course by school are reported in Appendix F.

Table 19. Pass Rates by Subject Area by School

Subject	Academy @ Shawnee		Fern Creek		Moore		Valley		Waggener		Western		Year 5 Target
	n	%	n	%	n	%	n	%	n	%	n	%	
English	686	82.7%	2071	89.1%	1,064	88.9%	1,080	82.9%	1,195	84.2%	840	83.6%	94.0%
Math	457	79.0%	1601	82.8%	1,068	84.6%	865	84.0%	825	76.2%	735	61.5%	87.5%
Science	538	72.1%	1518	78.0%	876	87.8%	693	77.8%	678	80.8%	901	66.5%	88.4%
Social Studies	392	70.2%	912	86.4%	783	91.6%	772	90.0%	644	83.7%	509	75.9%	90.6%
OVERALL	**2,073**	**76.7%**	**6,102**	**84.3%**	**3,791**	**88.0%**	**3,608**	**83.4%**	**3,342**	**81.4%**	**3,147**	**71.9%**	**--**

*Results of chi-square tests were significant at the level of 0.05 across all subject areas with a small effect size (*ES* = 0.01-0.10). Detailed chi-square tests statistics are reported in Appendix F.

Subgroup Analyses. Analyses were conducted for six subgroups: (1) trimester schedule status (i.e., two-term versus three-term courses); (2) gender; (3) LEP status; (4) grade level;

[13] Pearson Chi-Square tests are reported. Effect sizes were estimated based on Somers' *d* (Ferguson, 2009): a value of 0.2 is small effect size; a value of 0.5 is moderate, and a value of 0.8 is large.

(5) FRPM status; and (6) race/ethnicity. Detailed statistical results, including coefficients (β) and odds ratios (*OR*)[14] are reported in Appendix F. Key findings of the subgroup analyses are summarized in the following sections.

Student pass rates were higher among students taking three-term courses than those taking two-term courses. The overall pass rate for students taking three-term courses and two-term courses was 82% and 96%, respectively. Results of the GLMM indicated that the difference in pass rates were statistically significant, $\beta = -1.26$, $p < 0.001$, $OR = 0.28$. Similar findings are shown in all subject areas, except science. Specifically, the odds ratio of passing English, math, and social studies was 0.30, 0.08, and 0.20 times higher for students taking three-term courses (i.e., trimester) in comparison with students taking two-term courses (i.e., semester). Interestingly, although no difference was found with the overall science courses, differences were observed in the sub-subject areas for the science courses. For instance, the pass rate for Life Science was higher among the three-term courses ($OR = 0.40$) as compared to two-term courses; however, the pass rate for Earth/Space Science courses was higher among two-term courses ($OR = 7.63$) as compared to three-term courses. Taken together, trimester scheduling seemed to have overall positive effects in English, math, social studies, and a sub-area of the science courses (i.e., Life Science), but had a reversed effect in another sub-area of science (i.e., Earth/Space Science).

The pass rates were lower for males than for females. The overall pass rates for males and females were 78% and 86%, respectively. The GLMM results suggested that the difference in pass rates was statistically significant, $\beta = 0.53$, $p < 0.001$, $OR = 1.69$. In other words, the odds of passing the courses was 1.69 times higher if the student was a female. This difference was consistent across all subjects and core courses, except Geometry and Senior Math, with the *OR*s ranging from 1.17 to 1.99.

There was no difference in pass rates across all subject and core courses between LEP and non-LEP students. The overall pass rate for students with LEP and without LEP was 84% and 82%, respectively. The GLMM results showed that such a difference was not statistically significant. This finding is consistent across all subject and core courses.

Twelfth graders had higher pass rates in all subject areas in comparison with ninth, 10th, and 11th graders. The overall pass rate for ninth, 10th, 11th, and 12th graders was 79%, 81%, 82%, and 90%, respectively. Using 12th-grade students as the reference group, GLMM results indicated that 12th graders had a higher overall pass rate than ninth, 10th, and 11th graders, with *OR*s ranging from 0.37 to 0.43. A similar pattern was found in all subject areas as well as the majority of the core courses with few exceptions.

Students with free meal status had lower pass rates in all subject areas in comparison with students with paid meal status; there was no difference between students with reduced-price meal status and students with paid meal status. The overall pass rates for students with free, reduced-price, and paid meal status was 81%, 84%, and 88%, respectively. Specifically, results

[14] OR = the odds of passing the course was [odds ratio] times higher (or lower) if the student was a "non-reference group" in comparison with "the reference group".

of GLMM indicated that the odds of passing core courses were 0.64 times lower for students with free meal status in comparison with students with paid meal status. Similar patterns were observed across all subject areas and the majority of the core course areas, with *OR*s ranging from 0.30 to 0.72.

Student pass rates varied by race. The overall pass rate for students who are White (or Caucasian), Black (or African American), Hispanic, Asian, as well as those categorized into an "other" group (e.g., American Indian, Pacific Islander, and multiracial) are 83%, 79%, 87%, 95%, and 85%, respectively. Specifically, the odds of passing courses was 0.76 times lower for Black students in comparison to White students. In contrast, the odds of passing courses was 3.34 and 1.46 times higher for Asian and Hispanic students in comparison to White students. Examination of racial/ethnic differences across all subject areas revealed similar patterns. In particular,

- Compared to White students, Black students had lower pass rates in math (*OR* = 0.62) and science subjects (*OR* = 0.70).
- Compared to White students, Hispanic students had higher pass rate in math, science, and social studies, with *OR*s ranging from 1.52 to 1.84.
- Compared to White students, Asian students had higher pass rates in math (*OR* = 5.33) and social studies (*OR* = 13.38).
- There were no differences between White students and students in the "other" racial/ethnic group across all core courses and subject areas.

Objective F: Student Perceptions of Support for Learning from Teachers

Objective F is designed to measure changes in students' perceptions regarding the support for learning they have received from teachers. During Years 1 through 4, the CSCI Support for Learning scale was used as an indicator of students' perceptions of teachers' support for their learning. As explained previously, in Year 5, JCPS decided to not use the CSCI because the CSS collected similar information. Thus, McREL evaluators conducted a crosswalk of the CSCI and CSS items and requested that JCPS provide data on the CSS items that were similar to the CSCI items.

One item, "My teachers respect my opinion in class even if it disagrees with their opinions," from the student CSS was used as an indicator of students' perceptions of teachers' support of student learning. Of the valid student responses (n = 4,633), the mean of the item was 2.89 (SD = 0.70). As illustrated in Figure 8, students reported feeling more positive than negative about the Support for Learning scale item.

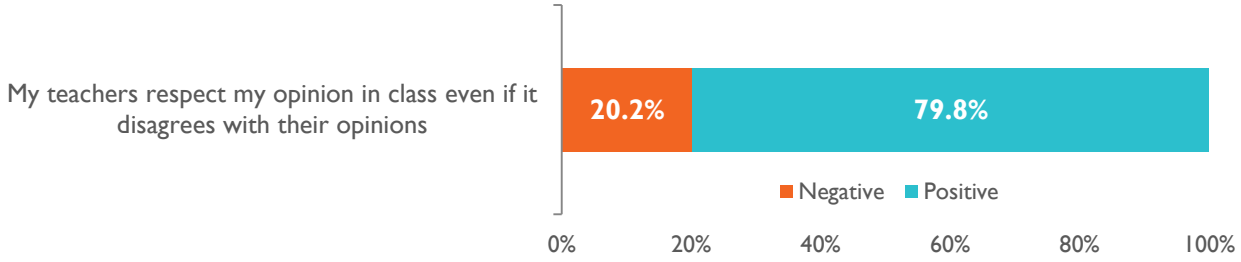


Figure 8. Distribution of student responses for the Support for Learning scale.

Note. Each CSS item was measured on a 4-point Likert scale (1= *Strongly disagree*, 2 = *Disagree*, 3 = *Agree*, and 4 = *Strongly agree*), ratings of 1 and 2 were grouped as a negative response and ratings of 3 and 4 were grouped as a positive response.

The examination of between-school differences in the Support for Learning subscale suggests that, in Year 5, schools varied in their levels of support for learning, $F(5, 4627) = 7.61$, $p < 0.001$, $\eta^2 = 0.008$. In particular, students at Fern Creek Traditional High School perceived a significantly higher level of support for learning compared to students from other high schools, with the exception of Waggener High School ($p < 0.01$); students from Waggener High School perceived a significantly higher level of support for learning compared to students from Valley Traditional High School ($p = 0.029$).

Subgroup analyses were conducted to assess whether students' demographic characteristics moderated their responses on the Support for Learning subscale. The demographics included gender, grade level, race/ethnicity (i.e., White, Black, Hispanic, Asian, and other racial/ethnic groups), FRPM status, and LEP status. Findings are summarized as follows:

- Student ratings of teachers' support for learning did not vary by gender ($t(4631) = 0.76$, $p = 0.446$, $\eta^2 = 0.000$).
- Student ratings of teachers' support for learning did not differ by FRPM status ($F(2, 4630) = 1.33$, $p = 0.264$, $\eta^2 = 0.001$).
- Students with LEP ($M = 3.02$, $SD = 0.70$) had higher ratings of teachers' support for learning than students without LEP ($M = 2.89$, $SD = 0.70$).
- Student ratings of teachers' support for learning did differ by grade level, $F(3, 4617) = 4.27$, $p = 0.005$, $\eta^2 = 0.003$. Specifically, 12th graders reported a higher level of support for learning from their teachers than did ninth graders ($p = 0.011$).
- Student ratings of teachers' support for learning did differ by race, $F(4, 4628) = 3.65$, $p = 0.006$, $\eta^2 = 0.003$. In particular, Hispanic students reported a higher level of support for learning from their teachers than did White students ($p = 0.048$).

Implementation Fidelity for Scheduling

Each i3 project is required to develop an implementation fidelity rubric for the primary interventions, which has been approved by the national evaluation team. The fidelity score for Project Goal 1 is high as most of the indicators for this project goal have been mandated by JCPS. The indicators for this construct follow:

- Master scheduler assigned
- Five 70-minute courses per day for each of the three 12-week trimesters
- Students are assigned to courses based on data (e.g., academic history and assessment scores)

Each project school was scored individually on these indicators. The scores were aggregated across the schools for one fidelity score. Table 20 shows the full fidelity table and scores. All six i3 project schools received a score of 3 or higher, which indicates that they have implemented this component of the project with fidelity.

Table 20. JCPS Fidelity Measure and Scores for Component 1: Student Scheduling

Key Elements of Component		Operational Definition for Indicator	Data Source(s) for Measuring the Indicator	Data Collection Schedule for the Indicator	Raw Scoring and Scoring Criteria for Fidelity			
					Possible Indicator Score Per School	Scoring Criteria	School Name	Indicator Score
1	Master scheduler assigned to each school	Master scheduler has been assigned	District and school records; interviews with counselors; survey results	Interviews conducted by the evaluation team annually	0-1	*0 = Low* *Master scheduler is not assigned* *1 = High* *Master scheduler is assigned*	Academy @ Shawnee	1
							Fern Creek	1
							Moore	1
							Valley	1
							Waggener	1
							Western	1
2	Five 70-minute courses per day for each of the three 12-week trimesters	Schedules are based on five 70-minute courses per day for each of the three 12-week trimesters	District and school records	Records provided by the district and collected by the evaluation team annually	0-1	*0 = Low* *School schedules do not follow the five 70-minute courses per day schedule* *1 = High* *School schedules follow the five 70-minute courses per day schedule*	Academy @ Shawnee	1
							Fern Creek	1
							Moore	1
							Valley	0
							Waggener	1
							Western	1
3	Students are assigned to courses based on data (e.g., academic history and assessment scores)	Counselors have assigned students to classes based on individual student data	Counselor interviews and survey results	Interviews conducted by the evaluation team annually	0-2	*0 = Low* *No students are assigned based on data* *1 = Moderate* *Freshmen or upperclassmen are assigned based on data* *2 = High* *Freshmen and upperclassmen are assigned based on data*	Academy @ Shawnee	2
							Fern Creek	2
							Moore	2
							Valley	2
							Waggener	2
							Western	2

Key Elements of Component	Operational Definition for Indicator	Data Source(s) for Measuring the Indicator	Data Collection Schedule for the Indicator	Raw Scoring and Scoring Criteria for Fidelity			
				Possible Indicator Score Per School	Scoring Criteria	School Name	Indicator Score
Component Level Score				0-6	*3-6 = High Implementation* *0-2 = Low Implementation*	Academy @ Shawnee	*4*
						Fern Creek	*4*
						Moore	*4*
						Valley	*3*
						Waggener	*4*
						Western	*4*
Implementation with fidelity = At least 67% of the schools have a minimum score of 3 *Implementation without fidelity = Fewer than 67% of the schools have a score of 3 or above*						*100% of the schools have a minimum score of 3; thus, this component has been implemented with fidelity*	

Project Goal 2: Student Engagement in School and College Readiness

The second i3 project goal is to provide a range of personalized supports to students to increase engagement in school and promote college readiness. The primary strategy is to create CAT advisory periods for students that are designed to focus on student engagement in school and college readiness. Additionally, each CAT facilitator, who is a teacher or other appropriate staff member working in the school, is charged with becoming an advocate for the small group of students in that advisory. To measure progress on this goal, a variety of indicators were identified. These indicators include the percentage of students who participate in a CAT advisory period, the percentage of students who meet ACT and PLAN benchmarks, postsecondary enrollment rates, and three scales from the CSS to assess students' perceptions of adult social support, peer social support, and connectedness to their school[15]. CARTs were also asked to complete a survey focused on CAT implementation in the spring of 2015. Table 21 outlines the objectives for Project Goal 2 and the yearly or end-of-project targets, when appropriate.

Table 21. Project Goal 2 Objectives, Performance Measures, and Targets

	Objective	Performance Measure	Target
A	Provide a CAT advisory period for students	Percentage of students who are in an advisory during the academic year	100%
B	Increase students' knowledge of and use of college-ready skills	Percentage of students who reach ACT and PLAN benchmarks in English, reading, math, and science	ACT by subject: English 38% Reading 30% Math 20% Science 19% PLAN by subject: English 50% Reading 32% Math 23% Science 19%
		Percentage of students enrolled in postsecondary institutions in the fall following high school graduation	55%
C	Improve students' sense of social support from adults	CSCI Adult Social Support Scale	3.42
D	Strengthen peer-to-peer relations and perceptions of peer social support	CSCI Peer Social Support Scale	3.52
E	Improve students' perceptions of school connectedness and engagement	CSCI School Connectedness/ Engagement Scale	3.32

This goal was particularly important to JCPS project staff because when the grant started, the state of Kentucky did not have a definition of "college and career readiness". Shortly after the grant

[15] As describe previously, the 2015 CSS indicators replaced the CSCI indicators. Since the CSCI indicators are the recorded performance measures, however, they are still included on the objective table.

was funded, the Kentucky Department of Education transformed the system and called it "College and Career Readiness for All." With this change, the statewide focus shifted towards career readiness, including career and technical education and certifications connected to career pathways.

What the project director would like to concentrate on next is determining a way to measure "work readiness" factors, such as teaching students about punctuality and tenacity. Project staff said, "How do we find the balance between [academics and soft skills]? How do we help kids learn those skills [i.e., work readiness and soft skills]? And, how do we measure these skills?" Project staff continued by explaining the difficulties in accomplishing this,

> *There are so many things that impact a student's test scores. The bigger challenge is figuring out how to [do] that effectively in the research. You can't do one or the other, it has to be both. The challenge is to equip kids with skills they need. The outcomes are so convoluted with other factors. We have so much programming in place. Which lever do you push?*

Objective A: College Access Time (CAT)

CAT advisory periods, led by the CARTs assigned to each school, were fully implemented at all six i3 schools during the 2010-2011 school year (project Year 1). Throughout the past five years, there have been several CART transitions at the schools. For Year 5, two of the six CARTs were new in their positions at the beginning of the year. In the spring of 2015, the six CARTs were asked to complete an online survey to provide insight as to how the CAT advisory periods were operating during the 2014-2015 school year. Of the six CARTs, four surveys were received for a response rate of 67%. Additionally, upon completing the survey, the CARTs were invited to participate in a follow-up interview. Only one CART responded and completed an interview. The following sections highlight relevant information related to CAT implementation at the project schools during the 2014-2015 school year, summarized from information derived from both the spring survey and project staff interviews.

Purpose of CAT[16]. Project staff commented on how the advisories started at the beginning of the project. The CART position was written into the grant with this position being responsible for developing the CAT advisory period curricula and training the teachers. To assist with implementation of CAT, Education Northwest was hired by JCPS to serve as the technical assistance provider. In partnership with JCPS, they put several deliverables together that evolved over time and project staff credit them with putting together meaningful professional development sessions for the CARTs. The first year of the i3 grant was spent training staff to build their capacity as leaders and gain their insight into what an "advisory" should be. Because the district is going to continue support of the CARTs at 19 schools throughout the district, project staff indicated that they believe they have justified the purpose of the CAT advisories.

[16] In past reports, information about CAT Design Teams was included. However, when asked if they have a Design Team, all four of the CARTs responded that the Design Teams are no longer being utilized so the related section has not been included in the Year 5 report.

Over the course of five years, district staff learned several lessons while implementing CAT in the project schools. First, project staff shared that they would develop a better on-boarding system to train new CARTs immediately as there was a lot of turnover with staff. Once the CARTs became trained, they were often promoted to other district positions, such as assistant principals. The CART position gave them experience with curriculum development, working across schools with teachers, as well as having a clear understanding of how to work with high school students. Second, the district would take a more active role in supporting the principal and CART so both understood the expectations and knew what resources were available. According to project staff, the success of the program depends on, in large part, how committed the principal is to the concept and the quality of the lesson that the CART produces.

For sustainability purposes, project staff would also like to update the SharePoint site so it can continue to be used as an online lesson repository for all of the CARTs. Further, they would like to increase professional development and collaboration time. To accomplish this, JCPS district staff plan to utilize the Goal Clarity Coaches, which are in each school at least on a part-time basis. District staff envision the Goal Clarity Coaches as individuals who could organize these types of training.

Efforts have already begun to document the process. JCPS recently created two documents for school leadership: the "*College Access Time Instructional Framework for Schools Leaders*" and "*Jefferson County Public Schools College Access Time Guidelines for School Leaders*." Additionally, Education Northwest created an "I Can Statements" document for JCPS. This document lists objectives, learning outcomes, and example "I Can" statements. The objectives included in the document are listed below:

1. Developing career interests and motivation
2. Supporting application and financial assistance planning
3. Developing college knowledge
4. Developing 21st century skills
5. Building teams and relationships
6. Developing life skills
7. Monitoring students' academic progress
8. ACT preparation
9. Intervening with subject-specific remediation

Table 22 shows the objective, learning outcomes, and example "I Can" statements for the Developing College Knowledge objective.

Table 22. Example "I Can" Statements for Developing College Knowledge

Objective	Learning Outcomes	Example I Can Statements
Developing college knowledge	Students will: 1. Learn how to "survive" college a. E.g. choosing a roommate, registering for classes, finding a tutor, and self-advocacy b. Time management c. Differences between professor's expectations vs. high school expectations (e.g., homework practices and office hours) 2. Develop cognitive skills important for success such as: a. Discussion with adults and with peers b. Application of knowledge to new situations c. Note taking	1. I can explain basic needs for surviving in college that include things like choosing compatible roommates, registering for classes, finding support resources if I am having trouble, and asking for help when I need it. 2. I can describe and demonstrate effective methods of managing time that works for me. 3. I can develop effective arguments to support my opinions using facts and evidence. 4. I can apply things I know to solve problems and make arguments. 5. I can take notes to summarize main points from different types of presentations.

On the spring implementation survey, each CART was asked to rank the four CAT priorities from most to least important. All four of the CARTs ranked "Strengthen peer-to-peer relations and perceptions of peer support, particularly within career themes" as the least important priority. Half of the CARTs ranked "Build knowledge and use of college-ready skills and habits" as the most important priority while one CART indicated "Improve students' sense of affiliation with adults and peers" and another CART selected "Advance college-ready skills, monitor student progress, and increase students' sense of affiliation with adults and peers" as the most important parts of CAT.

The CARTs were also asked to describe what they hoped to achieve during CAT by the end of the year. Responses follow:

- *During the past year, we hoped to instill in our younger students the importance of building a strong work ethic and maintaining a positive grade point average. As the students get closer to graduation, our goal is to have EVERY student have viable post high school opportunities, whether those opportunities are educational or vocational.*
- *I want all students to believe that college is within reach. I want the older students to know what the steps are to achieving college acceptance and attendance.*
- *Just to get through it. [It is a] waste of time, [neither the] teachers nor students like advisory time. The classes that use it for end-of-course work get the most out of it.*
- *Through advisory, I hoped to achieve a greater understanding of the roles and responsibilities of students in our building. Aiding them in finding purpose in their lives as individuals and students. Help[ing to] guide them into the next phases of their life.*

On the survey, CARTs were asked to reflect on how often CAT lessons follow the elements of the Classroom Instructional Framework (CIF), an observation tool used throughout the district. Half of the CARTs responded that they *almost always* use all four components of the CIF, which are:

(1) establishing engagement; (2) fostering connections; (3) deepening understanding; and (4) making meaning. On three of the components (i.e., establishing engagement, deepening understanding, and making meaning), one CART indicated that they *seldom* used any of those.

Most of the CAT periods have curricula specific to each grade level. For example, freshmen and sophomores may spend more time on ACT or PLAN preparation, while juniors and seniors focus more on researching colleges, completing applications, and other activities related to postsecondary education and careers. Table 23 shows the curriculum descriptions for each grade level by the survey respondents.

Table 23. CAT Descriptions by Grade Level

9th Grade	10th Grade	11th Grade	12th Grade
75% of English teachers participate in CAT lessons/activities	75% of English teachers participate in CAT lessons/activities	100% of English teachers participate in CAT lessons/activities	100% of English teachers participate in CAT lessons/activities
Advisory time	End-of-course preparation, special class preparation, or advisory time	End-of-course preparation, special class preparation, or advisory time	End-of-course preparation and special class preparation
Ice breaker, school update, lesson (e.g., character development)	Ice breaker, school update, lesson (e.g., advocacy and citizenship)	Ice breaker, school update, lesson (e.g., preparing for college, grades, decisions, and applications)	Ice breaker, school update, lesson (e.g., preparing for the end of high school, college choice applications, etc.)
The ninth grade emphasizes maintaining high grades, study skills, and proper school etiquette. Students may be selected to attend a campus visit.	The 10th grade continues to emphasize good grades but also adds the importance of ACT test scores, AP classes, and extracurriculars. Students are afforded the opportunity to attend multiple college visits.	The 11th grade continues to emphasize all of the lessons from ninth and 10th grade with an added emphasis on: college selection (including college visits, both on and off campus), introduction to financial aid, and ACT prep.	The 12th grade emphasizes all items from ninth, 10th, and 11th grade with an emphasis on filling out college applications, filling out the Free Application for Federal Student Aid (FAFSA), and economic competence (e.g., real-world personal finance).

CAT Monitoring. The CARTs were also asked if they use the walkthrough instrument that was developed for CAT. Two of the CARTs replied that they do not use it, while one CART indicated that it was used two or three times a month and another CART said the school used it monthly. One CART added that advisory times were monitored through teacher feedback from the lessons.

Further, the CARTS were asked how often students had the opportunity to provide formal feedback about CAT. Again, 50% of the CARTs who completed the survey responded that the students are *never* given an opportunity to provide formal feedback while another CART said that they have an opportunity to do so *once a year*. The other CART who has collected student feedback

commented that "Students are constantly encouraged to provide feedback about mentors and mentoring sessions."

CAT Advisors. Two of the four CARTs said that they trained advisors during the 2014-2015 school year for an hour, with one adding that follow-up was provided as needed. For the CARTs who did not provide training, their reasons were that only an eighth of the staff serve as advisors and the CART only started the position in September. The other CART said that it was not applicable as "most [of the advisors] were teaching content during advisory."

The CARTs were also asked to explain factors that facilitated advisor effectiveness as well as challenges faced by the advisors. Table 24 shows the results of those questions. Facilitating factors include the concept of CAT, positive relationships with students, and supportive administration. In contrast, challenges include apathetic students, time, and staff buy-in.

Table 24. Facilitating and Challenging Factors Faced by Advisors

Success Factors	Challenges
College-going knowledge	Conducting advisory in an actual English class
Passion for kids	No grade so kids don't care
Positive relationships with the students	Students with negative preconceived ideas of their future
Using advisory for end-of-course exams	Time
A willingness to follow through with their students	Buy-in
Consistent implementation	Lack of buy-in. It is someone else's job
Rapport-building	Time to effectively mentor their students
A supportive administration	

CAT Minutes and Ratio by School. The original requirements of the grant were for CAT advisory periods to be held 55 minutes per week with a student-to-staff ratio of 20:1. Table 25 shows the frequency and duration of each CAT period as reported on the spring 2015 survey. Based on these data, two schools clearly met the goal of having the CAT advisories last at least 55 minutes and meeting approximately weekly. All of the schools met the intended ratio of one advisor to 20 or fewer students.

Table 25. CAT Logistics by School

Frequency, Duration, and Ratio	School #1	School #2	School #3	School #4
Frequency of meetings	Two or three times a month	Weekly	Weekly	Students meet in smaller mentoring groups periodically. It differs from student to student.

Frequency, Duration, and Ratio	School #1	School #2	School #3	School #4
Number of weeks during school year	Fewer than 15 weeks	30 to 34 weeks	More than 34 weeks	We do not have a specific CAT time. Instead, we have more individualized mentoring sessions with our students.
Minutes	Depends on the lesson/activity	55 minutes	60 minutes	See above
Student-to-staff ratio	1:30 (it is a regular class)	1:18	1:20	Less than 1:10; approximately 1:6 or 1:8

CAT Training and Coaching Sessions. Only two of the CARTs participated in JCPS training sessions during the 2014-2015 school year. Those two CARTs participated in one training, which included topics on: (1) What is CAT; (2) What we are doing; and (3) Where to find resources. The CARTs listed the following as topics they would like to see as future training topics:

1. Building a college-going culture
2. Generating buy-in
3. ACT preparation
4. College-focused lessons
5. Financial aid workshops
6. College selection process

Although only two CARTs attended the training, three of the CARTs disagreed that the training sessions were valuable. One CART agreed that the SharePoint resource provided by JCPS was helpful while two CARTs disagreed and one CART strongly disagreed. Finally, three out of the four CARTs disagreed that the coaching sessions were valuable while one CART agreed that the coaching sessions were helpful.

Factors Facilitating and Challenging Implementation. CARTs were also asked to list two or three facilitating and challenging factors regarding CAT implementation at their schools. Table 26 lists those factors. Although some of the CARTs listed teacher buy-in and engagement as an ongoing challenge, a few of the CARTs thought that they had seen an increase in teachers' acceptance of the CAT program. Many of the successes appear to result from changes that the CARTs have made to the program, such as lesson design and re-branding CAT under a new name. Challenges include external factors, such as time and scheduling issues. Other challenges that continue to plague the project schools include buy-in from both students and teachers. The comments also indicate that it is difficult to train new staff, both teachers and administrators, in order to fully engage and understand the CAT concept.

Table 26. Facilitating and Challenging Factors of CAT Implementation

Success Factors	Challenges
Our junior English teachers are super efficacious with college access activities and materials.	All teachers/mentors are not created equal. Some teachers/mentors are wonderful with their students (e.g., time, follow-up, support, etc.) while others (no matter how much support you provide the MENTOR) merely are satisfied with doing the bare minimum.
Student buy-in	Buy-in. Advisory was not done well in this building prior to my arrival so teachers and administrators have a bad taste in their mouths.
Using for end-of-course content	Getting teacher buy-in
We moved to a much smaller, more individualized approach to student mentoring this past school year.	Buy-in
Journalism use of video information	Apathy
Our senior English teachers are great at building rapport and marketing the importance of college.	Many teachers in the building do not teach the "whole" child. They teach content over students. It makes it hard to sell college and not be able to build rapport.
We have a very supportive administration when it comes to implementing new ideas and new ways of building a true "college-going" environment.	Teachers not doing lessons
	The second biggest challenge we face is overcoming many of the outside influences on our students. Many people in the students' "outside school" life do not support our ideas of what is needed for success and work to undermine the students' future.
	Being stretched in multiple directions

Student Perceptions of CAT. Students were asked several items related to CAT on the 2015 Student Survey to gain an understanding about what students perceived they were learning during CAT and the relationships they have developed with their advisor and peers within their CATs. Table 27 shows student responses by grade level regarding what they have learned in the CAT advisory periods. As expected, due to the focus of the CAT advisories at each grade level, the means are greater for upperclassmen on the items related to college preparation. For example, the mean for the item, "I have learned how to complete a college application" is 2.53 for seniors, compared to 1.51 for freshmen.

Table 27. Student CAT Perceptions by Grade Level

	9th Grade			10th Grade			11th Grade			12th Grade		
	N	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*
CAT has helped me . . .												
understand the college admission process.	680	1.97	1.46	554	2.03	1.36	564	2.30	1.24	413	2.41	1.22
prepare for the ACT and/or PLAN test.	683	1.99	1.43	552	2.25	1.30	565	2.62	1.17	409	2.43	1.23

	9th Grade			10th Grade			11th Grade			12th Grade		
	N	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*
develop life skills (e.g., time management, communication, conflict resolution, and financial literacy).	678	2.06	1.40	549	2.22	1.31	565	2.40	1.18	405	2.32	1.23
During my past and current experiences in CAT . . .												
I have had opportunities to research and develop career interests.	680	2.18	1.38	550	2.27	1.33	567	2.50	1.15	410	2.51	1.17
I have learned how to complete a college application.	681	1.51	1.33	548	1.68	1.32	567	1.93	1.28	408	2.53	1.24
I have learned about financial literacy, financial aid, and paying for college.	680	1.75	1.40	550	1.85	1.33	565	207	1.26	410	2.52	1.20
I have created a resume.	676	1.40	1.35	552	1.69	1.39	566	1.91	1.32	411	2.17	1.31
I have learned how to apply for a job.	674	1.65	1.48	549	2.14	1.48	563	2.26	1.33	408	2.45	1.34

Principal Perceptions of CAT. Principals were asked a series of questions regarding the CAT advisory periods on the spring 2015 survey. Of the three principals who responded, they had specific goals that they wanted to accomplish within the CAT program during the 2014-2015 school year:

- *[The CAT should result in having] one adult in the building that students feel connected to and small groups of same sex/same age peers that students have built a relationship with. [We need] college awareness and explanations of personal accountability with college and career readiness majors for freshmen. Senior interview scores of a four. One hundred percent of the [students to submit] applications to college. As close to 100% as possible [of students having] FAFSAs completed.*
- *Students will understand what it means to be college and career ready. Students will also be exposed to a variety of college readiness lessons and be prepared to apply to colleges and to understand terminology used in colleges. Students will know [that] they will be able to go to college, even if their families cannot afford to send them to college.*
- *We use academic advising time every six weeks. We use the time for teachers to communicate learning goals with each student. We, in addition, use our college-going culture initiative in our English classes.*

Principals were also asked to list factors that facilitated CAT implementation as well as any challenges that the school faced with implementing the advisory periods. As shown in Table 28, the principals listed a variety of success factors, including building relationships, curriculum, and staffing. Similar challenges to that of the CARTs were listed, which included teachers not buying into the lessons and the engagement of all advisors.

Table 28. Principal Reports of Facilitating and Challenging Factors of CAT Implementation

Success Factors	Challenges
Authentic relationships	Building relationships
Effective differentiated lesson-planning	Making sure all lessons have relevance to the students
Pairing students with the right teacher	Teachers who do not buy into lessons
Implemented curriculum	Ensuring all advisors are engaged and following through with the plan
Meaningful lessons	Lessons that reach all learners
Organization by someone not in the classroom full-time	Time
Goal-setting towards college	
Implementation with fidelity	

Objective B. Increase Students' Knowledge of and Use of College-Ready Skills

For the purpose of the evaluation, end-of-project ACT and PLAN targets were established based on 2009-2010 data. At baseline (2009-2010), there was approximately a 15 percentage point gap between the rates of students meeting benchmarks in i3 schools relative to the district mean in all subjects except science. For science, the gap was about 10 percentage points. Since the i3 project's aim was to close these gaps, the end-of-project targets were defined as the 2009-2010 content area ACT or PLAN means across the i3 schools plus 15 percentage points. Table 29 shows the established end-of-project targets for student performance on the ACT and PLAN exams.

Table 29. ACT and PLAN End-of-Project Targets

Content Domains	ACT End-of-Project Target	PLAN End-of-Project Target
English	38%	50%
Mathematics	20%	23%
Reading	30%	32%
Science	19%	19%

During the 2014-2015 school year, a total of 1,404 10th-grade and 1,318 11th-grade students from the i3 project schools took the PLAN and ACT, respectively. In this report, evaluators examined the extent to which students in the i3 schools met ACT and PLAN benchmarks. State and district-level data and findings from the Years 1 through 4 (2010-2011, 2011-2012, 2012-2013 and 2013-2014) are included to show the i3 schools' progress trajectories over time. In addition,

school differences in relation to the ACT and PLAN outcomes are investigated using chi-square tests.[17] Cramer's V[18] is reported as an indicator of effect size.

Subgroup analyses (e.g., analyses based on students' demographic characteristics) were conducted to investigate whether the percentages of students meeting or exceeding the ACT and PLAN benchmarks differed by student attributes. Since students were nested within schools (i.e., within a multilevel structure), and the percentages of students meeting or exceeding the benchmarks seemed to differ by school (Nixon et al., 2012), a series of hierarchical generalized linear models[19] and subsequent analyses were conducted. The goal was to examine the associations between student attributes (i.e., gender, race, FRPM status, and LEP status) and the percentages of students passing the benchmarks for each subject area.

PLAN as an Indicator. As mentioned, PLAN scores serve as an early indicator of students' college readiness (relative to ACT scores). Figure 9 shows the percentages of students meeting or exceeding the PLAN benchmarks in English, math, reading, and science across the state, district, and i3 schools in project Year 5 (2014-2015). Overall, the percentages of students meeting or exceeding the benchmarks were lower in STEM-related subjects (i.e., math and science), which is consistent with district and state-level data from the 2013-2014 school year[20]. In addition, the percentages of i3 students meeting or exceeding the PLAN benchmarks were lower than findings from state and district-level data.

[17] Base on chi-square cell distributions, pairwise chi-squares were conducted to determine school differences in the percentages of students meeting or exceeding the benchmarks.

[18] To interpret Cramer's *V*, Ferguson (2009) suggests that a value of 0.20 was the recommended minimum effect size representing a "practically" statistically significant effect for social science data; a value of 0.50 presents a moderate effect size; and a value of 0.80 presents a strong effect size.

[19] When between-school variations in student outcomes are evident, multilevel modeling is a preferred approach because it adjusts for these variations.

[20] State and district data for 2014-2015 are not yet available. Therefore, the 2013-2014 performance data is used for comparison.

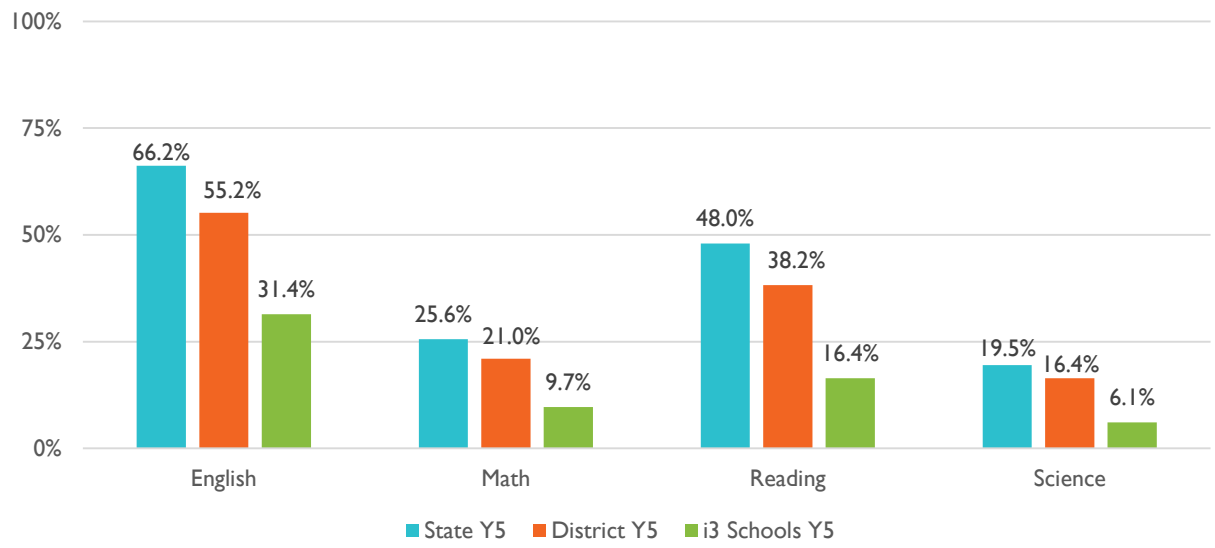


Figure 9. Percentages of students from i3 schools meeting or exceeding PLAN benchmarks across the state, district, and i3 schools in project Year 4.[21]

Compared to Year 4 findings, i3 schools' performance declined in all subject areas in Year 5 (see Figure 10).[22] Although the schools still have not reached the project targets, the gaps were reduced across all subject areas. Gaps between performance and end-of project goals ranged from 13 to 19 percentage points. The gap in English increased to 19% in Year 5, whereas the Year 4 results brought project schools within two percentage points of the end-of-project goal. The percentage of individuals to achieve the English benchmark in Year 5 (2014-2015) is at an all-time low since the baseline measurement (2009-2010). The gap in science scores resulted in the lowest difference from Year 4 to Year 5, which is also the smallest gap from the end-of-project goal.

[21] Source for the state and district data: http://education.ky.gov/AA/Reports/Pages/EXPLORE-and-PLAN-Data.aspx

[22] There are some discrepancies in the percentages of students passing the benchmarks between the reports archived at the Kentucky Department of Education and data provided by JCPS. The discrepancies may be due to various sample sizes reported in different data sources. In this report, the data provided by JCPS are used.

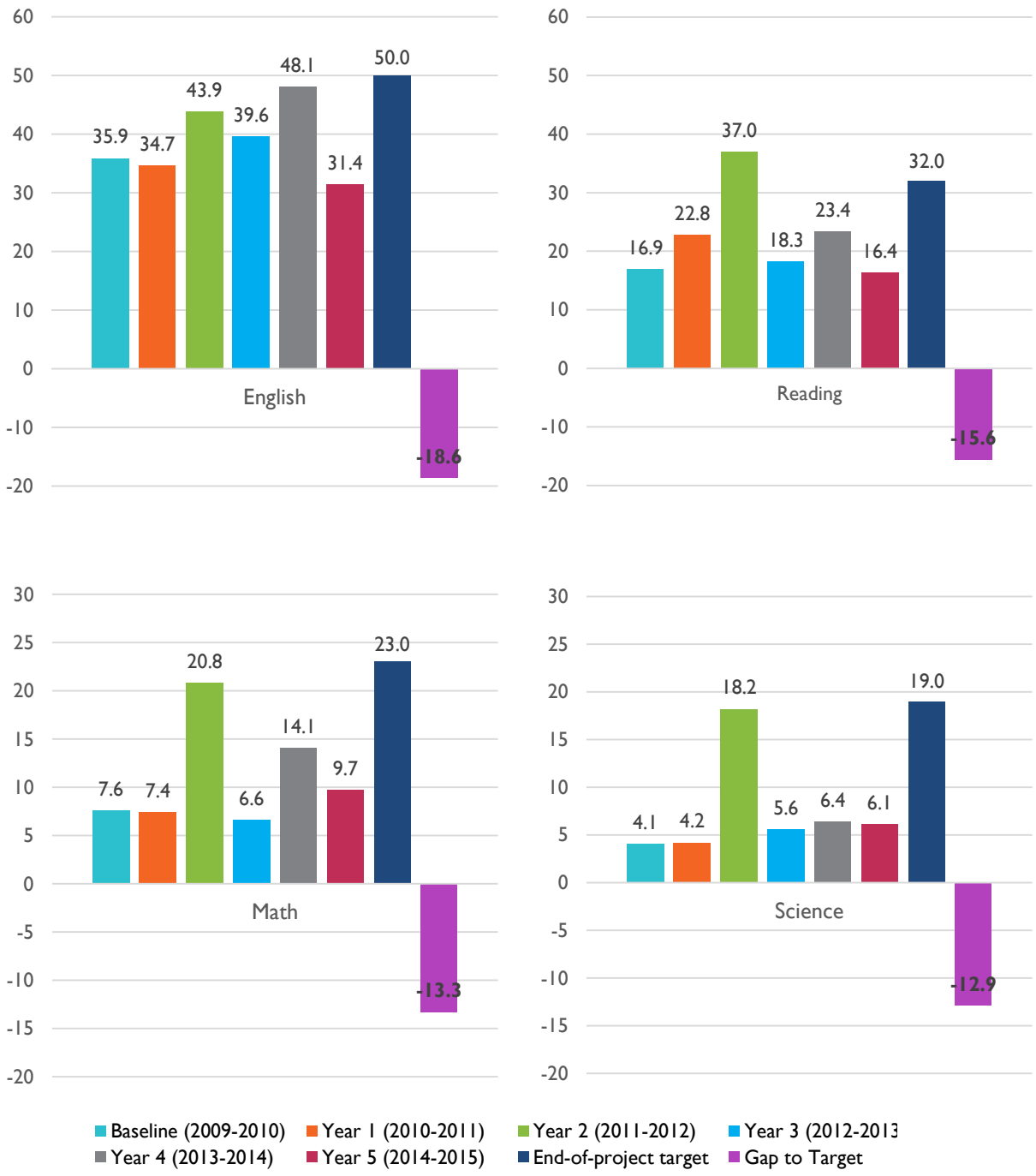


Figure 10. Percentages of students from i3 schools meeting PLAN benchmarks over time.

Overall, the percentage of students meeting or exceeding the benchmarks differed by school across all subject areas. Students in the i3 schools made the most progress in the STEM subjects (i.e., math and science) on the PLAN assessment. All project schools experienced decreases in the percentage of students achieving the benchmarks for English and reading. None of the schools met the end-of-project goals in any subject area. Table 30 shows the changes in the percentage of

students meeting or exceeding the benchmarks by school over time. The data shown in bold font with a gray background suggest positive outcomes, such as progress made by schools over time as well as progression toward the end-of-project targets. Findings are summarized as follows:

- **PLAN English:** All six i3 project schools showed decreases in percentage points from Year 4 to Year 5. Fern Creek Traditional High School exceeded the end-of-project target in Year 4, but dropped below the goal in Year 5 with a decrease of 13 percentage points. The gaps to the end-of-project target range from 7% to 37%. Waggener High School retained the least amount of variance from Year 4 to Year 5, though the school remains 20 percentage points under the end-of-project target.
- **PLAN Math:** Three of the six i3 schools (i.e., Moore Traditional High School, Valley High School, and Waggener High School) increased their math percentage points between Year 4 and Year 5. The remaining three schools (i.e., Academy @ Shawnee, Fern Creek Traditional High School, and Western High School) had slight decreases, ranging from two to five percentage points. All of the i3 schools were still more than nine percentage points from the end-of-project target, with gaps between 10 and 21 percentage points below the target.
- **PLAN Reading:** Similar to the findings of PLAN English, all of the i3 schools showed a decline in PLAN reading scores between Years 4 and 5. Valley High School experienced the largest decrease in benchmark achievement with a decrease of 12 percentage points. Additionally, none of the schools met or exceeded the end-of-project target; the gaps from the target range from 10 to 19 percentage points below the goal.
- **PLAN Science**: All six i3 schools, except Western High School, showed an increase in meeting or exceeding the science benchmark from Year 4 to Year 5. Western High School did not show improvement, but the decline from Year 4 to Year 5 was minimal (0.5%). Although the majority of schools improved in Year 5, none of the i3 schools met the end-of-project targets. The percentage of students failing to meet the benchmark in science ranges from 4 to 14 percentage points.

Overall, the majority of i3 students did not meet the end-of-project targets. The benchmarks for PLAN reading and PLAN science were adjusted prior to the 2014-2015 assessment (i.e., Year 5). The PLAN reading benchmark was increased from 17 to 18, while the PLAN science benchmark decreased from 21 to 20. Project and school staff should continue to investigate the reasoning behind the gaps and develop/identify strategies to prevent further decline.

Table 30. Percentages of Students Meeting or Exceeding the PLAN Benchmarks by School Over Time

Project Year	Academy @ Shawnee	Fern Creek	Moore	Valley	Waggener	Western	χ^2 (5)	Effect Size
English (End-of-Project Target = 50%)								
Year 1	22.0	48.9	33.0	31.6	34.2	21.5	63.63***	--
Year 2	25.3	**55.8**	**51.6**	**44.7**	**41.8**	**25.0**	55.33***	0.228
Year 3	**38.3**	51.5	42.2	35.6	34.2	**25.7**	41.04***	0.170
Year 4	**43.3**	**56.1**	**42.3**	33.4	31.9	**28.7**	65.56***	0.205
Year 5	28.6	43.0	35.6	24.9	30.4	13.4	57.54***	0.202
% Change from Y1 to Y2	**3.3**	**6.9**	**18.6**	**13.1**	**7.6**	**3.5**		
% Change from Y2 to Y3	**13.0**	-4.3	-9.4	-9.1	-7.6	**0.7**		
% Change from Y3 to Y4	**5.0**	**4.6**	**0.1**	-2.2	-2.3	**3.0**		
% Change from Y4 to Y5	-14.7	-13.1	-6.7	-8.5	-1.5	-5.3		
Gap to the End-of-Project Target	-21.4	-7.0	-14.4	-25.1	-19.6	-36.6		
Math (End-of-Project Target = 23%)								
Year 1	2.3	12.8	8.0	5.3	5.5	3.2	31.21***	--
Year 2	**13.3**	**30.3**	**25.5**	**8.5**	**26.1**	**10.3**	51.78***	0.221
Year 3	4.3	11.3	6.7	5.8	4.4	2.9	20.46**	0.120
Year 4	**7.5**	**15.5**	8.5	5.5	**5.6**	**7.0**	29.68***	0.138
Year 5	2.3	13.5	**10.3**	**7.9**	**9.8**	3.5	15.07**	0.104
% Change from Y1 to Y2	**11.0**	**17.5**	**17.5**	**3.2**	**20.6**	**7.1**		
% Change from Y2 to Y3	-9.0	-19.0	-18.8	-2.7	-21.7	-7.4		
% Change from Y3 to Y4	**3.2**	**4.2**	**1.8**	-0.3	**1.2**	**0.1**		
% Change from Y4 to Y5	-5.2	-2.0	**1.8**	**2.4**	**4.2**	-3.5		
Gap to the End-of-Project Target	-20.7	-9.5	-12.7	-15.1	-13.2	-19.5		
Reading (End-of-Project Target = 32%)								
Year 1	8.3	32.6	26.2	20.6	21.6	13.2	51.35***	--
Year 2	**18.1**	**48.3**	**41.6**	**35.8**	**37.0**	**22.6**	44.12***	0.204
Year 3	12.1	27.0	20.4	15.3	16.2	9.7	34.31***	0.155
Year 4	**17.5**	**31.8**	**30.3**	**20.7**	16.0	**14.8**	42.42***	0.165
Year 5	14.3	22.0	19.5	9.0	15.8	13.4	23.20***	0.129

Project Year	Academy @ Shawnee	Fern Creek	Moore	Valley	Waggener	Western	χ^2 (5)	Effect Size
% Change from Y1 to Y2	**9.8**	**15.7**	**15.4**	**15.2**	**15.4**	**9.4**		
% Change from Y2 to Y3	-6.0	-21.3	-21.2	-20.5	-20.8	-12.9		
% Change from Y3 to Y4	**5.4**	**4.8**	**9.9**	**5.4**	-0.2	**5.1**		
% Change from Y4 to Y5	-3.2	-9.8	-10.8	-11.7	-0.2	-1.4		
Gap to the End-of-Project Target	-17.7	-10.0	-12.5	-23.0	-16.2	-18.6		
Science (End-of-Project Target = 19%)								
Year 1	2.3	6.9	4.4	2.6	5.0	1.4	14.57*	--
Year 2	**7.2**	**24.0**	**23.0**	**11.8**	**21.2**	**12.3**	25.73***	0.156
Year 3	1.4	9.7	6.2	4.7	3.9	3.4	19.45*	0.117
Year 4	**6.7**	9.5	**6.7**	**5.2**	3.8	**5.2**	9.87	0.080
Year 5	**7.5**	**15.4**	**11.9**	**7.2**	**8.2**	4.7	22.38***	0.126
% Change from Y1 to Y2	**4.9**	**17.1**	**18.6**	**9.2**	**16.2**	**10.9**		
% Change from Y2 to Y3	-5.8	-14.3	-16.8	-7.1	-17.3	-8.9		
% Change from Y3 to Y4	**5.3**	-0.2	**0.5**	**0.5**	-0.1	**1.8**		
% Change from Y4 to Y5	**0.8**	**5.9**	**5.2**	**2.0**	**4.4**	-0.5		
Gap to the End-of-Project Target	-11.5	-3.6	-7.1	-11.8	-10.8	-14.3		

Note. Data for Year 1 were obtained from the Year 1 Report (Nixon et al., 2012); Data for Year 2 were obtained from the Year 2 Report (Donahue et al., 2012); and Data for Year 3 were obtained from the Year 3 Report (Donahue et al., 2013).

Effect size was calculated by using Cramer's *V* (Ferguson, 2009): a value of 0.20 was the recommended minimum effect size representing a "practically" significant effect for social science data; a value of 0.50 presents a moderate effect size; and a value of 0.80 presents a strong effect size.

*** $p < 0.001$

** $p < 0.01$

* $p < 0.05$

Statistically significant school variations in the percentage of students meeting PLAN benchmarks suggested that it is more appropriate to use multilevel modeling to examine the associations between student attributes and the percentages of students meeting or exceeding the benchmarks. Table 31 shows the results of the hierarchical generalized linear models.

Table 31. Results of Hierarchical Generalized Linear Models: PLAN Outcomes®

Fixed Effect	English		Math		Reading		Science	
	β	*OR*	*β*	*OR*	*β*	*OR*	*β*	*OR*
Female [a]	0.31*	1.36	-0.29	0.75	0.20	1.22	-0.43*	0.65
Students with free meal status [b]	-0.41*	0.66	-0.67**	0.51	-0.37	0.69	-0.32	0.73
Students with reduced-price meal status [c]	0.07	1.07	-0.49	0.61	0.29	1.34	0.97	1.08
Hispanic [d]	-0.46	0.63	-0.37	0.69	0.07	1.08	-0.33	0.72
Black [e]	-1.10***	0.33	-1.66***	0.19	-1.07***	0.34	-1.46***	0.23
Other Race [f]	-0.09	0.92	0.26	1.30	-0.16	0.85	0.26	1.29

[a] Male is the reference group.

[b & c] Students with paid meal status is the reference group.

[d, e, & f] White students is the reference group.

β = coefficient; *OR* = odds ratio

The interpretation of odds ratio is that the odds of passing the benchmark is the degree to which the score deviates from 1 if the student was a "predictor = 1 (i.e., female, students with free meal status, students with reduced-price meal status, Hispanic, Black, and Other Race) in comparison to "predictor = 0 (i.e., male, students with paid meal status, and White)." If the odds ratio is greater than 1, the predictor is more likely than the comparison to meet or exceed benchmarks; if the odds ratio is below 1, the predictor is less likely than the comparison to meet or exceed benchmarks.

***$p < 0.001$

**$p < 0.01$

*$p < 0.05$

As shown in Table 31, the results suggest that students' college readiness skills as measured by the PLAN differed by student characteristics across different subject areas. Specifically, Black students have lower odds of meeting or exceeding the benchmarks across all subject areas than White students; female students have higher odds of meeting or exceeding the benchmarks in English while they have lower odds of meeting or exceeding the benchmarks in science as compared to male students. Students with free meal status had lower odds of meeting or exceeding the benchmarks in English and math as compared to students with paid meal status. Findings for each subject area follow:

- The odds of meeting or exceeding the English benchmark was 1.36 times higher if the student was a female as opposed to a male. In contrast, the odds of meeting or exceeding the science benchmark was 0.65 times lower if the student was a female as opposed to a male.
- The odds of meeting or exceeding the English and math benchmarks was 0.66 and 0.51 times lower for students qualifying for free meal status as opposed to students with paid meal status.
- The odds of meeting or exceeding the English, math, reading, and science benchmarks was 0.33, 0.19, 0.34, 0.23 times lower for a Black student as opposed to a White student.

ACT as an Indicator. Results of ACT scores are utilized as indicators of students' college readiness for 11th graders. Figure 11 shows the percentages of students meeting the ACT

benchmarks in English, math, reading, and science across the state, district, and i3 schools during the fifth year of project implementation. The ACT benchmarks for mathematics and reading were adjusted from 22 to 19 and 20, respectively. Additionally, ACT introduced a science benchmark of 23 for demonstrating college readiness in biology. The percentage of students meeting the benchmarks was lowest for science and math across the state, district, and project schools.

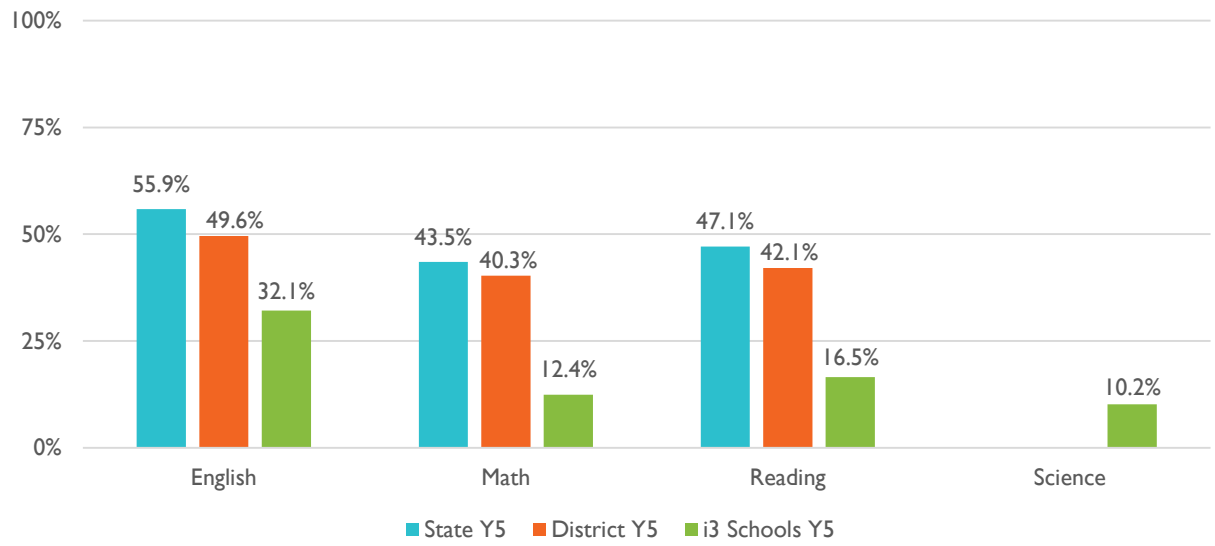


Figure 11. Percentages of students meeting or exceeding ACT benchmarks across the state, district, and i3 schools in project Year 5.

Note: State data were collected from the Kentucky State Report Card (http://applications.education.ky.gov/SRC/AssessmentByState.aspx) and the district data were collected from the Jefferson County Report Card (http://applications.education.ky.gov/SRC/AssessmentByDistrict.aspx).

Relative to the established end-of-project targets, Figure 12 shows that the i3 schools fell short of all four subject area targets[23]. The percentage of i3 students meeting or exceeding the ACT benchmarks decreased in English and reading from Year 4 to Year 5 but increased in math. Overall, the gap to the end-of-project target ranges from 6% to 14%, with the largest gap being in reading, followed by science, math, and English.

[23] Science scores were not available for the Year 4.

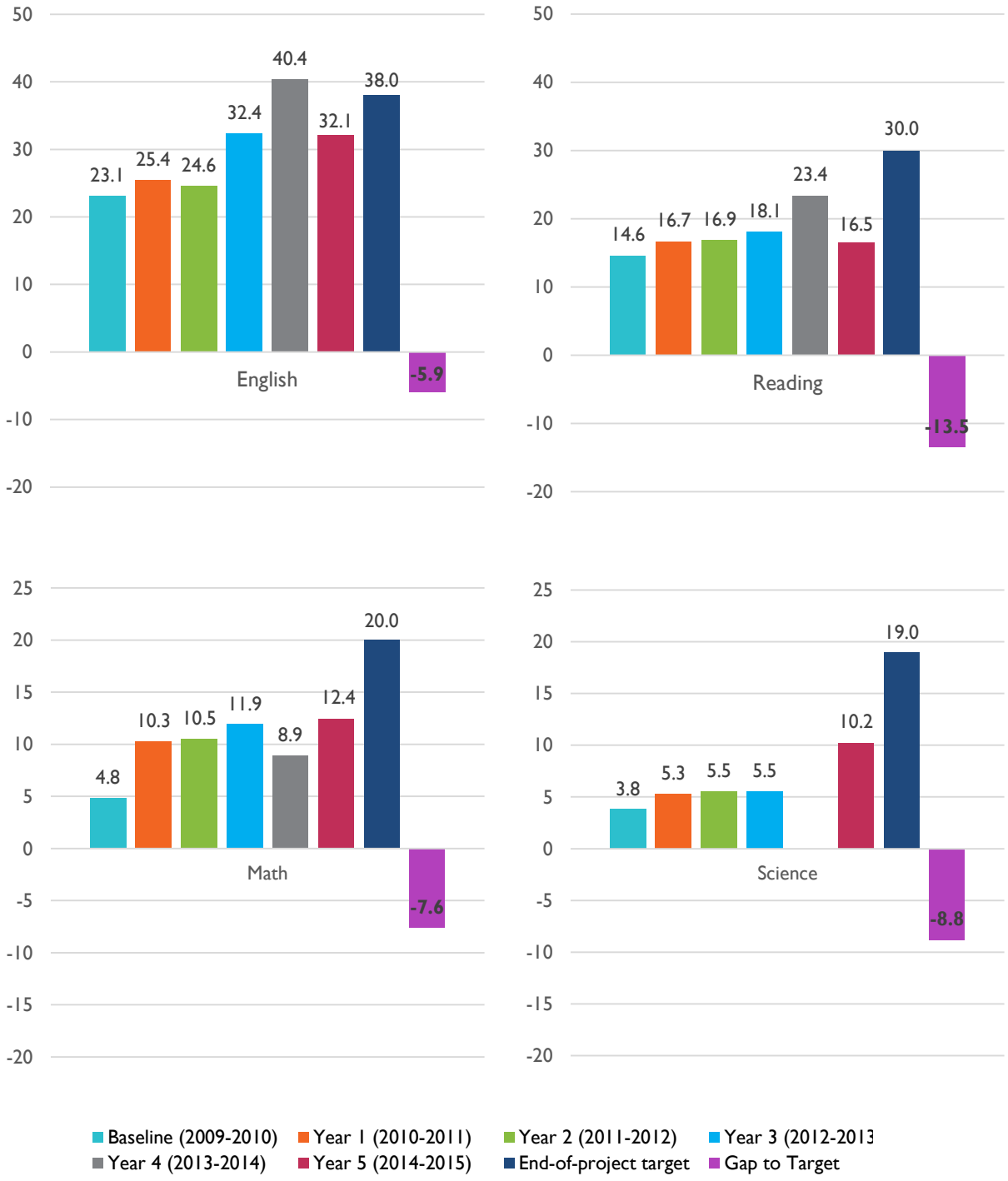


Figure 12. Percentages of students from i3 schools meeting ACT benchmarks across years.

Overall, the percentage of students meeting or exceeding the benchmarks differed by school across all subject areas. Table 32 shows changes in the percentage of students meeting or exceeding the ACT benchmarks by school over time. The data shown in bold font with a gray background

suggest positive outcomes, such as progress made by schools over time as well as progression toward the end-of-project targets. Findings are summarized in the following bullets.

- **ACT English:** Four of the six i3 schools (Academy @ Shawnee, Fern Creek Traditional High School, Moore Traditional High School, and Western High School) showed increases from Year 4 to Year 5, with the largest increase of five percentage points being attained by Academy @ Shawnee. The other two i3 project schools (Valley Traditional High School and Waggener Traditional High School) showed decreases ranging from four to eight percentage points between Year 4 and Year 5. Fern Creek Traditional High School was the only school to exceed the end-of-project target.
- **ACT Math:** All of the project schools failed to meet the end-of-project target for the percentage of students meeting or exceeding the math benchmark. Four of the six i3 schools (Academy @ Shawnee, Fern Creek Traditional High School, Valley High School, and Western High School) increased the percentage of students exceeding the benchmark from Year 4 to Year 5. Valley High School and Western Traditional High School failed to meet the benchmark by approximately 13 percentage points each.
- **ACT Reading:** Two project schools (Academy @ Shawnee and Moore Traditional High School) showed increases in the percentage of students meeting or exceeding the reading benchmark from Year 4 to Year 5; Academy @ Shawnee showed the greatest improvement with a 5.4% increase. However, all of the i3 project schools failed to meet the end-of-project targets by 3% to 22%.
- **ACT Science**: While all of the schools failed to meet the end-of-project targets by 3% to 18%, they did demonstrate increases in meeting the science benchmark from Year 4 to Year 5. The increases in percentage points range from one to seven, with the Academy @ Shawnee showing the most improvement.

Fern Creek Traditional High School seemed to perform better than the other schools across all ACT subjects, while Academy @ Shawnee showed the most improvement across all subject areas from Year 4 to Year 5. In Year 5, Western High School continued to struggle in STEM-related subject areas (i.e., math and science). Overall, the majority of students at the i3 project schools were struggling to meet the end-of-project targets across all subject areas.

Table 32. Percentages of Students Meeting or Exceeding the ACT Benchmarks by School Over Time

Project Year	Academy @ Shawnee	Fern Creek	Moore	Valley	Waggener	Western	χ^2 (5)	Effect Size
English (End-of-Project Target = 38%)								
Year 1	9.6	34.3	31.7	22.6	27.2	11.8	43.60***	--
Year 2	9.6	**34.7**	**32.3**	22.3	27.2	**12.2**	43.69***	0.200
Year 3	**21.6**	**49.9**	30.0	20.0	25.9	**25.0**	72.61***	0.261

Project Year	Academy @ Shawnee	Fern Creek	Moore	Valley	Waggener	Western	χ^2 (5)	Effect Size
Year 4	**24.4**	45.6	**30.2**	**28.2**	**34.8**	19.8	43.71***	0.194
Year 5	**28.9**	**46.3**	**30.4**	24.7	27.3	**23.7**	48.22***	0.191
% Change from Y1 to Y2	0.0	**0.4**	**0.6**	-0.3	0.0	**0.4**		
% Change from Y2 to Y3	**12.0**	**15.2**	-2.3	-2.3	-1.3	**12.8**		
% Change from Y3 to Y4	**2.8**	-4.3	**0.2**	**8.2**	**8.9**	**-5.2**		
% Change from Y4 to Y5	**4.5**	**0.7**	**0.2**	-3.5	-7.5	**3.9**		
Gap to the End-of-Project Target	-9.1	**8.3**	-7.6	-9.8	-10.7	-14.3		
Math (End-of-Project Target = 20%)								
Year 1	8.4	16.8	11.2	2.2	13.0	4.3	35.34***	--
Year 2	8.4	**17.0**	**11.8**	2.1	**13.6**	**4.5**	35.66***	0.180
Year 3	**11.4**	**18.5**	**12.5**	**5.7**	**13.8**	4.5	30.21***	0.168
Year 4	5.2	16.7	**14.5**	**5.9**	12.0	**5.9**	27.04***	0.153
Year 5	**12.2**	**18.5**	13.5	**7.5**	10.8	**7.5**	22.83***	0.132
% Change from Y1 to Y2	0.0	**0.2**	**0.6**	-0.1	**0.6**	**0.2**		
% Change from Y2 to Y3	**3.0**	**1.5**	**0.7**	**3.6**	**0.2**	0.0		
% Change from Y3 to Y4	-6.2	-1.8	**2.0**	**0.2**	-1.8	**1.4**		
% Change from Y4 to Y5	**7.0**	**1.8**	1.0	**1.6**	-1.2	**1.6**		
Gap to the End-of-Project Target	-7.8	-1.5	-6.5	-12.5	-9.2	-12.5		
Reading (End-of-Project Target = 30%)								
Year 1	3.6	24.2	19.3	14.0	19.0	7.5	34.72***	--
Year 2	3.6	24.3	19.3	13.9	19.6	7.7	33.95***	0.180
Year 3	**14.8**	**27.2**	8.8	**15.7**	**19.8**	**12.2**	33.36***	0.177
Year 4	11.3	26.6	**19.2**	15.5	**20.9**	**13.2**	22.45***	0.139
Year 5	**16.7**	**26.7**	14.3	11.4	14.9	8.1	42.36***	0.179
% Change from Y1 to Y2	0.0	**0.1**	0.0	-0.1	**0.6**	**0.2**		
% Change from Y2 to Y3	**11.2**	**2.9**	-10.5	**1.8**	**0.2**	**4.5**		
% Change from Y3 to Y4	-3.5	-0.6	10.4	-0.2	**0.9**	**1.0**		

Project Year	Academy @ Shawnee	Fern Creek	Moore	Valley	Waggener	Western	χ^2 (5)	Effect Size
% Change from Y4 to Y5	**5.4**	**0.1**	-4.9	-4.1	-6.0	-5.1		
Gap to the End-of-Project Target	-13.3	-3.3	-15.7	-18.6	-15.1	-21.9		
Science (End-of-Project Target = 19%)								
Year 1	2.4	8.4	6.8	1.6	7.1	1.9	17.80**	--
Year 2	2.4	**8.6**	6.8	1.6	**7.6**	1.9	18.28**	0.130
Year 3	**6.8**	8.4	3.1	**3.3**	**7.8**	**2.6**	12.83*	0.110
Year 4	4.4	**10.2**	**6.4**	**6.4**	3.8	2.6	14.43*	0.112
Year 5	**10.0**	**14.6**	**11.0**	**9.4**	**8.2**	**3.8**	17.23***	0.114
% Change from Y1 to Y2	0.0	**0.2**	0.0	0.0	**0.5**	0.0		
% Change from Y2 to Y3	**4.4**	-0.2	-3.7	**1.7**	**0.2**	**0.7**		
% Change from Y3 to Y4	-2.4	**1.8**	**3.3**	**3.1**	-4.0	0.0		
% Change from Y4 to Y5	**5.6**	**4.4**	**4.6**	**3.0**	**4.4**	**1.2**		
Gap to the End-of-Project Target	-9.0	-4.4	-8.0	-9.6	-10.8	-17.8		

Note. Data for Year 1 were obtained from the Year 1 Report (Nixon et al., 2012); Data for Year 2 were obtained from the Year 2 Report (Donahue et al., 2012); and Data for Year 3 were obtained from the Year 3 Report (Donahue et al., 2013).

Effect size was calculated by using Cramer's *V* (Ferguson, 2009): a value of 0.20 was the recommended minimum effect size representing a "practically" significant effect for social science data; a value of 0.50 presents a moderate effect size; and a value of 0.80 presents a strong effect size.

*** $p < 0.001$

** $p < 0.01$

* $p < 0.05$

Statistically significant school variations in the percentage of students meeting ACT benchmarks suggests that it is more appropriate to use multilevel modeling to examine the associations between student attributes and the percentages of students meeting or exceeding the benchmarks. Table 33 shows the results of the hierarchical generalized linear models.

Table 33. Results of Hierarchical Generalized Linear Models: ACT Outcomes

Fixed Effect	English		Math		Reading		Science	
	β	*OR*	*β*	*OR*	*β*	*OR*	*β*	*OR*
Female [a]	0.27*	1.31	-0.40*	0.67	0.261	1.30	-0.34	0.71
Students with free meal status [b]	-0.82***	0.44	-0.52**	0.59	-0.82	0.44	-0.80***	0.45
Students with reduced-price meal status [c]	-0.07	0.93	0.53	1.70	0.11	1.11	-0.02	0.98
Hispanic [d]	-0.73**	0.48	-1.02**	0.36	-0.64*	0.53	-0.78	0.46

Fixed Effect	English		Math		Reading		Science	
	β	*OR*	*β*	*OR*	*β*	*OR*	*β*	*OR*
Black [e]	-1.15***	0.32	-1.58***	0.21	-1.10***	0.33	-1.20***	0.30
Other Race [f]	-0.24	0.79	0.28	1.33	0.22	1.24	-0.20	0.82

[a] Male is the reference group.

[b & c] Students with paid meal status is the reference group.

[d, e, & f] White students is the reference group.

β = coefficient; *OR* = odds ratio

The interpretation of odds ratio is that the odds of passing the benchmark is the degree to which the score deviates from 1 if the student was a "predictor = 1 (i.e., female, students with free meal status, students with reduced-price meal status, Hispanic, Black, and Other Race) in comparison to "predictor = 0 (i.e., male, students with paid meal status, and White)." If the odds ratio is greater than 1, the predictor is more likely than the comparison to meet or exceed benchmarks; if the odds ratio is below 1, the predictor is less likely than the comparison to meet or exceed benchmarks.

***$p < 0.001$

**$p < 0.01$

*$p < 0.05$

As shown in Table 33, results suggest that students' college readiness skills measured by the ACT differed by student characteristics across the subject areas. Specifically, Black students, Hispanic students, and students who qualify for free meals (as compared to students with paid meal status) consistently have lower odds of meeting or exceeding the benchmarks in most subject areas. Males were found to be more college-ready than females in math while females were more college-ready than males in English. Findings for each subject area are discussed in detail below:

- The odds of female students meeting or exceeding the English benchmark is 1.31 times greater compared to male students. In contrast, the odds of female students meeting or exceeding math benchmarks is 0.67 times lower compared to male students.
- The odds that students who qualify for free meals have of meeting the English, math, and reading benchmarks are 0.44, 0.59, and 0.45 times lower as opposed to students with paid meal status.
- Hispanic students consistently had lower performance levels than White students in relation to the English, math, and reading outcomes. The odds of meeting or exceeding the English, math, and reading benchmarks were 0.48, 0.36, and 0.53 times less likely for Hispanic students compared to White students. Similarly, Black students had lower performance levels than White students in all subject areas. The odds of meeting or exceeding the English, math, reading, and science benchmarks were 0.32, 0.21, 0.33, and 0.30 times less likely for Black students as opposed to White students.

Students' Postsecondary Transition. JCPS provided data from the National Student Clearinghouse's StudentTracker database to allow the evaluators to assess students' postsecondary attendance. Based on 2010 data, 44% of the students who graduated in May of that year from the i3 project schools were enrolled in postsecondary institutions. The district mean for high schools for the same period was 55%; hence, the end-of-project target for the student transition outcome was set to 55%.

Table 34 shows changes in the postsecondary enrollment rates by project schools over the life of the grant through 2014. It should be noted that StudentTracker data are always one year behind the current project year so 2014 is the latest data point available. Although the majority of schools demonstrated an increase in the number of students attending postsecondary institutions between 2010 and 2012, this number decreased in 2013. However, the percentage increased at five out of the six i3 schools in 2014 with a 14% increase at Waggener High School. Overall, the Year 4 average increased from Year 3 by 6.8% and from the baseline by 4%. The Year 4 enrollment rate was the second highest enrollment rate from all the project years, with only Year 2 having a higher percentage of enrolled students. However, the project did not meet the goal of 55%.

Table 34. Postsecondary Enrollment Rates by i3 Project Schools Over Time

School	2010 [a] (Baseline) % Enrolled	2011 [a] (Year 1) % Enrolled	2012 [a] (Year 2) % Enrolled	2013 [a] (Year 3) % Enrolled	2014 (Year 4) # Graduated	2014 (Year 4) # Enrolled	2014 (Year 4) % Enrolled
Academy @ Shawnee	34.0%	33.0%	46.1%	29.3%	89	38	42.7%
Fern Creek Traditional High School	56.8%	53.6%	60.3%	54.2%	300	170	56.7%
Moore Traditional High School	37.3%	47.1%	63.0%	44.4%	153	67	43.8%
Valley Traditional High School	28.2%	31.1%	45.6%	27.0%	193	62	32.1%
Waggener High School	55.4%	41.8%	58.6%	35.3%	137	68	49.6%
Western High School	36.4%	41.4%	36.1%	39.5%	151	62	41.1%
Average Enrollment Rate [b]	**41.4%**	**41.3%**	**51.6%**	**38.3%**	**1,023**	**461**	**45.1%**

[a] Enrollment rates for 2010 and 2011 for each project school were obtained from the Year 2 annual report (Donahue et al., 2012); enrollment rates for 2012 were obtained from the Year 3 annual report (Donahue et al., 2013); and enrollment rates for 2013 were obtained from the Year 4 annual report (Donahue et al., 2014).

[b] The average enrollment rate was calculated as the average percentage enrollment rate across the six project schools, which accounted for variations in school size and the number of graduates among the i3 schools.

As shown in Table 35, the majority of students who enrolled in public institutions in 2014 (85%) was less than 1% greater than in 2013. However, the percentage of students enrolling in public institutions increased nearly 9% from the baseline year. In addition, the percentage of students enrolling in four-year institutions increased by 8% from Year 2 to Year 3. This percentage decreased between 2014 and 2010 by 3%, which indicates that more students seem to be enrolling in two-year institutions. This could be due in part to the added focus on two-year institutions and career pathways in the high schools. Finally, the percentage of students enrolling in Kentucky institutions decreased by 5% from Year 3 to Year 4; although, there was relatively no change between the baseline year and Year 4.

The enrollment status of students who graduated from the JCPS i3 project schools in the spring of 2011, 2012, 2013, and 2014 and enrolled in postsecondary institutions in the fall of 2011, 2012, 2013, and 2014, respectively, were also explored (see Table 36). In the fall of 2014, 38% of students enrolled full-time in postsecondary institutions, which was 7% lower than in 2013. The

percentages of students who enrolled full-time ranged from 31% (Valley High School) to 45% (Moore Traditional High School). Based upon preliminary postsecondary enrollment data, however, the enrollment status of approximately 52% of the May 2014 graduates from the i3 schools is unknown.

Table 35. Type of Institution that Students from i3 Schools Enrolled in Over Time

School	Public Institution					Four-Year Institution					Kentucky Institution				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
Academy @ Shawnee	72.2%	96.9%	91.4%	100.0%	92.1%	61.1%	34.4%	48.6%	22.2%	94.7%	75.0%	96.9%	94.3%	92.6%	92.1%
Fern Creek Traditional High School	79.9%	80.7%	88.1%	85.8%	85.3%	68.2%	70.7%	58.5%	67.1%	58.8%	90.9%	89.5%	91.5%	94.2%	90.6%
Moore Traditional High School	69.5%	72.5%	88.5%	81.6%	74.6%	64.4%	60.0%	50.6%	59.2%	62.7%	88.1%	90.0%	89.7%	94.7%	88.1%
Valley Traditional High School	65.2%	71.2%	81.9%	83.0%	88.7%	52.2%	54.2%	55.6%	44.7%	50.0%	91.3%	83.1%	91.7%	97.9%	88.7%
Waggener High School	77.6%	78.7%	86.3%	78.7%	80.9%	67.3%	51.7%	45.1%	63.9%	55.9%	91.6%	86.5%	87.3%	95.1%	92.6%
Western High School	88.5%	76.0%	80.0%	82.3%	91.9%	51.9%	47.9%	51.4%	58.1%	43.5%	94.2%	89.6%	97.1%	95.2%	85.5%
Across the i3 Schools	**76.9%**	**78.2%**	**86.2%**	**85.2%**	**85.6%**	**63.4%**	**57.9%**	**52.8%**	**52.5%**	**60.9%**	**89.9%**	**88.8%**	**91.3%**	**94.9%**	**89.6%**

Table 36. Student Enrollment Status Over Time

School	Full-Time				Part-Time				Less than Part-Time				Withdrawn				Status was Not Defined			
	2011	2012	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014
Academy @ Shawnee	37.5%	40.0%	18.5%	36.8%	--	5.7%	7.4%	--	--	2.9%	--	--	3.1%	--	--	7.9%	59.4%	51.4%	74.1%	55.3%
Fern Creek Traditional High School	63.5%	48.3%	55.3%	42.5%	4.4%	6.8%	5.3%	2.4%	--	1.1%	2.0%	1.8%	2.2%	1.1%	2.0%	4.7%	29.8%	42.6%	35.5%	48.8%
Moore Traditional High School	45.0%	41.4%	52.6%	44.8%	6.3%	10.3%	3.9%	1.5%	--	--	1.3%	1.5%	8.8%	2.3%	39.5%	4.5%	40.0%	46.0%	2.6%	47.8%
Valley Traditional High School	50.8%	40.3%	29.8%	30.6%	5.1%	4.2%	--	1.6%	3.4%	2.8%	2.1%	3.2%	3.4%	6.9%	--	9.7%	37.3%	45.8%	68.1%	54.8%
Waggener High School	48.3%	35.3%	45.9%	38.2%	3.4%	3.9%	3.3%	4.4%	--	2.9%	1.6%	--	1.1%	2.0%	6.6%	4.4%	47.2%	55.9%	42.6%	52.9%
Western High School	42.7%	41.4%	35.5%	35.5%	7.3%	1.4%	4.8%	--	2.1%	--	--	4.8%	3.1%	5.7%	8.1%	8.1%	44.8%	51.4%	51.6%	51.6%
i3 Schools	**51.6%**	**42.3%**	**45.4%**	**38.1%**	**4.8%**	**5.5%**	**4.2%**	**1.7%**	**0.7%**	**1.7%**	**1.4%**	**1.9%**	**3.4%**	**2.8%**	**3.3%**	**6.6%**	**39.5%**	**47.8%**	**54.4%**	**51.9%**

Objective C: Students' Sense of Social Support from Adults

Adult Social Support Scale. Five CSS items were selected as a measure of students' perceptions of support from adults to replace the former CSCI scale. Of the valid student responses (n = 3,646), the mean of the Adult Social Support subscale was 2.98 (SD = 0.56). As illustrated in Figure 13, students reported feeling more positive than negative about adult social support items. The item "There is at least one adult at my school whom I feel I can trust" received the highest rating compared to all other items.

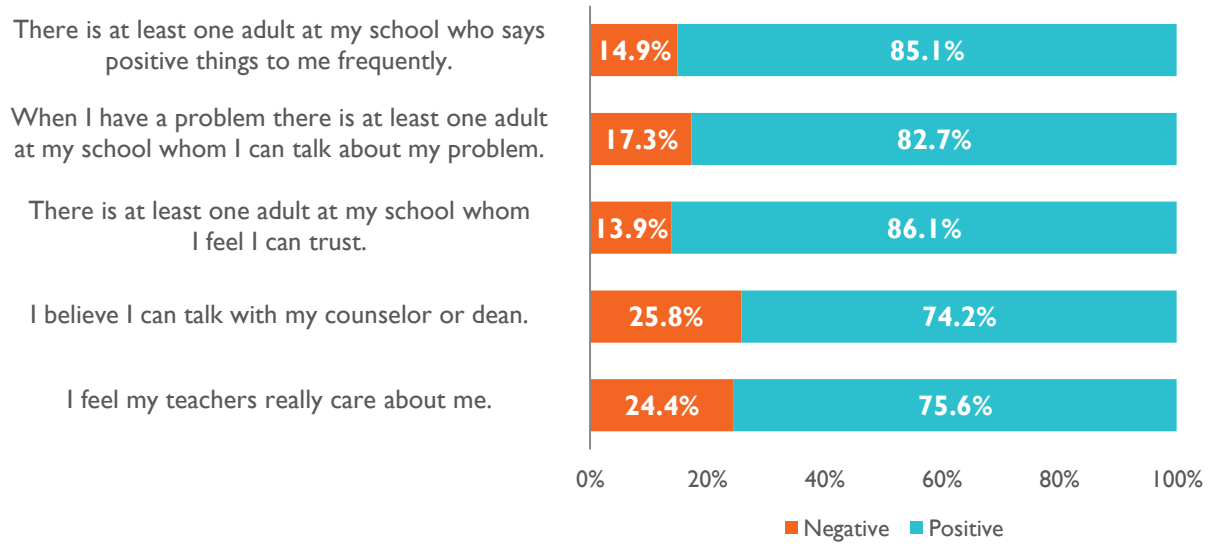


Figure 13. Distribution of student responses for the Adult Social Support subscale.

Note. Each CSS item was measured on a 4-point Likert scale (1 = *Strongly disagree*, 2 = *Disagree,* 3 = *Agree,* and 4 = *Strongly agree*), ratings of 1 and 2 were grouped as a negative response and ratings of 3 and 4 were grouped as a positive response.

The examination of between-school differences on the Adult Social Support subscale suggested that, in Year 5, schools varied in their perceived levels of adult social support, $F(5, 4631) = 10.80$, $p < 0.001$, $\eta^2 = 0.012$. In particular, students at Fern Creek Traditional High School perceived a significantly higher level of adult social support in comparison to students from other high schools, except Waggener High School.

Subgroup analyses were conducted to assess whether students' demographic characteristics moderated student ratings of adult social support. The demographics included gender, grade level, race/ethnicity, FRPM status, and LEP status. Findings are summarized as follows:

- Female students reported higher levels of adult social support than did male students, $t(4635) = 2.38$, $p = 0.018$, $\eta^2 = 0.001$.
- Student ratings of adult social support differed by grade level, $F(3, 4620) = 8.39$, $p < 0.001$, $\eta^2 = 0.005$. Specifically, 11th and 12th graders reported a higher level of adult social support than did ninth and 10th graders ($p < 0.01$).

- Student ratings of adult social support differed by race, $F(4, 4632) = 3.53$, $p = 0.007$, $\eta^2 = 0.003$. Specifically, Asian students reported a higher level of adult social support than did Black students ($p = 0.011$).
- Student ratings of adult social support differed by their FRPM status, $F(2, 4634) = 3.39$, $p = 0.34$, $\eta^2 = 0.001$. Specifically, students with paid meal status reported a higher level of adult social support than did students receiving free meals ($p = 0.05$).
- Student ratings of adult social support differed by their LEP status, $F(1, 4635) = 9.77$, $p = 0.002$, $\eta^2 = 0.002$. Specifically, students with LEP reported a higher level of adult social support than did students without LEP.

Peer Social Support Scale. One item, "I really like other students in my school," was used as an indicator of the sense of social support among students. Of the valid student responses (n = 4,634), the mean Peer Social Support item score was 2.59 (SD=0.79). As illustrated in Figure 14, students reported feeling more positive than negative about peer social support.

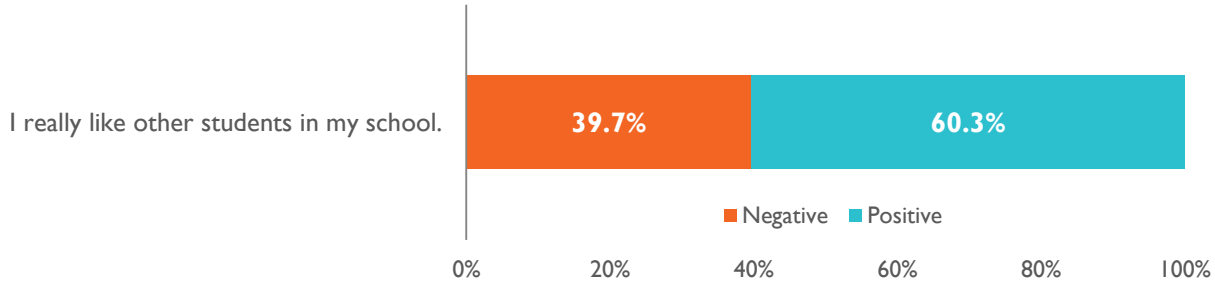


Figure 14. Distribution of student responses for the Peer Social Support subscale.

Note. Each CSS item was measured on a 4-point Likert scale (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Agree*, and 4 = *Strongly agree*), ratings of 1 and 2 were grouped as a negative response and ratings of 3 and 4 were grouped as a positive response.

The examination of between-school differences on the Peer Social Support item suggested that, in Year 5, schools varied in their perceived levels of peer social support, $F(5, 4628) = 3.78$, $p = 0.002$, $\eta^2 = 0.004$. In particular, students at Fern Creek Traditional High School perceived significantly higher levels of peer social support in comparison to students from Moore Traditional School ($p = 0.001$) and Western High School ($p = 0.44$).

Subgroup analyses were conducted to assess whether students' demographic characteristics moderated student ratings on the Peer Social Support subscale. The demographics included gender, grade level, race/ethnicity, FRPM status, and LEP status. Findings are summarized as follows:

- Male students reported a higher level of peer social support than did female students, $F(1, 4632) = 130.85$, $p < 0.001$, $\eta^2 = 0.027$.
- Students' perceptions of peer social support differed by their grade level, $F(3, 4617) = 3.80$, $p = 0.01$, $\eta^2 = 0.002$. In particular, ninth graders reported a higher level of peer social support than did 10th graders ($p = 0.023$).

- Student ratings of peer social support differed by race, $F(4, 4629) = 5.82$, $p < 0.001$, $\eta^2 = 0.005$. Specifically, Asian students reported a higher level of peer social support than did students from all other racial/ethnic backgrounds ($p < 0.01$).
- Students' perceptions of peer social support did not differ by their FRPM status, $F(2, 4631) = 0.297$, $p = 0.743$, $\eta^2 = 0.000$.
- Students with LEP reported a higher level of peer social support than did students without LEP, $F(1, 4632) = 20.08$, $p < 0.001$, $\eta^2 = 0.004$.

Objective E: School Connectedness and Engagement

School Connectedness and Engagement Scale. Five CSS items were selected as a measure of students' perceptions of school connectedness and engagement to replace the CSCI items. It should be noted that, of the five items, two items related to school engagement were measured as "Yes/No" items (see Figure 15, items B17 and B18). Overall, only about a third of the students were involved in some sort of club or sports team. In terms of items related to students' perceptions of school connectedness, a mean score was calculated based on three items measured on a 4-point Likert scale (see Figure 15, items B3, B5, and B23). Of the valid student responses (n = 4,643), the scale mean was 2.64 (SD = 0.65). As illustrated in Figure 15, students reported feeling more positive than negative about school connectedness items.

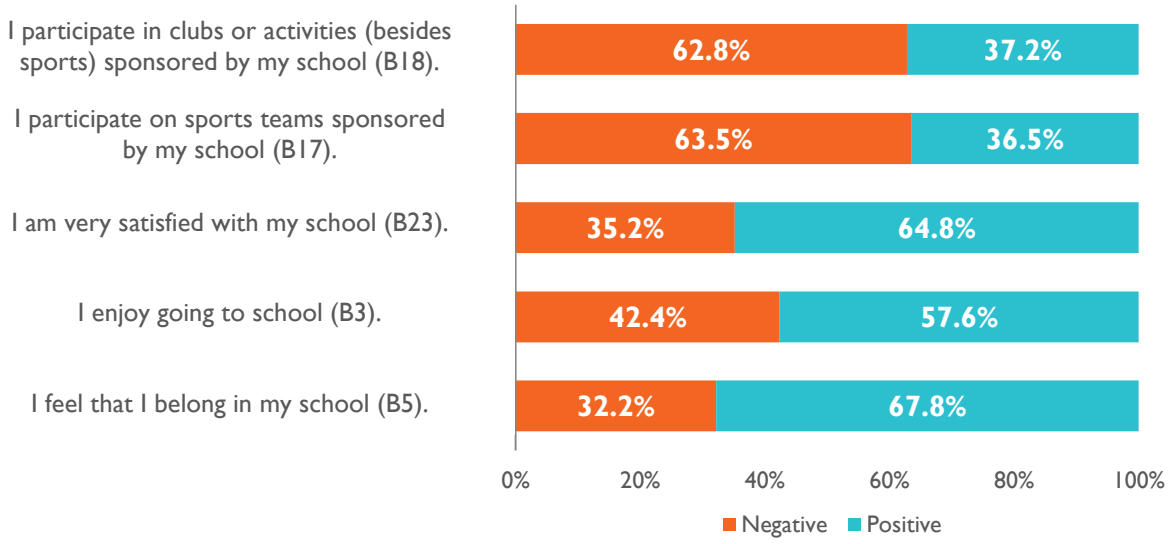


Figure 15. Distribution of student responses for the School Connectedness and Engagement subscale.

Note. Items B17 and B18 were measured by "Yes/No" responses. Items B3, B5, and B23 were measured on a 4-point Likert scale (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Agree*, and 4 = *Strongly agree*), ratings of 1 and 2 were grouped as a negative response and ratings of 3 and 4 were grouped as a positive response.

The examination of between-school differences suggested that, in Year 5, schools varied in students' perceptions of school connectedness, $F(5, 4637) = 17.89$, $p < 0.001$, $\eta^2 = 0.019$. In particular, students at Fern Creek Traditional High School perceived significantly higher levels of

school connectedness in comparison to students from other Moore Traditional Schools ($p < 0.001$), Waggener High School ($p = 0.027$), and Western High School ($p < 0.001$). Students at Valley Traditional High School also reported a higher level of school connectedness than did students at Moore Traditional School ($p < 0.001$) and Western High School ($p < 0.001$). Students at Moore Traditional School reported the lowest level of school connectedness as compared to all other schools, except Western High School ($p < 0.01$).

Subgroup analyses were conducted to assess whether students' demographic characteristics moderated their ratings on the School Connectedness and Engagement subscale. The demographics included gender, grade level, race/ethnicity, FRPM status, and LEP status. Findings are summarized as follows:

- Male students reported a higher level of school connectedness than did female students, $F(1, 4641) = 18.63$, $p < 0.001$, $\eta^2 = 0.004$.
- Students' perceptions of school connectedness differed by student grade level, $F(3, 4626) = 3.48$, $p = 0.015$, $\eta^2 = 0.002$. In particular, 11th graders reported a higher level of school connectedness than did 10th graders ($p = 0.019$).
- Student ratings of school connectedness and engagement differed by race, $F(4, 4638) = 10.61$, $p < 0.001$, $\eta^2 = 0.009$. Specifically, Asian students reported the highest level of school connectedness, followed by Hispanic students ($p < 0.05$).
- Students' perceptions of school connectedness and engagement did not differ by students' FRPM status, $F(2, 4640) = 1.55$, $p = 0.212$, $\eta^2 = 0.001$.
- Students with LEP reported a higher level of school connectedness and engagement than did students without LEP, $F(1, 4641) = 45.03$, $p < 0.001$, $\eta^2 = 0.010$.

College and Career Readiness. In Year 5, McREL evaluators also requested nine CSS items related to students' perceptions of college readiness (see Figure 16). The reliability for the scale was 0.76. In this section, evaluators examine the extent to which student perceptions of college readiness differ by school and demographic characteristics (i.e., gender, grade level, race, FRPM status, and LEP status). A College Readiness subscale mean score was calculated and used for the analysis. Of the valid student responses ($n = 4{,}627$), the scale mean was 3.12 ($SD = 0.50$). As illustrated in Figure 16, students reported feeling more positive than negative about their college readiness.

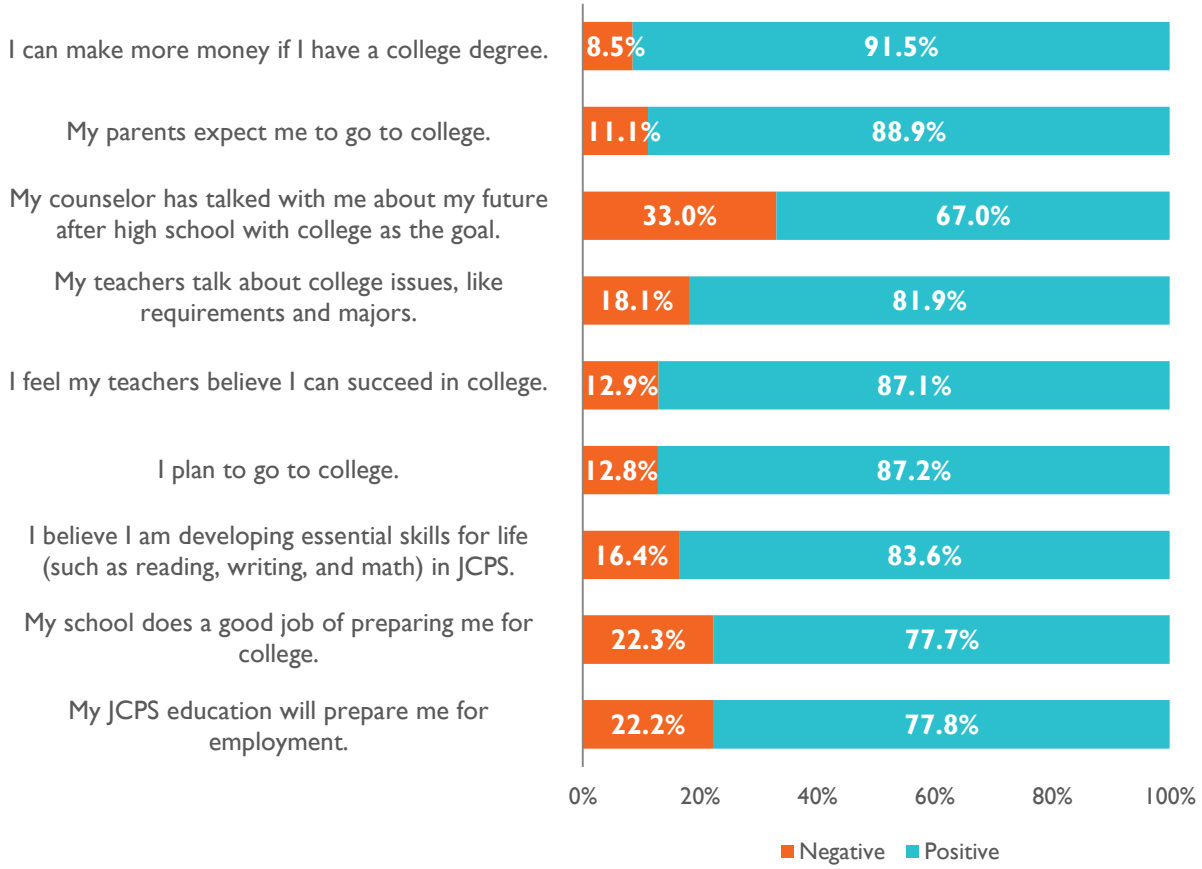


Figure 16. Distribution of student responses for the College Readiness subscale.

Note. Each CSS item was measured on a 4-point Likert scale (1= *Strongly disagree*, 2 = *Disagree,* 3 = *Agree,* and 4 = *Strongly agree*), ratings of 1 and 2 were grouped as a negative response and ratings of 3 and 4 were grouped as a positive response.

The examination of between-school differences suggested that, in Year 5, schools varied in students' perceived levels of school connectedness, $F(5, 4621) = 12.76$, $p < 0.001$, $\eta^2 = 0.014$. Subgroup analyses were conducted to assess whether students' demographic characteristics moderated their ratings on the College Readiness subscale. The demographics included gender, grade level, race/ethnicity, FRPM status, and LEP status. Findings are summarized as follows:

- Female students reported a higher level of college readiness than did male students, $F(1, 4625) = 23.12$, $p < 0.001$, $\eta^2 = 0.005$.
- Students' perceptions of college readiness differed by student grade level, $F(3, 4612) = 5.02$, $p = 0.002$, $\eta^2 = 0.003$. In particular, 10th graders reported the lowest level of college readiness than did ninth, 11th, and 12th graders ($p < 0.05$).
- Student ratings of college readiness differed by race, $F(4, 4622) = 9.97$, $p < 0.001$, $\eta^2 = 0.009$. Specifically, Asian students reported a higher level of college readiness than did White and Hispanic students ($p < 0.05$); Black students also reported a higher level of college readiness than did White students ($p < 0.001$).

- Students' perceptions of college readiness did not differ by their FRPM status, $F(2, 4624) = 1.28, p = 0.279, \eta^2 = 0.001$.
- Students with LEP reported a higher level of college readiness than did students without LEP, $F(1, 4625) = 12.79, p < 0.001, \eta^2 = 0.003$.

Implementation Fidelity for CAT

There are seven indicators for this the CAT measure. The indicators for this construct follow:

- CARTs are assigned to each school.
- CARTs receive professional development.
- CARTs develop curriculum topics in a timely manner.
- CARTs develop and deliver CAT lessons in a timely manner.
- CARTs use a walkthrough tool to monitor CAT advisory periods.
- CARTs provide training to advisors.
- CAT advisory periods are offered frequently.

Each project school was scored individually on these indicators. The scores were aggregated across the schools for one overall fidelity score. Table 37 shows the full fidelity table and scores. Due to a lack of data, assumptions were made on the fidelity rubric for some of the schools based on informal conversations or e-mails as well as past history. None of the i3 project schools implemented the CART components with a score higher than 12. In order to reach a threshold indicating that the schools implemented the component with fidelity, 67% of the schools needed to reach a score of 12 or higher; thus, this component was not implemented with fidelity.

Table 37. JCPS Fidelity Measure and Scores for Component 2: CAT

Key Elements of Component		Operational Definition for Indicator	Data Source(s) for Measuring the Indicator	Data Collection Schedule for the Indicator	Raw Scoring and Scoring Criteria for Fidelity			
					Possible Indicator Score Per School	Scoring Criteria	School Name	Indicator Score
1	College Access Resource Teacher (CART) assigned to each school	Each school has a CART assigned	District and school records	Records collected by the evaluation team annually	0-1	*0 = Low* *CART is not assigned* *1 = High* *CART is assigned*	Academy @ Shawnee	1
							Fern Creek	1
							Moore	1
							Valley	1
							Waggener	1
							Western	1
2	CART receives professional development	CARTs participate in CAT professional development (one CART per school)	CART Survey[a]	Survey administered by the evaluation team annually	0-3	*0 = Low* *Attended no sessions* *1 = Adequate* *Attended 1-2 sessions* *2 = Moderate* *Attended 3-4 sessions* *3 = High* *Attended 5 or more sessions*	Academy @ Shawnee	1
							Fern Creek	1
							Moore	0
							Valley	0
							Waggener	0
							Western	0
3	CARTs develop and deliver CAT lessons in a timely manner	Timely availability of lessons to teachers	CART and Teacher Surveys	Surveys administered by the evaluation team annually	0-3	*0 = Low* *Teachers do not receive lessons* *1 = Adequate* *Teachers receive lessons on the morning of advisory*	Academy @ Shawnee	3
							Fern Creek	3
							Moore	3
							Valley	3

	Key Elements of Component	Operational Definition for Indicator	Data Source(s) for Measuring the Indicator	Data Collection Schedule for the Indicator	Raw Scoring and Scoring Criteria for Fidelity			
					Possible Indicator Score Per School	Scoring Criteria	School Name	Indicator Score
						2 = Moderate *Teachers receive lessons one day before advisory* *3 = High* *Teachers receive lessons two or more days before advisory*	Waggener	3
							Western	3
4	CARTs use a walkthrough tool to monitor CAT advisory periods	CARTs use the walkthrough tool to monitor advisories	CART Survey[a]	Survey administered by the evaluation team annually	0-4	*0 = Low* *CARTs use walkthroughs less than once a trimester* *1 = Adequate* *CARTs use walkthroughs once a trimester* *2 = Moderate* *CARTs use walkthroughs monthly* *3 = Sufficient* *CARTs use walkthroughs biweekly* *4 = High* *CARTs use walkthroughs weekly*	Academy @ Shawnee	2
							Fern Creek	1
							Moore	0
							Valley	0
							Waggener	0
							Western	0

Key Elements of Component		Operational Definition for Indicator	Data Source(s) for Measuring the Indicator	Data Collection Schedule for the Indicator	Raw Scoring and Scoring Criteria for Fidelity			
					Possible Indicator Score Per School	Scoring Criteria	School Name	Indicator Score
5	CARTs provide training to advisors	The number of hours that CARTs provide training to teachers on how to be effective advisors	CART and Teacher Surveys	Surveys administered by the evaluation team annually	0-3	*0 = Low* *Zero hours of training with teachers* *1 = Adequate* *1-2 hours of training with teachers* *2 = Moderate* *2-3 hours of training with teachers* *3 = High* *More than 3 hours of training with teachers*	Academy @ Shawnee	1
							Fern Creek	1
							Moore	1
							Valley	1
							Waggener	1
							Western	1
6	CAT advisory periods are offered frequently	How often CAT advisory periods are provided at the school	CART and Teacher Surveys	Survey administered by the evaluation team annually	1-3	*1 = Low* *Bimonthly* *2 = Moderate* *Weekly* *3 = High* *Twice a Week*	Academy @ Shawnee	1
							Fern Creek	1
							Moore	1
							Valley	2
							Waggener	2
							Western	2

Key Elements of Component	Operational Definition for Indicator	Data Source(s) for Measuring the Indicator	Data Collection Schedule for the Indicator	Raw Scoring and Scoring Criteria for Fidelity			
				Possible Indicator Score Per School	Scoring Criteria	School Name	Indicator Score
Component Level Score				0-17	*12-17 = High Implementation* *6-11 = Moderate Implementation* *0-5 = Low Implementation*	Academy @ Shawnee	*9*
						Fern Creek	*8*
						Moore	*6*
						Valley	*7*
						Waggener	*7*
						Western	*7*
Implementation with fidelity = At least 67% of the schools have a minimum score of 12 or above *Implementation without fidelity = Fewer than 67% of the schools have a score of 12 or above*						*No school has a score of more than 12; thus, this component has not been implemented with fidelity*	

[a] Only four CARTs turned in surveys, as they were collected anonymously, these totals are being assigned to the first schools on the list. The project director indicated that professional development sessions did not happen frequently this year so no school would score above a "1," even if they had returned the survey.

Project Goal 3: Teachers' Pedagogical and Student Support Practices

The third project goal is to improve teachers' pedagogical and student support practices to maximize the effectiveness of increased learning time. Strategies to reach this goal include ensuring that content-based and cross-disciplinary PLCs meet regularly during the school year. Measures to indicate progress on this goal include changes in teachers' perceptions of their ability to identify and appropriately respond to unique academic and social needs of students as defined by the 2015 Teacher Survey. Table 38 outlines the objectives for Project Goal 3 and the yearly or end-of-project target, when appropriate.

Table 38. Project Goal 3 Objectives, Performance Measures, and Targets

	Objective	Performance Measure	Target
A	Ensure that content-based and cross-disciplinary professional learning communities (PLCs) meet regularly over the school year.	Frequency of content-based PLCs in core courses	15 content-based PLCs annually
		Total time for content-based PLCs	60 hours
		Frequency of cross-disciplinary PLCs	32 cross-disciplinary PLCs annually
		Total time for cross-disciplinary PLCs	29 hours
B	Increase teachers' perceptions of collaboration among themselves within and across content areas in the school	Collaboration Scale on the Teacher Survey	30.38 [a]
C	Increase teachers' perceptions of their own self-efficacy with respect to content-based knowledge for teaching	Self-Efficacy Scale on the Teacher Survey	33.77 [b]
D	Improve teachers' perceptions of their instructional practices in order to increase student academic engagement and challenge	Teaching Scale on the CSS	10.00 [c]
E	Improve teachers' perceptions of their ability to identify and appropriately respond to students' unique academic and social needs	CSCI Support for Learning and Adult Social Support scales	4.04 and 4.22, respectively

[a] The reported 2013 mean and standard deviation for the Teacher Collaboration scale on the Teacher Survey was 28.20 and 4.36, respectively. The target for Years 4 and 5 was set as the growth of half a standard deviation, or 30.38.

[b] The reported 2013 mean and standard deviation for the Self-Efficacy scale on the Teacher Survey was 31.59 and 4.35, respectively. The target for Years 4 and 5 was set as the growth of half a standard deviation, or 33.77.

[c] The reported 2013 mean and standard deviation for the Teaching scale on the CSS was 8.75 and 2.50, respectively. The target on Years 4 and 5 was set as the growth of a half a standard deviation, or 10.00.

Objective A: Professional Learning Community (PLC) Meetings

Project staff commented that this was arguably the most successful i3 intervention because it integrated a culture of teacher collaboration among the schools that will continue beyond the life of the grant. A large part of that success is the "homegrown assessment" system where all teachers in a school who teach a common course, such as English I, can have a conversation with colleagues

about the students enrolled. Additionally, through this intervention, JCPS adapted the PLC framework and supported training for both teachers and principals.

An interviewed principal explained that there are three sets of questions that his school tries to respond to and discuss during a PLC meeting:

1. What does our current progress data tell us? How do we celebrate?
2. In terms of planning, what's working and what's not working? Do we plan a school remediation day or continue on to the next unit?
3. How do we overcome any obstacles we may be facing in the classroom?

This is also a time for teachers to discuss individual students and what problems they may be facing. For example, if a student has been absent for multiple days, how can the team address the problem?

Content-Based PLCs. The content-based PLC target of 60 hours was based on an original estimate of having 15 four-hour-long, half-day sessions. The target for the content-based PLCs was based on the i3 schools having 55-minute PLC periods where 29 total hours would be devoted to the PLCs. Although some teachers may attend half-day training sessions (e.g., DuFour PLC training), individual schools tend to hold PLC meetings regularly within their buildings and each school conducts these PLCs in a different way. In order to report consistently across the schools, Teacher Survey results will be used to estimate how well the schools are doing in reaching the objectives' targets and to calculate the fidelity implementation score.

All but four teachers indicated that they participated in at least one content-based PLC in their school. Assuming there are 34 weeks in a school year, Table 39 estimates the average frequency and duration of the content-based PLCs at each i3 project school. Based on these estimates, the i3 schools exceeded the target of having 15 content-based PLC meetings per year. Typically, most of the schools have meetings on a weekly basis; therefore, they are meeting an average of 34 times per year. In addition, four out of the six i3 schools meet for 60 minutes per session. Because two schools do not meet for a full hour, the project average is just below the 60-minute target.

Table 39. Average Frequency and Duration of Content-Based PLCs by School

School	Meetings Per Week	Frequency (# Per Year)	Minutes Per Meeting	Duration (Hours Per Year)
Academy @ Shawnee	1	34	60	34
Fern Creek Traditional High School	1	34	60	34
Moore Traditional High School	1	34	30	17
Valley Traditional High School	1	34	45	26
Waggener High School	1	34	60	34
Western High School	1	34	60	34
Across the i3 Schools	**1**	**34**	**52.5**	**29.8**

Principals were also asked to comment on factors that facilitated content-based PLC implementation in their schools and challenges they faced. Table 40 lists those successes and challenges.

Table 40. Principal Reports of Facilitating and Challenging Factors of Content-Based PLC Implementation

Success Factors	Challenges
Alignment of standards—all teachers are on the same page	Buy-in for some
Common curriculum	Most groups have common planning [periods]; a few do not. Those that do not have to meet outside the school day
Weekly common formative assessment data	Small teams of teachers
Common assessments	AP versus regular curriculum
Differentiation based on formative data	Time for PLC work is a challenge; we have incorporated planning sessions for six weeks each to give teachers more time to work together
Synergy—the group is stronger than an individual and the group benefits from a variety of ideas to enhance instruction	
Each group reports the percent of students proficient in each standard throughout the year. Year-end tests are not a surprise; each PLC knows where students are with each standard.	Continue to support school with i3 funds; these are used to create time for teachers to meet
Improved interventions	

Cross-Disciplinary PLCs. A cross-disciplinary PLC can be defined as a School of Study, Math-English-Social Studies-Science (MESS) group, or freshmen academy, among others. When asked if they participated in a cross-disciplinary PLC, only 40% of teachers responded that they did. Table 41 estimates the extent to which the 40% of teachers who reported that they participated in a cross-disciplinary PLC have met the project's targets. For the cross-disciplinary PLCs, neither the frequency nor the duration targets have been met (M = 10.8 and M = 7.7, respectively). This is well below the goal of having 32 cross-disciplinary PLC meetings per year, totaling 29 hours. Many teachers chose to skip these questions or indicated that they *did not know*. These responses were not included in the analysis, but it does indicate that many teachers may not be aware that this work is happening within the schools.

Table 41. Average Frequency and Duration of Cross-Disciplinary PLCs by School

School	Frequency of Meetings	Frequency (# Per Year)	Minutes Per Meeting	Duration (Hours Per Year)
Academy @ Shawnee	Once or twice a year	2	60	2
Fern Creek Traditional High School	Monthly	9	60	9
Moore Traditional High School	Weekly	34	30	17
Valley Traditional High School	Monthly	9	45	7

School	Frequency of Meetings	Frequency (# Per Year)	Minutes Per Meeting	Duration (Hours Per Year)
Waggener High School	Monthly	9	60	9
Western High School	Once or twice a year	2	60	2
Across the i3 Schools	**--**	**10.8**	**52.5**	**7.7**

Principals were also asked to comment on factors that facilitated cross-disciplinary PLC implementation in their schools and the challenges they faced. Table 42 lists those successes and challenges.

Table 42. Principal Reports of Facilitating and Challenging Factors of Cross-Disciplinary PLC Implementation

Success Factors	Challenges
Authentic assessments	Cohort scheduling
Differentiation for age-specific needs	Finding time to plan is a challenge
Students see connections between content	Time during the day due to content PLCs
Authentic lessons	Finding the right teachers to pair
Relevance and real-world applications across subjects	Students are not in pure cohorts
Students achieve more and have better results on tests	
Teachers from different content areas work together and think outside the box	

Objective B: Increase Teachers' Perceptions of Collaboration Among Teachers Within and Across Content Areas

The Teacher Collaboration and Support scale, consisting of nine items, measures teachers' perceptions of the levels of collaboration and support among teachers at their school. Items in this section follow:

- Teachers have sufficient time to collaborate with colleagues to plan and improve instruction.
- Collaboration is viewed as an important part of this school's culture.
- Teachers have sufficient resources to provide quality instruction.
- Teachers are generally willing to try new ideas.
- Teachers in this school trust each other.
- It is okay in this school to discuss with other teachers positive and/or negative feelings, concerns, and frustrations related to instruction and practice.
- Teachers discuss difficulties and work together to develop solutions.

- Teachers support each other's efforts to make improvements.
- Access to expertise and resources is available and provided in a timely manner.

The internal consistency reliability (Cronbach's α) estimate of the Teacher Collaboration and Support scale was 0.83. Respondents selected answer choices based on a 4-point Likert scale (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Agree,* and 4 = *Strongly agree*). The scales were summed to generate a scale score.

Across the core content teachers at JCPS i3 schools (n = 94), teachers reported high levels of teacher collaboration and support (M = 27.00, SD = 3.69). Figure 17 displays the percentage average across schools of teachers with negative (i.e., *strongly disagree* or *disagree*) and positive (i.e., *agree* or *strongly agree*) responses on the Teacher Collaboration and Support scale. The project target for this scale was M = 30.38, which was not met by any of the i3 schools.

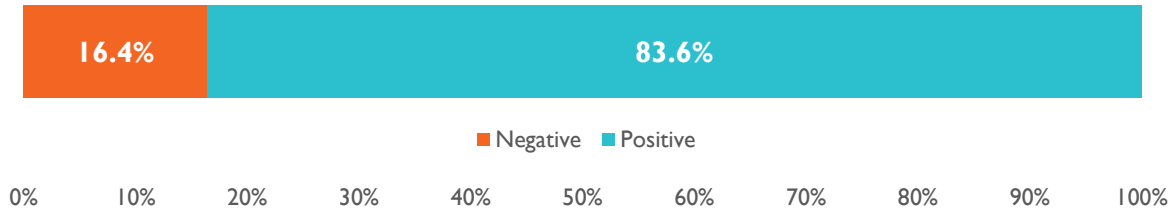


Figure 17. Distribution of teacher responses for the Teacher Collaboration and Support scale.

Nearly 84% had positive responses across the scale. Table 43 lists the items as well as the teachers' level of agreement. Thematically, the items that tended to have higher levels of agreement focused on teachers supporting one another, collaborating, and working together. Collaboration is perceived as part of the school's culture, and teachers seem to be supporting each other and working well together to solve problems. This may be attributable to the PLCs, where time is devoted for teachers to work collaboratively to discuss students' progress and challenges in a supportive work environment.

Table 43. Agreement with Teacher Collaboration and Support Scale Items

Item	Aggregated Percentage of Positive Responses *(Agree or Strongly Agree)*
Teachers are willing to try new ideas.	94.7%
Collaboration is seen as an important part of this school's culture.	93.6%
Teachers support each other's efforts to make improvements.	89.3%
It is okay in this school to discuss with other teachers positive and/or negative feelings, concerns, and frustrations related to instruction and practice.	83.0%
Teachers discuss difficulties and work together to develop solutions.	81.9%
Teachers have sufficient time to collaborate with colleagues to plan and improve instruction.	78.7%

Item	Aggregated Percentage of Positive Responses *(Agree or Strongly Agree)*
Access to expertise and resources is available and provided in a timely manner.	77.7%
Teachers in this school trust each other.	76.6%
Teachers have sufficient resources to provide quality instruction.	76.6%

Objective C: Increase Teachers' Perceptions of Their Own Self-Efficacy with Respect to Content-Based Knowledge for Teaching

The Teacher Self-Efficacy scale, consisting of 10 items, measures teachers' perceptions of their own self-efficacy. Items in this section follow:

- How often do you feel that you are able to work effectively?
- How often are you satisfied with the quality of your work?
- How often do you feel that you are being successful in your work?
- How often do you have sufficient self-confidence to defend your own points of view?
- How often do you feel adequately prepared to use formative data (e.g., class work, homework, and other instructional activities) to adjust your instruction?
- How often do you feel adequately prepared to use summative data (e.g., end of chapter, unit, or course assessments) to adjust your instruction?
- How often do you feel confident in teaching all required content standards in your subject area?
- How often do you feel confident in adjusting your instructional practices to meet the needs of individual students?
- How often do you worry about being criticized if positive results are not readily apparent?
- How often does the emphasis on success discourage you from trying new approaches?

The internal consistency reliability (Cronbach's α) estimate of the Teacher Self-Efficacy scale was 0.67. Respondents selected frequency answer choices based on a 4-point Likert scale (1 = *Never*, 2 = *Sometimes*, 3 = *Often,* and 4 = *Very often*), with a summed scale range of 10 to 40 points.

Across the core content teachers at JCPS i3 schools (n = 87), teachers reported moderately high levels of teacher self-efficacy (M = 31.32, SD = 16.21) and did not surpass the end-of-project target of 33.77. Figure 18 displays the percentage average across the schools of teachers who responded to each category on the Teacher Self-Efficacy scale. Overall, the teachers in the six i3 project schools seem to have high perceptions of their own self-efficacy as 89% of them provided positive responses.

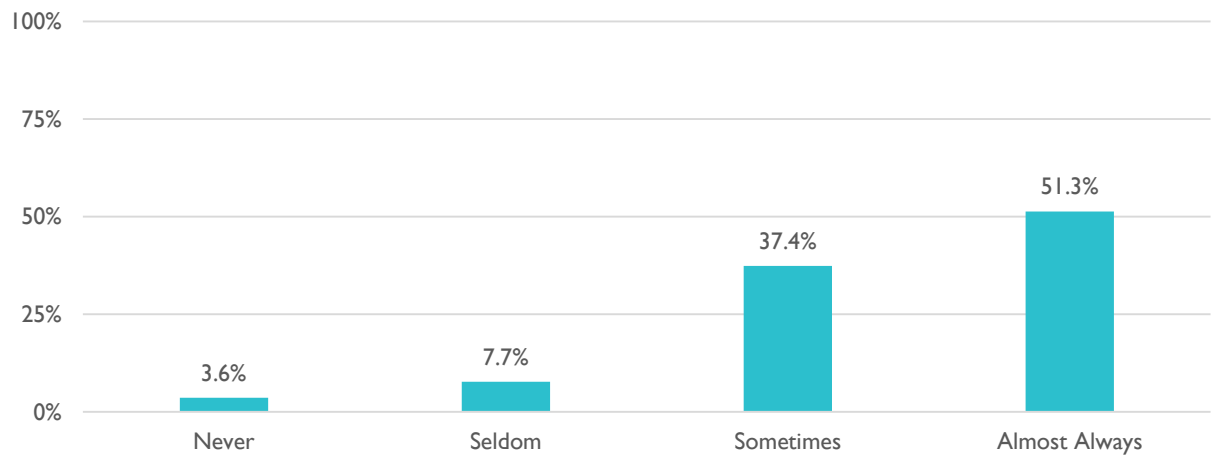


Figure 18. Distribution of teacher responses for the Teacher Self-Efficacy scale.

Survey responses also indicated that over half of the teachers are reluctant to try new ideas because of the emphasis on success. According to the survey, 59% of the core content teachers are *sometimes* or *almost always* discouraged from trying new approaches because of the emphasis on success. A high percentage of teachers frequently choose not to try new approaches because of the pressure of achieving high results.

Objective D: Improve Teachers' Perceptions of Their Instructional Practices in Order to Increase Student Academic Engagement and Challenge

CSS Teaching Scale

JCPS provides staff members who have been CSS-certified with data for the i3 project schools to gauge teachers' perceptions of their instructional practices in order to increase students' academic engagement and challenge. Three items from the CSS relate to this construct:

- If I try really hard, I can get through to even the most unmotivated students.
- By trying a different teaching method, I can significantly affect a student's achievement.
- If teachers have willingness, they can help any student learn.

The internal consistency reliability (Cronbach's α) estimate of the CSS Teaching scale was 0.83. Respondents selected answer choices based on a 4-point Likert scale (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Agree,* and 4 = *Strongly agree* with an N/A choice).

Across the core content teachers at JCPS i3 schools (n = 491), teachers reported moderately high levels of student academic engagement (M = 8.88, SD = 2.18), although it did not meet the end-of-project target of 10.00. Table 44 shows the items and the teachers' level of agreement. Certified staff in the project schools tended to have high levels of agreement with all three items. Specifically, 91% of the respondents agreed or strongly agreed that by trying different teaching methods, they can significantly affect student achievement. This indicates that teachers attempt to

meet individual learning needs for all students. Over 70% of the teachers strongly agreed or agreed with the other two items.

Table 44. Teachers' Perceptions of Their Instructional Practices to Increase Student Academic Engagement and Challenge

Items	Strongly Disagree	Disagree	Agree	Strongly Agree	N/A
If I try really hard, I can get through to even the most unmotivated students.	2.8%	6.1%	20.7%	49.8%	20.5%
By trying a different teaching method, I can significantly affect a student's achievement.	1.0%	4.7%	60.4%	28.7%	5.3%
If teachers have willingness, they can help any student learn.	1.4%	3.3%	15.0%	50.8%	29.5%

Student Academic Engagement. Teachers' perceptions of student academic engagement and challenge were also measured through the 2015 Teacher Survey. Consisting of six items, this scale measures teachers' perceptions of the extent that students are academically engaged in their school. Items in this section follow:

- Teachers at my school challenge students academically.
- Teachers at my school encourage students to go beyond stated expectations.
- Teachers at my school involve students in setting expectations.
- Teachers at my school involve students in planning lessons.
- Teachers at my school involve students in developing criteria for assessing their assignments.
- Teachers at my school work with disenfranchised students to help them feel more connected to school.

The internal consistency reliability (Cronbach's α) estimate of the Student Academic Engagement scale was 0.81. Respondents selected answer choices based on a 4-point Likert scale (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Agree,* and 4 = *Strongly agree*).

Across the core content teachers at JCPS i3 schools (n = 875), teachers reported moderately high levels of student academic engagement (M = 16.35, SD = 3.04). Figure 19 displays the percentage average across the schools of teachers who had negative (i.e., *strongly disagree* or *disagree*) or positive (i.e., *strongly agree* or *agree*) responses on the Student Academic Engagement scale. Overall, almost two thirds of the respondents demonstrated positive agreement on the Student Academic Engagement scale. The percentages of teachers responding with a rating of *agree* or *strongly agree* was more than 80% on two items: "Teachers at my school challenge students academically" (81%) and "Teachers at my school work with disenfranchised students to help them feel more connected to school" (86%).

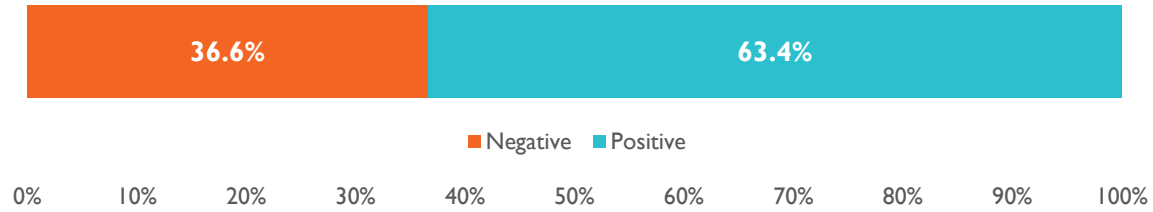


Figure 19. Distribution of teacher responses for the Student Academic Engagement scale.

Items regarding how teachers involve students in planning tended to have more negative responses. For example, nearly three quarters of the teacher respondents indicated that they *strongly disagree* or *disagree* with the item, "Teachers at my school involve students in planning lessons" (76%). Similarly, 56% of teachers strongly disagreed or disagreed that "Teachers at my school involve students in developing criteria for assessing their assignments."

Thus, it seems that teachers tended to rate items that focused on challenging students and working with disenfranchised students higher than items related to students being actively involved in planning lessons, setting expectations, and developing criteria for lessons. It appears that teachers have fewer tendencies to actively engage students in planning lessons, but do perceive themselves to be challenging students academically and setting high expectations for them.

Objective E: Improve Teachers' Perceptions of Their Ability to Identify and Appropriately Respond to Student's Unique Academic and Social Needs

The last objective for Project Goal 3 is to measure teachers' perceptions of their ability to respond to students' unique academic, social, and emotional needs. This objective is measured through two scales on the CSS: Support for Learning and Adult Social Support.

Support for Learning Scale. Six CSS items were selected to assess school personnel's perceptions of support for learning for their students. Of the valid student responses (n = 492), the scale mean was 2.94 (SD = 0.61). As illustrated in Figure 20, school personnel reported feeling more positive than negative about the support for learning items. However, one item received a much lower rating as compared to all other items, "Teachers at my school assign meaningful homework on a regular basis" (55% positive responses).

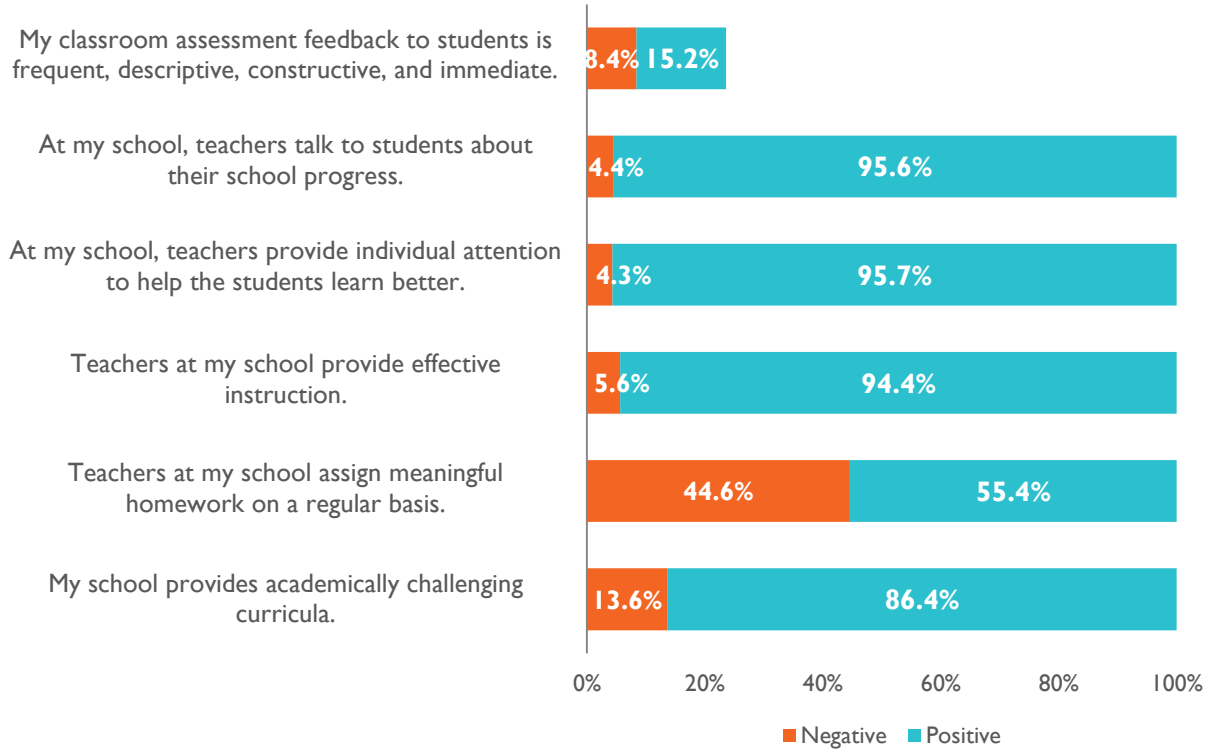


Figure 20. Distribution of school personnel responses for the Support for Learning subscale.

Note. Each item was measured on a 4-point Likert scale (1= *Strongly disagree*, 2 = *Disagree*, 3 = *Agree*, and 4 = *Strongly agree*), ratings of 1 and 2 were grouped as a negative response and ratings of 3 and 4 were grouped as a positive response.

Significant variations continue to exist between the i3 schools, $F(5, 486) = 2.90$, $p = 0.014$, $\eta^2 = 0.029$. Yet, the results of multiple comparisons did not reveal any significant differences between individual schools. The results of subgroup analyses revealed that male school personnel reported a higher level of support for learning than did female school personnel, $F(1, 444) = 15.53$, $p < 0.001$, $\eta^2 = 0.034$. Additionally, school personnel from racial/ethnic minority backgrounds reported a lower level of support for learning than did their White counterparts, $F(1, 424) = 14.23$, $p < 0.001$, $\eta^2 = 0.032$. School personnel's ratings on the Support for Learning subscale did not differ by years of teaching experience (i.e., school personnel with less than one year of teaching experience vs. school personnel with at least two years of teaching experience), $F(1, 307) = 1.74$, $p = 0.188$, $\eta^2 = 0.006$.

Adult Social Support Scale. Five CSS items were selected to assess school personnel's perceptions of adult social support for their students. Of the valid student responses ($n = 492$), the scale mean was 3.08 ($SD = 0.61$). As illustrated in Figure 21, school personnel reported feeling more positive than negative about adult social support items. However, one item received a much lower rating as compared to all other items, "If I really try hard, I can get through to even the most unmotivated students" (72% positive responses); while one item receive 98% of positive responses, " I feel the teachers at my school really care about their students."

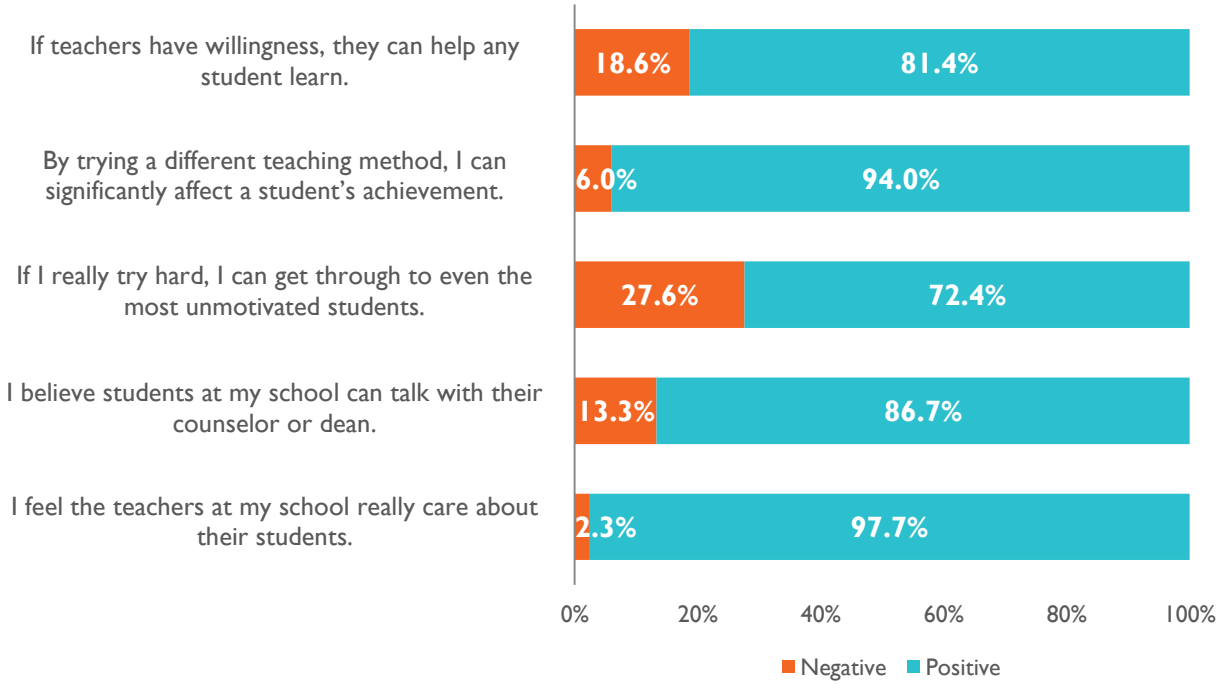


Figure 21. Distribution of school personnel responses for the Adult Social Support subscale.

Note. Each item was measured on a 4-point Likert scale (1= *Strongly disagree*, 2 = *Disagree,* 3 = *Agree,* and 4 = *Strongly agree*), ratings of 1 and 2 were grouped as a negative response and ratings of 3 and 4 were grouped as a positive response.

Significant variations continue to exist between the i3 schools, $F(5, 486) = 3.95$, $p = 0.002$, $\eta^2 = 0.039$. School personnel from Waggener High School reported a higher level of adult social support than did school personnel from Moore Traditional High School ($p = 0.031$), Valley Traditional High School ($p = 0.002$), and Western High School ($p = 0.024$). The results of subgroup analyses revealed that school personnel ratings of adult social support did not differ by gender or minority status, $F(1,444) = 0.71$, $p = 0.400$, $\eta^2 = 0.002$ and $F(1, 424) = 0.37$, $p = 0.546$, $\eta^2 = 0.001$, respectively. However, school personnel who have been in the school for two to five years reported higher ratings of adult social support as compared to school personnel who were in the school for less than one year, $F(1, 307) = 5.82$, $p = 0.016$, $\eta^2 = 0.019$.[24]

Implementation Fidelity for PLCs

The fidelity score for this project goal is high as most of the indicators have been mandated by the district. The indicators for this construct follow:

- Frequency of content-based PLCs
- Duration of content-based PLCs

[24] The coding for years of experience in this school was: 1 = less than one year, 2 = two to five years, 3 = six to 10 years, 4 = 11 to 20 years, and 5 = more than 20 years.

- Frequency of cross-disciplinary PLCs
- Duration of cross-disciplinary PLCs

Each project school was scored individually on these indicators. The scores were aggregated across the schools for one overall fidelity score. Table 45 shows the full fidelity table and scores. To be implemented with fidelity, at least 67% of the schools must obtain a minimum score of 10. During Year 5, none of the schools scored a 10; therefore, this component has not implemented with fidelity.

Table 45. JCPS Fidelity Measure and Scores for Component 3: PLCs

Key Elements of Component		Operational Definition for Indicator	Data Source(s) for Measuring the Indicator	Data Collection Schedule for the Indicator	Raw Scoring and Scoring Criteria for Fidelity			
					Possible Indicator Score Per School	Scoring Criteria	School Name	Indicator Score
1	Content-based PLCs	Frequency of PLCs	Teacher surveys	Teacher survey administered annually	1-4	*1 = Low* *Fewer than 10 content-based PLCs annually* *2 = Minimal* *11-12 content-based PLCs annually* *3 = Adequate* *13-14 content-based PLCs annually* *4 = High* *15 or more content-based PLCs annually*	Academy @ Shawnee	4
							Fern Creek	4
							Moore	4
							Valley	4
							Waggener	4
							Western	4
2	Content-based PLCs	Duration of PLCs	Teacher surveys	Teacher survey administered annually	1-4	*1 = Low* *Less than 50 hours* *2 = Minimal* *50-54 hours* *3 = Moderate* *55-59 hours* *4 = High* *60 or more hours*	Academy @ Shawnee	1
							Fern Creek	1
							Moore	1
							Valley	1
							Waggener	1
							Western	1
3	Cross-disciplinary PLCs	Frequency of cross-disciplinary PLCs	Teacher surveys	Teacher survey administered annually	1-4	*1= Low* *Fewer than 25 cross-disciplinary PLCs annually*	Academy @ Shawnee	1
							Fern Creek	1

Key Elements of Component		Operational Definition for Indicator	Data Source(s) for Measuring the Indicator	Data Collection Schedule for the Indicator	Raw Scoring and Scoring Criteria for Fidelity			
					Possible Indicator Score Per School	Scoring Criteria	School Name	Indicator Score
						1 = Minimal *25-28 cross-disciplinary PLCs annually* *2 = Adequate* *29-31 cross-disciplinary PLCs annually* *3 = High* *32 cross-disciplinary PLCs annually*	Moore	1
							Valley	1
							Waggener	1
							Western	1
4	Cross-disciplinary PLCs	Duration of cross-disciplinary PLCs	Teacher surveys	Teacher survey administered annually	1-4	*1 = Low* *Less than 22 hours* *2 = Minimal* *22-24 hours* *3 = Moderate* *25-28 hours* *4 = High* *29 or more hours*	Academy @ Shawnee	1
							Fern Creek	1
							Moore	1
							Valley	1
							Waggener	1
							Western	1
Component Level Score					**1-16**	***10-14 = High Implementation*** ***6-9 = Moderate Implementation*** ***1-5 = Low Implementation***	**Academy @ Shawnee**	**7**
							Fern Creek	**7**
							Moore	**7**
							Valley	**7**
							Waggener	**7**
							Western	**7**

Key Elements of Component	Operational Definition for Indicator	Data Source(s) for Measuring the Indicator	Data Collection Schedule for the Indicator	Raw Scoring and Scoring Criteria for Fidelity			
				Possible Indicator Score Per School	Scoring Criteria	School Name	Indicator Score
Implementation with fidelity = At least 67% of the schools have a minimum score of 10 or above *Implementation without fidelity = Fewer than 67% of the schools have a score of 10 or above*						*No school has a score of more than 10; thus, this component has not been implemented with fidelity*	

Summary and Recommendations

Project Goal 1: Student Mastery of Academic Material

Project Goal 1 included objectives regarding course assignment protocols and monitoring of progress; core course analysis; and perceptions of academic challenge from both the student and teacher perspectives. Progress on this goal was analyzed through a variety of measures. Evaluators interviewed school counselors to learn how they assign students to courses and monitor students' progress to ensure they are in the appropriate classes. Teachers were also asked on the Teacher Survey to respond to questions about the master schedule, while principals were asked questions on the implementation survey regarding students' course placement and scheduling. In addition, teachers addressed questions regarding the level of academic challenge provided to students at their school. Students' perceptions of academic challenge, teacher support for learning, and self-efficacy were also measured through the CSS and Student Survey. To measure students' academic progress, core course pass and fail rates were analyzed.

Course Assignment Protocols and Monitoring of Progress

Although the trimester was the driving force behind this goal, due to external forces, including the implementation of end-of-course exams, the trimester schedule did not work how it was intended. Initially, the trimester was designed to provide students, especially those who were struggling, with multiple opportunities to pass courses so they could graduate on time. With the implementation of end-of-course exams, however, many core content courses (i.e., English and math) became three-trimester or year-long courses.

According to the interviewed counselors, the trimester allowed for scheduling flexibility and the ability to immediately respond to student needs. Simultaneously, it was challenging because they had to change the master schedule each trimester. One of the counselors also believed that by providing the students with multiple opportunities to pass a course within the trimester schedule, students were given an open invitation to fail a course without major consequence because they were able to take it many times. For accelerated students, one counselor indicated that the trimester was "irrelevant" because most accelerated students took year-long classes while another counselor thought that the trimester limited opportunities for advanced students because they could not take as many electives or participate in the career pathway curricula. Based on Teacher Survey results, the majority of teachers did not think that the trimester schedule met the needs of either struggling or advanced students.

In terms of placing students in courses, the counselors discussed how they use multiple sources of data to accurately assign the student to the course that best fits his or her needs (e.g., comprehensive, advanced, honors, or AP). For upperclassmen, this typically involved conversations with the students to discuss potential interests to help frame a course load around those interests in addition to meeting graduation requirements. For incoming freshmen, the counselors also review data from the students' middle school career. At least one counselor from the high school typically

meets with students at the middle schools to discuss high school graduation requirements and expectations.

In terms of students' perceptions of the scheduling process, over half of the Student Survey respondents (56%) agreed that they were able to change courses if they were struggling in a class, and 82% agreed that there are opportunities to make up courses in which they have failed. Students were also asked if they had opportunities to take courses outside their core courses and if they had opportunities to take honors or advanced classes. Over 80% of the respondents agreed with both of those statements.

Recommendations

- Request that counselors and other affiliated school personnel document their scheduling and monitoring processes. From these submissions, create a "Best Practices" resource that will provide a multitude of ideas that schools can adapt to fit into their own contexts.
- Bring schools together to share their successes and challenges. During this time, have district staff present information on who can address questions that master schedulers and counselors may have that relate to scheduling (e.g., Infinite Campus) or student placement.
- Develop case studies of specific programs (e.g., Schools of Study) which may warrant further study and be of interest to the schools throughout the district.
- Have the counselors facilitate meetings with the faculty at their schools to learn more about why teachers indicated on the teacher survey that the schools may not always have the best placement strategies for students.
- Create time for school staff to discuss how the current scheduling process impacts both struggling and accelerated students as they were divided on whether the current processes benefitted these students. Listening to different perspectives may encourage and create new ideas that can benefit all students, regardless of their academic status.

Core Course Pass Rates

Overall, approximately 82% of i3 students passed their core courses. Across the subject areas, the pass rates were higher in English (86%) and social studies (84%) than in math (79%) and science (77%). As compared to the previous year, i3 students made some progress in English (1% increase) and social studies (1% increase), but they showed a decrease in math (1% decrease) and science (3% decrease). Thus, the i3 schools did not meet any of the Year 5 performance targets across any subject area (6% to 11% below the targets).

Although student pass rates varied across different subjects and core courses, one school (i.e., Moore Traditional High School), in particular, had higher pass rates than did others. While the majority of schools struggled to meet the Year 5 targets, Moore Traditional High School exceeded

the Year 5 target (1% above the target) in social studies and was only 0.6% shy from the science target.

Findings of subgroup analyses revealed that trimester scheduling seemed to have positive effects in English, math, social studies, and some sub-areas of science (i.e., life science and earth/space science) in comparison with the traditional two-term courses. Additionally, achievement gaps measured by course pass rates continued to be observed among the subgroups. In particular, female students had higher passing rates as compared to male students across all subject areas and across the majority of the core courses. Nevertheless, consistent with national trends, students from certain racial/ethnic (i.e., Black/African American) and socioeconomically disadvantaged (i.e., those with FRPM status) groups fell behind their counterparts. Such differences were more pronounced between White students and Black students and between students from middle- and upper-income families (i.e., students with paid meal status) and low-income families (e.g., students with FRPM status). These gaps have been well documented in the literature as well as in the previous project reports. Yet, it is interesting to observe that, in Year 5, Hispanic students demonstrated higher pass rates in math, science, social studies, and the majority of the core course areas than they have in past years.

Recommendations

- Identify, develop, and implement strategies to close achievement gaps among the subgroups, specifically the ethnicity/race and FRPM subgroups.
- Examine why specific courses (e.g., Geometry, Physical Science, and Earth/Space Science) tend to have lower pass rates than other core courses. Determine which strategies teachers may need to utilize to help increase pass rates. Provide professional development for teachers to learn how to effectively implement these instructional strategies in their teaching.
- Study the variations of the pass/fail rates across the schools to determine why some schools seem to have higher pass rates than others. Use data from this report and/or school data to create individual school profiles to look at trends, ask more in-depth questions, and gain a full understanding of what is happening at each school, specifically in terms of the achievement gaps. Develop an action plan based on these findings to support the school in closing the achievement gaps.

Academic Challenge, Self-Efficacy, and Support for Learning from Teachers

Overall, the i3 schools showed a slight increase (2%) in the mean percentage of students' perceptions of academic challenge from Year 4 to Year 5. When compared to the end-of-project target, i3 schools, on average, were 8% below the goal of 75% agreement. The examination of variations across the i3 schools revealed that four schools (i.e., Fern Creek Traditional High School, Moore Traditional High School, Valley High School, and Waggener High School) showed minor increases from Year 4 to Year 5; yet, the other two schools (i.e., Academy @ Shawnee and Western High School) showed minor decreases from Year 4 to Year 5. Further, results of subgroup analyses

revealed that students' perceptions of academic challenge differed by their LEP status, grade level, and race/ethnicity.

Teachers tended to agree that the school provided students with academic challenge. A majority of teachers agreed that the students seemed to enjoy school and that high grades are viewed as an indicator of mastering high standards. However, a third also agreed that students were bored at the school and just over half agreed that students do well at their school.

Responses regarding student engagement were also positive. Teachers agreed that they challenge their students academically and help disenfranchised students feel more connected to school. They also tended to agree that the teachers in their school encourage students to go beyond stated expectations and involve the students in setting those expectations. However, a majority of teachers disagreed that they involve students in developing criteria for assessing their assignments and that they work to involve students in planning lessons. Thus, it appears that teachers still struggle with ways of encouraging student voice in the classroom.

Recommendations

- Investigate variations across the schools to identify strategies and practices that are working in some schools but not working in other schools. Experiment with modifying strategies and practices for the respective schools.
- Conduct focus groups with small groups of students across the grade levels to learn more about what a "challenging" curriculum means to them, and what they believe constitutes "meaningful" homework assignments.
- Facilitate conversations with the leadership at each of the i3 schools to review the data regarding students' perceptions of academic challenge, which differed across the schools and may suggest that some schools need more support than others. Develop an action plan with each school to improve students' perceptions of academic challenge.
- Encourage building leadership to have conversations with teachers about how to develop an engaging and challenging curriculum. If possible, allow students to join in those conversations in order to have their voices heard and to establish a new type of relationship with teachers and administrators.

Fidelity

Each school has implemented Project Goal 1 related to student scheduling with a high degree of fidelity. The elements assessed by the fidelity tool included: (1) master scheduler assigned; (2) five 70-minute courses per day; and (3) students assigned to courses based on data (e.g., academic history and assessment scores). Because at least 67% of the project schools received a score of 5 or higher, this component has been implemented with a high level of fidelity.

Project Goal 2: Student Engagement in School and College Readiness

The second project goal is to provide a range of personalized supports to students to increase engagement in school and promote college readiness. The primary strategy is to create CAT advisory periods for students that are designed to focus on college readiness and support students' sense of community within their schools. In addition to CAT implementation data (gathered via the CART and principal surveys), 10th grade PLAN scores and 11th grade ACT scores were analyzed to measure students' college preparedness. Postsecondary transition rates were examined through StudentTracker data. Students' perceptions about their own engagement, adult social support, and peer social support were measured through the CSS while their perceptions of CAT were measured by the Student Survey.

CAT Implementation

To support college readiness for JCPS students, all project schools hired a CART to design and plan the CAT advisory periods to increase students' understanding and interest in attending college. Being that the CARTs have the autonomy to plan and design CAT advisory periods within each project school, they have implemented projects and have curricula planned out for the school year. However, they still struggle with having 100% of the teachers buy into the process and engage students. Further, a few of the CARTs mentioned that student apathy is an issue. The CARTs also had limited time and opportunity to provide training to their own staff, and there were limited opportunities for them to receive training for themselves.

Recommendations

- Allow time for the CARTs at the i3 schools to visit other i3 schools (or other district schools) to monitor, assess, and provide feedback on how to strengthen each other's programs. This would allow for the creation of a community of learners to be built within the i3 project schools, which could be expanded to other CAT programs in the district.
- Provide training at the district level for all advisors so those assigned as advisors can continue to see the value of the program and increase their buy-in.
- Encourage building administrators to allow time for the CARTs to provide training to advisors at their schools. This may also help administrators who have not fully bought into the program to become more aware of its value and to help build support for CAT.
- Create more structured guidelines for what a CAT advisory period should look like. Although the CARTs appreciate the autonomy afforded to them, structure and CAT standards would help them reach targeted goals.
- Share information with the CARTs on funding resources, particularly for schools where the CART position may not be full-time in the future.

Students' Knowledge and Use of College Readiness Skills and Postsecondary Transition

Based on students' ACT and PLAN outcomes, a finding from this evaluation was that the majority of i3 students are not college ready, using ACT and PLAN benchmarks as an indicator of college readiness. Compared to Year 4 findings, the performance of the i3 schools declined in all subject areas in Year 5. Although the schools still have not reached the project targets, the gaps were reduced across all subject areas. Gaps between performance and the end-of project goals range from 13 to 19 percentage points.

The percentage of i3 students meeting or exceeding the ACT benchmarks decreased in English and reading from Year 4 to Year 5 but increased in math. Overall, the gap to the end-of-project target ranges from 6% to 14%, with the largest gap in reading, followed by science, math, and English.

In regards to postsecondary transition, there was an overall increase in the percentage of students enrolling in a postsecondary institution from 2013 (38%) to 2014 (45%). Although the target goal of 55% was not reached, there was an increase of 4% from the baseline to 2014. It should also be noted that of those students who did enroll in postsecondary institutions, 86% attended public institutions, 53% attended four-year institutions, and 90% attended an institution in Kentucky.

Recommendations

- Review instructional practices to determine why student scores are still not reaching the PLAN and ACT benchmarks, specifically in the areas of math and science. Provide professional development to teachers who may benefit from new pedagogical instruction.
- Establish a time for i3 school administrators, teachers, and CARTs to share their lessons learned or best practices of what has or has not worked in their schools to improve academic achievement. Some schools have made more progress than others. Start with a team at those schools to learn more about what they have done to achieve their current accomplishments.
- Strategize to further reduce achievement gaps among subgroups, particularly racial/ethnic groups and students qualifying for FRPMs.
- Continue to examine postsecondary transition data and address questions regarding why student transition rates have decreased.
- Encourage the CARTs to conduct exit interviews with seniors to find out why they made particular choices. CAT should be a time for students to set goals and work with their advisor to ensure that they achieve those goals. Track the progress of students; if students have developed relationships with their advisors over the course of the school year, encourage both the advisor and student to send an e-mail in late summer or early

fall to track what the student is doing and why that student chose the path that he or she did.

Student Perceptions of School Climate

Multiple CSS items were used to examine students' perceptions of (1) support for learning (1 item), (2) adult social support (5 items), (3) peer social support (1 item), and (4) school connectedness (3 items). Overall, students reported more positive than negative perceptions across all constructs. Two items were also selected from the CSS to assess student engagement. About one third of students indicated that they were engaged in sports or clubs at school

Student perceptions also varied by school. Overall, Fern Creek Traditional High School reported higher levels of support for learning, adult social support, peer social support, and school connectedness than did all other i3 schools. Student perceptions also differed by students' demographic characteristics. As seen in Table 45, male students reported higher levels of peer social support and school connectedness than did female students; yet, female students reported a higher level of adult social support than did male students. Students from higher grade levels reported higher levels of support for learning, adult social support, and school connectedness. Asian students, in general, reported higher levels of adult social support, peer social support, and school connectedness as did students from other racial/ethnic groups. Student perceptions of support for learning, peer social support, and school connectedness did not differ by FPRM status; yet, students with paid meal status reported a higher level of adult social support than did students with free meal status. Students with LEP also reported higher levels of support for learning, adult social support, peer social support, and school connectedness than did students without LEP.

Table 46. Snapshot of Overall Student Perceptions of School Climate

Demographic Characteristics	Support for Learning	Adult Social Support	Peer Social Support	School Connectedness
Gender	Not significant	Female > Male	Male > Female	Male > Female
Grade level	12th > 9th	11th & 12th > 9th & 10th	9th > 10th	11th > 10th
Race	Hispanic > White	Asian > Black	Asian > White, Black, Hispanic	Asian > Hispanic > White & Black
FRPM	Not significant	Students with paid meal status > students with free meal status	Not significant	Not significant
LEP	LEP > non-LEP	LEP > non-LEP	LEP > non-LEP	LEP > non-LEP

Recommendations

- Review the school culture data with the i3 schools. Develop action plans on how the staff at each school can continue to improve their climate.
- Continue to develop a culture within the schools that provides peer-to-peer support to ensure there is a respectful culture between students as well as adults.

- Work with building administrators to develop stronger relationships with families and community members. Continue to emphasize afterschool programs and activities while ensuring that all students have access.
- Investigate why grade levels differed across the various CSS constructs. For example, why do 12th graders believe there is more support for learning than ninth graders? If there are certain activities happening at a particular grade level to make them feel more supported, how can those activities be replicated in other grade levels?
- Explore why students with LEP tend to have more positive perceptions of school culture. If it is because of special services they receive, brainstorm ways in which other students can receive more personalized services to meet their individual needs.

Fidelity

No schools on this component reached a threshold of implementation. However, it should be noted that the indicators are based upon JCPS' original proposal on what they thought was achievable. Once the i3 schools began to implement the CAT advisory periods, they found that adjustments had to be made to fit CAT within the school schedule. For example, not all of the schools could implement a 55-minute CAT period due to scheduling conflicts. Other schools decided that they only wanted to offer CAT biweekly in order to increase academic time. Thus, the goals originally set for CAT in the proposal were not feasible for all participating i3 project schools. During Year 5, response rates on the survey and interviews were also low, so some of the fidelity measures were based on informal conversations with the CARTs and past trends.

Recommendations

- Discuss the fidelity components with school leaders and teachers so they have a clear understanding of the expectations of CAT (e.g., how many times per week the advisory periods should be held and how many minutes they should last).
- Provide relevant, useful, and timely professional development sessions for CARTs, especially on ways in which they can provide training to advisors in their schools. Focus on how they can train advisors to engage and motivate students.
- Develop a common walkthrough tool and provide guidance to the CARTs on how to provide feedback to the advisors after they have been observed by the CART. Establish a continuous improvement model for CARTs to use with their advisors in order to strengthen the relationships between advisors and students.

Project Goal 3: Teachers' Pedagogical and Student Support Practices

The third project goal is to improve teachers' pedagogical and student support practices to maximize the effectiveness of increased learning time. The strategy to reach this goal is to ensure that content-based and cross-disciplinary PLCs meet regularly over the school year. The increase in the number of PLCs should lead to improvements in teachers' perceptions of collaboration and self-efficacy. In terms of instructional practice, teachers' perceptions of how their own instructional practices increase student academic engagement and challenge should improve, as well as their perceived ability to identify and appropriately respond to students' unique academic and social needs. Evaluators collected relevant data via the CSS and Teacher Survey to assess this project goal.

Professional Learning Community (PLC) Meetings

Findings showed that more time is allocated to content-based PLCs than cross-disciplinary PLCs. Based on survey responses, on average, the content-based PLCs met weekly across the project schools while the cross-disciplinary PLCs met less frequently. Survey results showed that half of the i3 project schools hosted cross-disciplinary PLCs monthly while the other three schools met once a trimester. Principals reported that they were pleased with the implementation of both types of PLCs at their schools. Typical challenges that were shared included lack of time and monetary resources to continue to support the PLCs.

Recommendations

- Provide continued assistance to schools to help them find funding for the provision of stipends to teachers for participating in activities outside of their normal duties or to pay for substitutes so teachers can participate in "data days".
- Allow principals and teacher leaders to visit other high schools to observe their PLCs and other effective collaboration practices.
- Communicate with principals and teachers to let them know how the PLCs will be continued without the support of the i3 grant as concerns were raised about this issue.
- Review the target benchmarks to determine if modifications need to be made to better reflect how the PLCs operate in practice.
- Establish districtwide guidelines on how often content-based and cross-disciplinary PLCs should meet. Ensure that each school understands how JCPS defines a PLC so school personnel consistently record meetings.
- Systemically collect information about the how schools facilitate PLCs. Create a "Best Practices" document that describes effective practices across schools. Work with the evaluation team to create a data collection system for the project schools that could be adapted across the district. Facilitate a meeting with the schools to share "Best Practices" and help them learn from one another.

Increase Teachers' Perceptions of Collaboration

Teachers tended to have higher levels of agreement on items regarding teachers supporting one another, collaborating, and working together. This may be a result of the PLCs, where time is devoted for teachers to work collaboratively to discuss students' progress and challenges in a supportive environment. Teachers were less likely to agree on items regarding resources and time. A large percentage of teachers disagreed with the statements about having enough time to collaborate with colleagues to improve instruction and the ability to access expertise and sufficient resources in a timely fashion. Another survey item that did not have a high level of agreement was "Teachers in this school trust each other." However, it takes time to develop trust and a truly collaborative culture, and it seems that the schools are continuing their work in building a trusting culture within their schools.

Recommendations

- Continue to provide professional collaboration opportunities for teachers with the inclusion of trust exercises. Although collaboration is building within the schools, results for this area indicate that trust issues remain within the schools.
- Work with building administrators to ensure that the schools have adequate time and resources for collaborative planning and PLCs. The district can provide ideas and strategies to help the schools meet the scheduling needs of both students and teachers.
- Survey teachers and building administrators to learn more about what resources may be lacking or what resources they believe will help them improve their teaching practices.
- Communicate with the schools about how collaboration will continue to be supported by the district once the i3 funding is gone.

Improve Teachers' Perceptions of Their Own Self-Efficacy with Respect to Content-Based Knowledge for Teaching

In general, teachers tended to have high levels of self-efficacy as over 80% of them responded positively. The items that did not score as highly were about pressure to achieve immediate results. Only a quarter of the teachers responded that they *never* or *seldom* worry about being criticized if positive results are not readily available and over half (59%) are *sometimes* or *almost always* discouraged from trying new approaches because of the emphasis on success.

Recommendations

- Provide training sessions for school staff to help them look more positively at data so they can measure progress by the "smaller" successes and look at trends over time rather than immediate results.
- Document innovative teaching strategies being used with success. Build time into schedules to allow teachers to share innovative practices that have led to student success.

- Work with administrators on ways to motivate staff and develop a culture that does not include fear of being criticized and one that promotes innovative techniques, as long as results are being measured and continuously improved.

Improve Teachers' Perceptions of Their Instructional Practices in Order to Increase Student Academic Engagement and Challenge

Teachers tended to rate survey items that focused on challenging students and working with disenfranchised students higher than items related to students being actively involved in planning lessons, setting expectations, and developing criteria for lessons. It appears that teachers have fewer tendencies to actively involve students in planning lessons, although teachers perceived themselves to be challenging students academically and setting high expectations for them.

Recommendations

- Continue to work with staff to encourage students to go beyond the expectations set by teachers. Provide training to help motivate students who may have apathetic tendencies.
- Encourage classroom teachers to collaborate with the students' advisors to encourage and motivate them to go beyond classroom expectations.
- Assist teachers in developing lesson plans that will encourage an increase in students' involvement (i.e., student voice) within the classrooms.
- Develop protocols that teachers can use in the classroom as they work to increase student voice. Because this may be a different teaching model than what teachers are typically used to, the district may need to expend time and resources to gain buy-in from teachers in understanding how this type of teaching strategy may improve student outcomes.
- Conduct focus groups with a small sample of students to collect their input on how best to increase their voice and active engagement in terms of lesson development and planning. Have a pilot group of teachers implement those strategies to document what works and share their successes and challenges with other teachers in their building and throughout the district.

Improve Teachers' Perceptions of Their Ability to Identify and Appropriately Respond to Students' Unique Academic and Social Needs

Overall, school personnel reported feeling more positive than negative about the adult social support and support for learning items. However, one item, in particular, received a much lower rating as compared to all other items, "Teachers at my school assign meaningful homework on a regular basis" (55% positive responses). Additionally, school personnel's ratings of adult social support and support for learning differed by school. School personnel ratings also differed by the demographic characteristics of the staff; however, the patterns are inconsistent across the two different subscales. Specifically, in terms of support for learning, male and White staff members reported higher ratings than did female staff and staff from racial/ethnic minority backgrounds.

Regarding adult social support, staff with more than two years of teaching experience perceived a higher rating than did staff with less than one year of teaching experience.

Recommendations

- Observe teachers using the district observation protocol to determine if they are effectively differentiating instruction for all students.
- Provide professional development on differentiated instruction and how to personalize instruction for individual students to teachers who may be struggling in this area.
- Conduct focus groups or interviews with students to learn more about how they think teachers could provide individualized support for them.
- Encourage dialogue between classroom teachers and students' assigned advisors to further explore how instruction can be individualized for each student.

PLC Implementation Fidelity

No schools on this component reached a threshold of implementation. However, the indicators are based upon the original proposal. Project staff may want to reconsider whether or not these are appropriate targets given how the schools ended up structuring their PLC sessions.

Recommendations

- Create a feedback mechanism to monitor the extent to which teachers implement instructional strategies discussed within the PLCs. This may be accomplished through the use of an administrator observation form or a district feedback form to gather more data about how the work of the PLCs are being implemented in the classroom.
- Continue to support cross-disciplinary PLCs by providing staff with time to participate and resources. Document how the cross-disciplinary PLCs are functioning by conducting focus groups or interviews with leaders of those PLCs. Share the findings with the i3 schools that may be struggling to implement this component.

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Appendices

Appendix A:
Spring Interview Protocols

Principal Interview Protocol – Spring 2015

Investing in Innovation (i3) Implementation Evaluation

Overview

1. Please tell me what, if any, have been the biggest changes at [high school name] over the course of the 2014-2015 school year.

2. In general, what are your goals for the school and how do you perceive the i3 grant helping you to achieve those goals?

Professional Learning Communities (PLCs): Course-Based

1. What, if any, changes have been made to the structure of the PLCs over the course of the 2014-2015 school year?

2. If I were to observe a typical course-based PLC, what would I say? Is this in any way different from how such a PLC would have been structured or run in prior years?

3. Who monitors the progress of the PLCs? How?

4. Have you observed any benefits arising from the use of PLCs?

   Probe: Have you noticed any improvement in teachers' instructional practices that you think are attributable to PLC participation?

5. What factors have supported the implementation of the course-based PLCs?

   Probe: How has the PLC Design Team provided support for implementation?

6. What have been the challenges associated with implementing course-based PLCs? How have you addressed those challenges?

7. What types of professional development have you received to help in implementing a PLC?

   Probe: Who provided the professional development? What types of resources and support did you receive? Were the resources and support adequate?

8. What other support or resources do you need?

Professional Learning Communities: Cross-Content (School of Study Design Team)

1. What, if any, changes occurred to the School of Study Design Team (SOS) PLC at [High School] for the 2014-2015 school year?

   Probe: When did the program get started? How many minutes do they meet each week? How did you decide who would be on the team (e.g., volunteers, selection process)?

2. If I were to observe an SOS PLC, what would I see that might be different from a non-SOS PLC?

3. Who monitors the progress of the SOS PLC? How?

4. What benefits have you observed from the SOS PLC?

   Probe: Have you noticed any improvements in teachers' instructional practices that you think are attributable to SOS participation?

5. What factors have facilitated the implementation of the SOS PLC?

6. What have been the challenges associated with implementing the SOS PLC? How have you addressed those challenges?

7. What professional development have you received to help in implementing the SOS?

8. What other support or resources do you need?

Trimester Scheduling and Responding to Student Needs

1. Has trimester scheduling met the needs of struggling students? Why or why not? How has the trimester schedule offered expanded learning opportunities for struggling students?

2. Has trimester scheduling met the needs of high-performing students? Why or why not? How has the trimester schedule offered acceleration and expanded learning opportunities for higher performing students?

3. How is your staff trained to monitor student progress? Do you have a process for a student to change courses if there is a placement more appropriate for him or her (i.e., a struggling student needs to be moved to a less challenging course while an advanced student need to be moved to a more challenging course)?

4. Has the change of the accountability model (e.g., end-of-course exams) altered your thoughts and support of the trimester scheduling model? Why or why not?

College Access Time

1. What goals did you have for CAT this year? Did the CATs accomplish those goals? Why or why not? If they did not, what changes will you make to achieve those goals next year?

2. What feedback have you received about CAT from:

   a. Teachers
   b. Students
   c. Parents

3. What factors facilitated the implementation of CAT at your school?

4. What have been the challenges associated with implementing CAT at your school?

5. What additional support do you need to implement CAT at your school?

Sustainability

1. What piece or pieces of the grant do you think [high school] will be able to support once the grant funding ends?
2. What have been the two or three most important lessons learned over the course of the i3 grant?

College Access Resource Teacher Interview Protocol – Spring 2015

Investing in Innovation (i3) Implementation Evaluation

College Access Time (CAT) Implementation

1. Briefly describe your current responsibilities and discuss any changes that have occurred in your role as CART over the course of the year.

2. Please describe what a typical CAT advisory looks like in your school now.

   Probe: Do you have different curricula for different grade levels? How do you focus on building a strong relationship with an adult who is "on my case and on my side" and positive peer relationships around common career interests, and college readiness?

3. What were your goals for CAT this year? Have you achieved these goals? How?

   Probe on the following four goals of CAT:

   a. Advance college-ready skills, monitor student progress, and increase students' sense of affiliation with adults and peers
   b. Build knowledge of and use of college-ready skills and habits
   c. Improve students' sense of affiliation with adults and peers
   d. Strengthen peer-to-peer relations and perceptions of peer support, particularly within career themes

4. Tell me how your design team has functioned during the 2014-2015 school year. What types of topics and tasks did it address? How often did it meet?

5. How have you monitored CAT implementation at your school? What, if any, changes have you made to CAT based on your monitoring processes?

6. What factors have supported CAT implementation?

7. What have been the greatest challenges associated with CAT implementation?

Advisor Training

1. How have you provided training to advisors throughout the school year?

2. How have teachers responded? What challenges have you faced? How did you address those challenges?

CAT Logistics

1. Our records show that your CAT is offered [INSERT NUMBER OF MINUTES CAT IS OFFERED FROM SPRING 2015 SURVEY]. Did you make any changes to the number of minutes CAT is offered each week?

2. Did you make any changes to the student-to-advisor ratio over the course of the school year, which was [INSERT STUDENT TO ADVISOR RATIO FROM SPRING 2015 SURVEY]?

3. Did you collect data from students, and if yes, how (e.g., surveys, focus groups)? How did student feedback impact CAT implementation?

CART Training

1. What professional development resources did you receive from JCPS (e.g., training or materials) for your own growth? Were the resources provided adequate? Was adequate support provided for using the resources?

2. What other support or resources do you need from the district? From your school?

Sustainability

1. How will advisory continue at [high school] once the funding ends?

2. What have been the two or three most important lessons learned about advisory over the course of the i3 grant?

Counselor Interview Protocol:
Course Assignment and Response to Student Needs

Investing in Innovation (i3) Implementation Evaluation

Objectives:

(1) To determine how school counselors assign students to courses, including how freshmen placement differs from upperclassmen placement.

(2) To determine if the trimester schedule meets the needs of the students in terms of course placement (e.g., appropriate remediation and acceleration).

(3) To determine whether, and if so, how, student progress (for the purpose of class placement) is monitored throughout the year.

1. Walk me through the process you used to place rising 10th-, 11th-, and 12th-grade students in classes during the 2014-2015 school year.
   a. When did you begin the course placement process?
   b. Who, besides yourself, was involved in the course placement process?
   c. How did you determine student placement (e.g., data, parent input, or other)?
   d. How did you and under what circumstances did you make changes to individual student schedules during the 2014-2015 school year (i.e., how did you monitor progress)?
   e. Did you receive any sources of support during the student placement process? What kind of support did you receive and from whom (e.g., district)?
   f. Have you participated in any professional development or training related to the scheduling of students?
2. Did you use the same process for placing ninth graders? If no, please explain how you made freshmen placements.
3. What, if any, changes did you make in placing students from the 2014-2015 school year to the 2013-2014 school year?
4. Are there other changes that need to be made to the course placement process?
5. How well does trimester scheduling meet the needs of struggling students? Why or why not? How has the trimester schedule offered expanded learning opportunities for struggling students?
6. How well does trimester scheduling meet the needs of high-performing students? Why or why not? How has the trimester schedule offered acceleration and expanded learning opportunities for higher performing students?

7. In what ways has the trimester schedule affected student achievement? Why do you think the trimester schedule has affected student achievement in that way?

8. In what ways has the trimester schedule affected graduation rates? Why do you think the trimester schedule has affected graduation rates in that way?

Sustainability

1. Will you school maintain trimesters? Why or why not?
   What have been the biggest lessons learned about scheduling students over the course of the i3 grant?

Appendix B:
2015 Principal and College Access Resource Teacher (CART) Implementation Surveys

Jefferson County Public Schools (JCPS)
Investing in Innovation (i3)

Principal Survey
Spring 2015

McREL International (formerly the Mid-Continent Regional Education Laboratory and Edvantia, Inc.), an education research company, is working with the Jefferson County Public Schools (JCPS) district to evaluate the Investing in Innovation (i3) project. Project staff want to know about your thoughts, experiences, and so on related to your involvement in the implementation of the i3 project so they can use that information to make adjustments and improvements. Data from this survey will be summarized in a report provided to JCPS project staff. The survey should take approximately 25 to 30 minutes to complete. Please complete by **Friday, May 1**.

Protecting Your Rights: Participation in this survey is voluntary and should not involve any known risks above those normally encountered in daily life. There will be no retribution of any sort for the responses you provide. If you feel uncomfortable about responding to some questions, please feel free to skip those questions. You may also choose to stop participating in the survey altogether without penalty or reprisal.

About Your Confidentiality: Survey responses will be collected via Qualtrics utilizing transport layer security (TLS) encryption. TLS encryption is a security feature that encrypts the survey link and data as it moves across the Internet. McREL evaluators will handle the data and do everything they can to ensure its security[25]. Although most responses will be aggregated across schools, please note that your responses may be identified by school. This will help us to identify practices being implemented at schools that may warrant further study.

Benefits: Although there are no direct personal benefits for you and you will not receive any compensation for participating in the survey, the information you provide will give project staff better information about how to improve the project. These kinds of improvements may result in indirect benefits to you as a participant in the project.

Questions: If you have any questions about this survey, please contact Dr. Tara Donahue, Managing Evaluator (800.624.9120 ext. 5419; tdonahue@mcrel.org). For information on protection of your rights as a participant, contact Karen Bumgardner, a member of McREL's Institutional Review Board, at 800.624.9120, ext. 5841, or kbumgardner@mcrel.org.

[25] Please note that Institutional Review Boards (IRBs) do have the authority to inspect consent records and data files only to assure compliance with approved procedures. If, during the process of collecting data, a threat of violence against an individual or entity is uncovered, McREL cannot guarantee anonymity or confidentiality to any party involved.

Electronic Consent*

If you agree to participate in this survey, please click "Yes, I agree" below. By doing so, you are indicating that you have read the information on this page, are at least 18 years of age, and that you voluntarily agree to participate in the survey.

If you decline to participate in the survey, click "No, I do not agree" below.

- Yes, I agree to participate in the survey.
- No, I do not agree to participate in the survey.

General Professional Learning Community (PLC) Information

1. **Please rank the following goals of PLCs in order of importance with 1 being *least important* and 3 being *most important*:***

Item	Least important 1	2	Most important 3
a. Improve instruction and assessment practices	☐	☐	☐
b. Diagnose and improve student proficiency	☐	☐	☐
c. Develop effective classroom environments to promote and support learning	☐	☐	☐

2. **Please rank the following PLC practices in order of importance with 1 being *least important* and 3 being *most important*:***

Item	Least important 1	2	Most important 3
a. Planning for formative assessment	☐	☐	☐
b. Examining formative work	☐	☐	☐
c. Adjusting practice through data	☐	☐	☐

3. **According to the PLC Quick Start Guide, there are four types of alignment upon which PLCs may focus. Please indicate the level of importance placed upon each type of alignment across the PLCs in your school with 1 being *least important* and 4 being *most important*:***

Item	Least important 1	2	3	Most important 4
a. Aligned learning environment goals	☐	☐	☐	☐
b. Aligned assessment goals	☐	☐	☐	☐
c. Aligned curriculum goals	☐	☐	☐	☐
d. Aligned instruction goals	☐	☐	☐	☐

4. **Are you familiar with the PLC Scoring Guide?***
   - ☐ Yes
   - ☐ No

5. **Who uses the PLC Scoring Guide at your school?**
[This question will only appear if "Yes" is selected on Q4]
   - Principal
   - Assistant principal
   - Department chairs
   - Teacher leaders
   - Teachers
   - Other (please specify: _____)

6. **How frequently is the PLC Scoring Guide used?**
[This question will only appear if "Yes" is selected on Q4]
   - Daily
   - Weekly
   - Two or three times a month
   - Monthly
   - Once a trimester
   - Never
   - Other (please specify: _____)

7. **Do PLC teams observe other PLC teams in the school?***
   - Yes
   - No

8. **Do PLC teams observe PLC teams at other schools?***
   - Yes
   - No

9. **There are three "Big Ideas" with corresponding indicators associated with the PLCs. Thinking about the PLCs across your school, please rate your level of agreement with the indicators for *Big Idea #1: Building a Collaborative Culture*.***

Indicators	Strongly disagree	Disagree	Agree	Strongly agree
a. Collaboration focuses on the group learning together				
b. The team is focused on critical questions				
c. Products of collaboration efforts (e.g., norms, goals, outcomes, assessments, and lesson plans) are explicit				

10. Thinking about the PLCs across your school, please rate your level of agreement with the indicators for *Big Idea #2: Ensuring that All Students Learn*.*

Indicators	Strongly disagree	Disagree	Agree	Strongly agree
a. Identifies/discusses essential common outcomes	☐	☐	☐	☐
b. Outcomes are aligned with content standards/pacing guides	☐	☐	☐	☐
c. Instructional plans include specific learning targets	☐	☐	☐	☐
d. Teams develop multiple common formative assessments/tasks	☐	☐	☐	☐
e. Instructional plans and activities include strategies to increase the use of higher order thinking skills	☐	☐	☐	☐
f. Instructional plans provide support for students at different learning levels	☐	☐	☐	☐

11. Thinking about the PLCs across your school, please rate your level of agreement with the indicators for *Big Idea #3: Establishing a Focus on Results*.*

Indicators	Strongly disagree	Disagree	Agree	Strongly agree
a. Pursues specific and measurable team performance goals (SMART goals)	☐	☐	☐	☐
b. Accesses relevant student information to monitor progress toward goals	☐	☐	☐	☐
c. Utilizes common assessments and formative tasks to monitor student progress	☐	☐	☐	☐
d. Reflects on data to identify students in need of intervention (enrichment) and plans for strategies, activities, and interventions	☐	☐	☐	☐
e. Utilizes an increasingly directive, timely, and systematic response to students not meeting established outcomes and learning targets	☐	☐	☐	☐

12. Do staff members in your school use Learning Walks to observe classrooms?*

- ☐ Yes
- ☐ No

13. **Who uses Learning Walks at your school?**
[This question will only appear if "Yes" is selected on Q12]

- Principal
- Assistant principal
- Department chairs
- Teacher leaders
- Teachers
- Other (please specify: _____)

Content-Based PLCs

14. **How often do content-based PLCs meet at your school?***

- Daily
- Weekly
- Two or three times a month
- Monthly
- Once a trimester
- Never
- Other (please specify: _____)

15. **For how long do the content-based PLCs meet (i.e., minutes per session)?***

- 30 minutes
- 45 minutes
- 60 minutes
- 75 minutes
- 90 minutes
- 120 minutes
- Other (please specify: _____)

16. **How many content-based PLCs meet at your school during the 2014-2015 school year?*** _____

17. **Who leads or facilitates the content-based PLCs (i.e., what is that person's title)?**

Facilitator 1: | |

Facilitator 2: | |

Facilitator 3: | |

18. **In two or three sentences, describe how content-based PLCs are monitored at your school.***

19. **What are two or three benefits you have observed from the content-based PLCs?** *(If you only have two responses, mark "NA" for the third benefit.)******

Benefit 1:

Benefit 2:

Benefit 3:

20. **What are two or three challenges your school has faced in implementing content-based PLCs?** *(If you only have two responses, mark "NA" for the third challenge)* *****

Challenge 1:

Challenge 2:

Challenge 3:

21. **What other support or resources do you need to continue to build and improve content-based PLCs in your school?**

Cross-Content PLCs

22. **Which type(s) of cross-content PLCs do you have at your school?***
    - ◔ School of Study (SOS)
    - ◔ Math/English/Social Studies/Science (MESS)
    - ◔ Q4R2
    - ◔ None
    - ◔ Other (please specify: _____)

23. **What teachers (i.e., subject areas) are paired?**

24. **How often do cross-content PLCs meet at your school?**
    - ◔ Daily

- Weekly
- Two or three times a month
- Monthly
- Once a trimester
- Never
- Other (please specify: _____)

25. For how long do the cross-content PLCs meet at your school (i.e., minutes per session)?

- 30 minutes
- 45 minutes
- 60 minutes
- 75 minutes
- 90 minutes
- 120 minutes
- Other (please specify: _____)

26. How many cross-content PLCs meet at your school during the 2014-2015 school year? _____

27. Who leads or facilitates the cross-content PLCs (i.e., what is that person's title)?

Facilitator 1:	
Facilitator 2:	
Facilitator 3:	

28. In two or three sentences, describe how cross-content PLCs are monitored at your school.

29. What are two or three benefits you have observed from the cross-content PLCs? *(If you only have two responses, mark "NA" for the third benefit.)*

Benefit 1:	
Benefit 2:	
Benefit 3:	

30. What are two or three challenges your school has faced in implementing cross-content PLCs? *(If you only have two responses, mark "NA" for the third benefit.)*

Challenge 1:

Challenge 2:

Challenge 3:

31. **What other support or resources do you need to continue to build and improve cross-content PLCs in your school?**

Trimester Scheduling and Responding to Student Needs

32. **Does your school have a written protocol in place for determining how freshmen should be assigned to courses?***
    - Yes
    - No

33. **Does your school have a written protocol in place for determining how upperclassmen should be assigned to courses?***
    - Yes
    - No

34. **Does your school have a written protocol or guidelines in place for monitoring student progress throughout the year?***
    - Yes
    - No

35. **Does your school have a written protocol or guidelines in place for making adjustments to student course placement based on student pass/fail rates in courses?***
    - Yes
    - No

36. **Has the trimester addressed the needs of struggling students in your school?***
    - Yes
    - No

37. **Please describe how the trimester has addressed the needs of struggling students in your school.** *[This question will only appear if "Yes" is selected on Q36]*

38. **Please describe how the trimester has not addressed the needs of struggling students in your school.** *[This question will only appear if "No" is selected on Q36]*

39. **Has the trimester schedule addressed the needs of advanced or accelerated students?***

- Yes
- No

40. **Please describe how the trimester schedule has addressed the needs of accelerated or advanced students.** *[This question will only appear if "Yes" is selected on Q39]*

41. **Please describe how the trimester schedule has not addressed the needs of accelerated or advanced students.** *[This question will only appear if "No" is selected on Q39]*

42. **What are two or three factors that have helped address the needs of all students at your school?** *(If you only have two responses, mark "NA' for the third factor.)**

Factor 1:

Factor 2:

Factor 3:

43. **What have been two or three challenges associated with addressing the needs of all students at your school?** *(If you only have two responses, mark "NA' for the third challenge.)**

Challenge 1:

Challenge 2:

Challenge 3:

44. What additional support or resources do you need to effectively schedule and monitor student progress?

College Access Time/Advisory Period

45. In two to three sentences, please describe what you hope the CATs achieve by the end of the year.*

46. Rank the following components of CAT from most important to least important with 1 being *least important* and 4 being *most important*:*

Item	Least important 1	2	3	Most important 4
a. Advance college-ready skills, monitor student progress, and increase students' sense of affiliation with adults and peers	☐	☐	◄	►
b. Build knowledge and use of college-ready skills and habits	☐	☐	◄	►
c. Improve students' sense of affiliation with adults and peers	☐	☐	◄	►
d. Strengthen peer-to-peer relations and perceptions of peer support, particularly within career themes	☐	☐	◄	►

47. Rank the following based on importance in CAT with 1 being *least important* and 4 being *most important*:*

Item	Least important 1	2	3	Most important 4

a. Monitor students' academic progress and intervene with subject-specific remediation	☐	☐	◄	►
b. Develop career interests and motivation, and ensure appropriate, related college-bound course taking and ACT preparation	☐	☐	◄	►
c. Develop 21st century skills including study skills, persistence, independence, adaptation to change, digital literacy, effective communication, inventive thinking, and fostering motivation to high achievement	☐	☐	◄	►
d. Develop knowledge and support for college application and financial assistance planning	☐	☐	◄	►

48. What are two or three factors that facilitate successful CAT implementation?
*(If you only have two responses, mark "NA" for the third factor.)******

Factor 1: _____

Factor 2: _____

Factor 3: _____

49. What are two or three challenges you have faced in implementing CAT at your school?
*(If you only have two responses, mark "NA" for the third challenges.)******

Challenge 1: _____

Challenge 2: _____

Challenge 3: _____

Thank you for completing this survey. We appreciate your time and effort.

Jefferson County Public Schools (JCPS)
Investing in Innovation (i3)

College Access Resource Teacher (CART) Survey
Spring 2015

McREL International (formerly the Mid-Continent Regional Education Laboratory and Edvantia, Inc.), an education research company, is working with the Jefferson County Public Schools (JCPS) district to evaluate the Investing in Innovation (i3) project. This survey is being conducted as part of the i3 grant evaluation with a specific focus on how College Advisory Time (CAT) is being implemented at your school. Project staff want to know about your thoughts, experiences, and so on related to your involvement in the implementation of CAT so they can use that information to make adjustments and improvements. Data from this survey will be summarized in a report provided to JCPS project staff. The survey should take approximately 25 to 30 minutes to complete. Please complete by **Friday, May 1, 2015**.

Protecting Your Rights: Participation in this survey is voluntary and should not involve any known risks above those normally encountered in daily life. There will be no retribution of any sort for the responses you provide. If you feel uncomfortable about responding to some questions, please feel free to skip those questions. You may also choose to stop participating in the survey altogether without penalty or reprisal.

About Your Confidentiality: Survey responses will be collected via Qualtrics utilizing transport layer security (TLS) encryption. TLS encryption is a security feature that encrypts the survey link and data as it moves across the Internet. McREL evaluators will handle the data and do everything they can to ensure its security[26]. Although most responses will be aggregated across schools, please note that your responses may be identified by school. This will help us to identify practices being implemented at schools that may warrant further study.

Benefits: Although there are no direct personal benefits for you and you will not receive any compensation for participating in the survey, the information you provide will give project staff better information about how to improve the project. These kinds of improvements may result in indirect benefits to you as a participant in the project.

Questions: If you have any questions about this survey, please contact Dr. Tara Donahue, Managing Evaluator (800.624.9120 ext. 5419; tdonahue@mcrel.org). For information on protection of your rights as a participant, contact Karen Bumgardner, a member of McREL's Institutional Review Board, at 800.624.9120, ext. 5841, or kbumgardner@mcrel.org.

[26] Please note that Institutional Review Boards (IRBs) do have the authority to inspect consent records and data files only to assure compliance with approved procedures. If, during the process of collecting data, a threat of violence against an individual or entity is uncovered, McREL cannot guarantee anonymity or confidentiality to any party involved.

Electronic Consent*

If you agree to participate in this survey, please click "Yes, I agree" below. By doing so, you are indicating that you have read the information on this page, are at least 18 years of age, and that you voluntarily agree to participate in the survey.

If you decline to participate in the survey, click "No, I do not agree" below.

- Yes, I agree to participate in the survey.
- No, I do not agree to participate in the survey.

General Questions about CAT

1. **In two to three sentences, please describe a typical College Access Time (CAT) or advisory period in your school for each grade level.***

Ninth grade:

Tenth grade:

Eleventh grade:

Twelfth grade:

2. **In two to three sentences, please describe what you hope to achieve during CAT by the end of the year.***

3. **Rank the following components of CAT from most important to least important with 1 being *least important* and 4 being *most important*:***

Item	Least important 1	2	3	Most important 4
a. Advance college-ready skills, monitor student progress, and increase students' sense of affiliation with adults and peers	☐	☐	◄	►
b. Build knowledge and use of college-ready skills and habits	☐	☐	◄	►
c. Improve students' sense of affiliation with adults and peers	☐	☐	◄	►
d. Strengthen peer-to-peer relations and perceptions of peer support, particularly within career themes	☐	☐	◄	►

Design Team

4. **Do you have a CAT design team?***
   - Yes
   - No *[Qualtrics will skip to Q9 since the following questions are not applicable.]*

5. **How many members are on the design team?** _____

6. **How often does the design team meet?**
   - Daily
   - Weekly
   - Two or three times a month
   - Monthly
   - Once a trimester
   - Once a year
   - Never
   - Other (please specify: _____)

7. **In two to three sentences, describe the purpose of the design team.**

8. **What topics are discussed in the design team?**

Topic 1:	
Topic 2:	
Topic 3:	
Topic 4:	
Topic 5:	

CAT Content

9. Approximately what percentage of CAT is devoted to the following? (Total must sum to 100%.)*

Items	%
a. Monitor students' academic progress and intervene with subject-specific remediation	____
b. Develop career interests and motivation, and ensure appropriate, related college-bound course taking and ACT preparation	____
c. Develop 21st century skills including study skills, persistence, independence, adaptation to change, digital literacy, effective communication, inventive thinking, and fostering motivation to high achievement	____
d. Develop knowledge and support for college application and financial assistance planning	____
Total	____

10. Do you use the walkthrough instrument to monitor CAT implementation?*

- Yes
- No

11. How often do you use it? *[This question will only show if "Yes" is selected for Q10]*

- Weekly
- Two or three times a month
- Monthly
- Once a trimester
- Twice a year
- Once a year

12. Do you use any other tool to monitor CAT implementation? Please describe.
[This question will only show if "No" is selected for Q10]

13. How often do CAT lessons follow the elements of the Classroom Instructional Framework?

Items	Seldom	Sometimes	Almost always
a. Establishing engagement			
b. Fostering connections			
c. Deepening understanding			
d. Making meaning			

14. **What have been two or three factors that have made CAT implementation successful in your school during the 2014-2015 school year?** *(If you only have two responses, mark "NA" for the third factor.)**

Factor 1: _____

Factor 2: _____

Factor 3: _____

15. **What have been your two or three biggest challenges?** *(If you only have two responses, mark "NA" for the third challenge.)**

Challenge 1: _____

Challenge 2: _____

Challenge 3: _____

Advisor Training

16. **Did you train the advisors in your school for the 2014-2015 school year?***

- ○ Yes
- ○ No

17. **How many hours of training did you provide?**
[This question will only show if "Yes" is selected for Q16] _____

18. **Why not?** *[This question will only show if "No" is selected for Q16]*

_____

19. **What are two or three factors that have facilitated advisor effectiveness?**

Factor 1: _____

Factor 2: _____

Factor 3: _____

20. What are two or three challenges advisors face?

Challenge 1: _____

Challenge 2: _____

Challenge 3: _____

CAT Logistics

21. How often does your CAT period meet?*

- Daily
- Weekly
- Two or three times a month
- Monthly
- Other (please specify: _____)

22. How many weeks does your CAT period meet during the school year?*

- Fewer than 15 weeks
- 15 to 19 weeks
- 20 to 24 weeks
- 25 to 29 weeks
- 30 to 34 weeks
- More than 34 weeks
- Other (please specify: _____)

23. How many minutes per week does your CAT period meet?*

- 30 minutes
- 45 minutes
- 55 minutes
- 60 minutes
- 75 minutes
- 90 minutes
- Other (please specify: _____)

24. What is your ratio of students to teachers during CAT time?*

- 1:10
- 1:15
- 1:18
- 1:20
- 1:25
- Other (please specify: _____)

25. How are students assigned to CATs?*

- Grade level
- School of Study
- Student interest
- Gender
- Other (please specify: _____)

26. How many school days prior to CAT do advisors receive their lessons?*

- 1 day
- 2 days
- 3 days
- 4 days
- 5 days
- Other (please specify: _____)

27. How often do students provide formal feedback about CAT?*

- Daily
- Weekly
- Two or three times a month
- Monthly
- Never
- Other (please specify: _____)

28. Describe how you gather feedback from students.

CART Training

29. How many CAT training sessions provided by JCPS did you attend during the 2014-2015 school year?*

- 1
- 2
- 3
- 4
- 5
- Other (please specify: _____)

30. What topics were covered during your training sessions?

Topic 1:

Topic 2:

Topic 3:

Topic 4:

Topic 5:

Topic 6:

Topic 7:

Topic 8:

Topic 9:

Topic 10:

31. Did you find the topics covered during the training helpful in implementing an advisory period in your school?

- Yes
- No

32. What topics would be useful for you? *[This question will only show if "No" is selected for Q30]*

Topic 1:	
Topic 2:	
Topic 3:	
Topic 4:	
Topic 5:	

33. Please indicate your level of agreement with the following statements:*

Items	Strongly disagree	Disagree	Agree	Strongly agree
a. The training sessions provided by JCPS are valuable.				
b. The SharePoint resources are valuable.				
c. The coaching sessions are valuable.				

34. What other training, support, or resources do you need for successful advisory implementation in your school?

Final Comments

35. Please include any other comments or observations you have about CAT implementation at your school.

Thank you for completing this survey. We appreciate your time and effort.

Appendix C:
2015 Student Survey

McREL INTERNATIONAL

2015 JCPS i3 Student Survey

We would like to learn how you feel about your experiences in the classroom and your school in general. We are going to ask your thoughts about the difficulty of your courses, how you see yourself as a student, your College Advisory/Access Time (CAT), and how your courses meet your needs as a student. Your responses are anonymous; this means that your name will not be linked to your survey. You will not be identified or named in any reports. Your answers to this survey will never be given to your parents (or guardians), your teachers, or anyone other than the researchers who will write the report about the project.

There are no right or wrong answers—choose the answer that is right for you. It is important that you answer the questions based on what you really do or know. If you do not want to answer a question, just leave it blank. Your participation is voluntary; you decide whether or not to take the survey. If you do not wish to participate in the survey, turn in your blank survey without penalty. Your completed (or blank) survey will be sealed in an envelope and sent to the researchers. Thank you for your help!

With PENCIL or BLUE or BLACK INK, please fill in the circle that most closely corresponds to your response for each of the following questions/statements.

Please mark responses like this: ● Not like this: ⊗ or ⊘

Based on your experiences during the CURRENT trimester, please tell us how much you agree with the following sentences.	**Not Taking This Class**	**Disagree A Lot**	**Disagree A Little**	**Agree A Little**	**Agree A Lot**
1. My **English** class motivates me to learn more about English.	-	1	2	3	4
2. I feel like my **English** class is too easy for me.	-	1	2	3	4
3. I feel like my **English** class is too hard for me.	-	1	2	3	4
4. My **math** class motivates me to learn more about math.	-	1	2	3	4
5. I feel like my **math** class is too easy for me.	-	1	2	3	4
6. I feel like my **math** class is too hard for me.	-	1	2	3	4
7. My **science** class motivates me to learn more about science.	-	1	2	3	4
8. I feel like my **science** class is too easy for me.	-	1	2	3	4
9. I feel like my **science** class is too hard for me.	-	1	2	3	4
10. My **social studies** class motivates me to learn more about social studies.	-	1	2	3	4
11. I feel like my **social studies** class is too hard for me.	-	1	2	3	4
12. I feel like my **social studies** class is too hard for me.	-	1	2	3	4
Please tell us how much you agree with the following sentences.		**Disagree A Lot**	**Disagree A Little**	**Agree A Little**	**Agree A Lot**
13. I am not doing well in school.		1	2	3	4
14. My school emphasizes spending a significant amount of time on school work and studying.		1	2	3	4
15. I think I'm a good student.		1	2	3	4
How sure are you that things will work out well . . .		**Not Sure At All**	**Mostly Not Sure**	**Mostly Sure**	**Very Sure**
16. when you have to learn something new at school?		1	2	3	4
17. when you have to give a talk in class?		1	2	3	4
18. when you have to do an activity for the first time?		1	2	3	4

PLEASE CONTINUE

How sure are you that things will work out well . . .		Not Sure At All	Mostly Not Sure	Mostly Sure	Very Sure
19. when you are having trouble with your schoolwork?		1	2	3	4
20. when you have to figure out something by yourself?		1	2	3	4
CAT has helped me . . .	**Have Not Covered Topic**	**Disagree A Lot**	**Disagree A Little**	**Agree A Little**	**Agree A Lot**
21. understand the college admission process.	-	1	2	3	4
22. prepare for the PLAN® and/or ACT® test.	-	1	2	3	4
23. develop life skills (e.g., time management, communication, conflict resolution, and financial literacy).	-	1	2	3	4
During my past and current experiences in CAT . . .	**Have Not Covered Topic**	**Disagree A Lot**	**Disagree A Little**	**Agree A Little**	**Agree A Lot**
24. I have had opportunities to research and develop career interests.	-	1	2	3	4
25. I have learned how to complete a college application.	-	1	2	3	4
26. I have learned about financial literacy, financial aid, and paying for college.	-	1	2	3	4
27. I have created a resume.	-	1	2	3	4
28. I have learned how to apply for a job.	-	1	2	3	4
I feel I can go to . . .		**Disagree A Lot**	**Disagree A Little**	**Agree A Little**	**Agree A Lot**
29. my CAT advisor when I need help with my classes.		1	2	3	4
30. my CAT advisor when I have a personal problem.		1	2	3	4
31. students in my CAT when I have an academic problem.		1	2	3	4
32. students in my CAT when I have a personal problem.		1	2	3	4
In general, . . .		**Disagree A Lot**	**Disagree A Little**	**Agree A Little**	**Agree A Lot**
33. if I am struggling in a class, I have the opportunity to change to a different course.		1	2	3	4
34. if I do not pass a class, there are opportunities for me to make up the credit for that class.		1	2	3	4
35. I have opportunities to take classes outside my core classes (e.g., foreign language, music, art, and theater).		1	2	3	4
36. I have opportunities to take honors or advanced classes.		1	2	3	4

37. In what grade are you?
- - Freshman (9th)
- - Sophomore (10th)
- - Junior (11th)
- - Senior (12th)

38. What is your sex?
- - Male
- - Female

39. Which race/ethnicity best describes you?
- - Asian
- - Black/African American
- - Hispanic/Latino
- - White/Caucasian
- - Multiple ethnicity/Other

(please specify): _____

40. What is your GPA?
- - 4.01 or above
- - 3.51 – 4.00
- - 3.01 – 3.50
- - 2.51 – 3.00
- - 2.01 – 2.50
- - 1.51 – 2.00
- - 1.01 – 1.50
- - 1.00 or below
- - I'm not sure

Appendix D:
2015 Teacher Survey

Investing in Innovation (i3) Grant Implementation Evaluation:
Making Time for What Matters Most

Spring 2015 Teacher Survey – Consent Form

In October 2010, Jefferson County Public Schools (JCPS) was awarded a four-year development grant by the U.S. Department of Education through the inaugural Investing in Innovation (i3) program competition. JCPS' project, *Making Time for What Matters Most*, aims to improve student achievement, narrow achievement gaps, strengthen students' college readiness skills, and increase the percentage of students who graduate and go on to college. Interventions include trimester scheduling, college access time/advisory, and teacher professional learning communities.

Purpose of the Survey: JCPS' i3 grant program is being evaluated – meaning that it is being looked at and studied to see if it is doing what it is supposed to do. McREL International, an independent research firm, is working with JCPS to figure out whether the i3 grant is achieving its goals. To help with this evaluation, we are surveying all core content teachers at the participating schools to ask about your thoughts and experiences related to your involvement in the i3 project (e.g., trimester scheduling, college access time/advisory, and professional learning communities). McREL is not evaluating the effectiveness of your school or individual teachers. Rather, the data obtained from the survey will be reported in an aggregated form to assist JCPS in making project-wide adjustments and improvements.

Protecting Your Rights: Participation in this survey is voluntary and should not involve any known risks above those normally encountered in daily life. There will be no retribution of any sort for the responses you provide. If you feel uncomfortable about responding to some questions, please feel free to skip those questions. You may also choose to stop participating in the survey altogether without penalty or reprisal.

About Your Confidentiality: Survey responses will be collected via Qualtrics utilizing transport layer security (TLS) encryption. TLS encryption is a security feature that encrypts the survey link and data as it moves across the Internet. McREL evaluators will handle the data and do everything they can to ensure its security[27]. Although most responses will be aggregated across schools, please note that your responses may be identified by school. This will help us to identify practices being implemented at schools that may warrant further study.

Benefits: While there are no direct benefits to individuals for participating, the survey is one of several data sources that we will use to evaluate JCPS' i3 grant program. Our evaluation report will provide crucial information to JCPS to help them understand the impact of the i3 grant on various stakeholders and improve specific reform initiatives. In appreciation of your time and contribution, you will receive a professional development stipend through JCPS.

Questions: If you have any questions about this survey, please contact Dr. Tara Donahue, Managing Evaluator (800.624.9120 ext. 5419; tdonahue@mcrel.org). For information on protection of your rights as a participant, contact Karen Bumgardner, a member of McREL's Institutional Review Board, at 800.624.9120, ext. 5841, or kbumgardner@mcrel.org.

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Electronic Consent*

If you agree to participate in this survey, please click "Yes, I agree" below. By doing so, you are indicating that you have read the information on this page, are at least 18 years of age, and that you voluntarily agree to participate in the survey.

If you decline to participate in the survey, click "No, I do not agree" below.

- Yes, I agree to participate in the survey.
- No, I do not agree to participate in the survey.

Investing in Innovation (i3) Grant Implementation Evaluation
Teacher Survey – Spring 2015

Instructions: Please answer the following questions based on your experiences during the current school year (2014-2015).

1. At which i3 school do you teach?
   - Academy @ Shawnee
   - Fern Creek Traditional High School
   - Moore Traditional High School
   - Valley Traditional High School
   - Waggener High School
   - Western High School

Section I: Teacher Collaboration and Support

Please tell us about your experiences with teacher collaboration and support at your school.

2. Rate the extent to which you agree or disagree with each of the following statements.

Statements	Strongly disagree	Disagree	Agree	Strongly agree
a. Teachers have sufficient time to collaborate with colleagues to plan and improve instruction.	☐	☐	☐	☐
b. Collaboration is seen as an important part of this school's culture.	☐	☐	☐	☐
c. Teachers have sufficient resources to provide quality instruction.	☐	☐	☐	☐
d. Teachers are generally willing to try new ideas.	☐	☐	☐	☐
e. Teachers in this school trust each other.	☐	☐	☐	☐
f. It is okay in this school to discuss with other teachers positive and/or negative feelings, concerns, and frustrations related to instruction and practice.	☐	☐	☐	☐
g. Teachers discuss difficulties and work together to develop solutions.	☐	☐	☐	☐
h. Teachers support each other's efforts to make improvements.	☐	☐	☐	☐
i. Access to expertise and resources is available and provided in a timely manner.	☐	☐	☐	☐

Section II: Professional Learning Communities (PLCs)

Please tell us about your experiences with PLCs at your school.

3. In general, who leads or facilitates PLCs at your school? *Select all that apply.*
   - ` Principal
   - ` Assistant Principal
   - ` Department Chair
   - ` Teacher Leaders
   - ` Teachers
   - ` Educational Recovery Specialist or Interventionist
   - ` I don't know
   - ` Other (please specify): _____

4. In thinking about the PLCs at your school, please rank the following **PLC goals** in order from most to least important with 1 being *least important* and 3 being *most important.*

PLC Goals	1st	2nd	3rd
a. Improve instruction and assessment practices	☐	☐	☐
b. Diagnose and improve student proficiency	☐	☐	☐
c. Develop effective classroom environments to promote and support learning	☐	☐	☐

5. In thinking about the PLCs at your school, please rank the following **PLC practices** in order from most to least important with 1 being *least important* and 3 being *most important.*

PLC Practices	1st	2nd	3rd
a. Planning for formative assessment	☐	☐	☐
b. Examining formative work	☐	☐	☐
c. Adjusting practice through data	☐	☐	☐

6. In thinking about the PLCs at your school, please rank the following **PLC topics covered** in order from most to least important with 1 being *least important* and 4 being *most important.*

PLC Topics Covered	1st	2nd	3rd	4th
a. Assessment	☐	☐	☐	☐
b. Curriculum	☐	☐	☐	☐
c. Instruction	☐	☐	☐	☐
d. Learning environment	☐	☐	☐	☐

7. Rate the extent to which you agree or disagree with each of the following statements.

Statements	Strongly disagree	Disagree	Agree	Strongly agree
a. I feel that my contribution to the PLC is valued.	☐	☐	☐	☐
b. Successful results with students are a regular part of discussions during PLCs.	☐	☐	☐	☐
c. Teacher collaboration related to instruction has increased as a result of my school's PLCs.	☐	☐	☐	☐
d. The PLC facilitator is adequately prepared for all PLC meetings.	☐	☐	☐	☐
e. School administrators (e.g., principal and assistant principal) attend the PLC meetings.	☐	☐	☐	☐
f. I feel that my instructional practice has improved as a result of participating in PLCs.	☐	☐	☐	☐
g. Time for collaborative planning is uninterrupted.	☐	☐	☐	☐
h. New ideas are welcomed and supported.	☐	☐	☐	☐
i. The PLC facilitator encourages all voices to be heard.	☐	☐	☐	☐

PLC Participation: Course-alike / Content-based

8. Please indicate the course-alike / content-based PLC of which you are a member. *Select all that apply.*

` English Dept.	` Math Dept.	` Science Dept.	` Social Studies Dept.
` English 1	` Algebra 1	` Biology	` Humanities and Related Arts
` English 2	` Algebra 2	` Integrated Science 1A	` U.S. History
` English 3	` Applied Math	` Integrated Science 1B	` World Civics
` English 4	` Geometry	` Other (please specify): _____	

` Not applicable - I do not participate in a course-alike/content-based PLC (skip to question #11)

9. In general, how often do course-alike / content-based PLCs meet at your school?

` Daily	` Once a trimester (3 times per year)
` Weekly	` Once or twice per year
` Two to three times per month	` Never
` Monthly	` I don't know
` Other (please specify): _____	

10. On average, how long does a course-alike / content-based PLC meeting last?

` 30 minutes	` 70 minutes
` 45 minutes	` 90 minutes
` 60 minutes	` I don't know
` Other (please specify): _____	

PLC Participation: Cross-content / School of Study (SOS)

11. Please indicate the cross-content / SOS PLC of which you are a member. *Select all that apply.*

` Analytical and Applied Sciences (SOS)	` Freshman Academy - Grade Level
` Environmental Sciences (SOS)	` Sophomore - Grade Level
` Health Sciences (SOS)	` Junior - Grade Level
` Medical Sciences (SOS)	` Senior - Grade level
` Communication and Media (SOS)	` Math/English/Science/Social Studies (MESS)
` Leadership and Social Sciences (SOS)	` Q4R2 (Quadrant 4, Higher Rigor and Relevance Challenge Level)
` Visual and Performing Arts (SOS)	` Other (please specify): _____

` Not applicable - I do not participate in a cross-content or SOS PLC (skip to question #14)

12. In general, how often do cross-content / SOS PLCs meet at your school?

- ` Daily
- ` Weekly
- ` Two to three times per month
- ` Monthly
- ` Other (please specify): _____
- ` Once a trimester (3 times per year)
- ` Once or twice per year
- ` Never
- ` I don't know

13. On average, how long does a cross-content / SOS PLC meeting last?

- ` 30 minutes
- ` 45 minutes
- ` 60 minutes
- ` Other (please specify): _____
- ` 70 minutes
- ` 90 minutes
- ` I don't know

PLC Big Ideas

There are three "Big Ideas" with corresponding indicators associated with PLCs. Each indicator is listed below.

14. Rate the extent to which you agree or disagree with the indicators for *Big Idea #1: Building a Collaborative Culture*.

Indicators	Strongly disagree	Disagree	Agree	Strongly agree
a. Collaboration focuses on the group learning together.	☐	☐	☐	☐
b. The PLC team is focused on critical questions.	☐	☐	☐	☐
c. Products of collaboration efforts (e.g., norms, goals, outcomes, assessments, and lesson plans) are explicit.	☐	☐	☐	☐

15. Rate the extent to which you agree or disagree with the indicators for *Big Idea #2: Ensuring that All Students Learn*.

Indicators	Strongly disagree	Disagree	Agree	Strongly agree
a. The PLC identifies/discusses essential common outcomes.	☐	☐	☐	☐
b. Outcomes align with content standards/pacing guides.	☐	☐	☐	☐
c. Instructional plans include specific learning targets.	☐	☐	☐	☐
d. PLC teams develop multiple common formative assessments/tasks.	☐	☐	☐	☐
e. Instructional plans and activities include strategies to increase the use of higher order thinking skills.	☐	☐	☐	☐
f. Instructional plans provide support for students at different learning levels.	☐	☐	☐	☐

16. Rate the extent to which you agree or disagree with the indicators for *Big Idea #3: Establishing a Focus on Results*.

Indicators	Strongly disagree	Disagree	Agree	Strongly agree
a. PLCs pursue specific and measurable team performance goals (SMART goals).	☐	☐	☐	☐
b. PLCs access relevant student information to monitor progress toward goals.	☐	☐	☐	☐
c. PLCs utilize common assessments and formative tasks to monitor student progress.	☐	☐	☐	☐
d. PLCs reflect on data to identify students in need of intervention (enrichment) and plans for strategies, activities, and interventions.	☐	☐	☐	☐
e. PLCs utilize an increasingly directive, timely, and systematic response to students not meeting established outcomes and learning targets.	☐	☐	☐	☐

Section III: Course Assignment Process and Trimester Schedule

Thinking about your experiences with the course assignment process and trimester scheduling, please share those experiences with us by answering the questions below.

17. Indicate the extent to which you agree or disagree with the following statements about your school's course assignment process.

My school . . .	Strongly disagree	Disagree	Agree	Strongly agree
has a course assignment process that results in the best placement for students.	☐	☐	☐	☐
has a clear process for identifying students early when they are struggling.	☐	☐	☐	☐
has effective practices in place to successfully intervene with students who are struggling in a course.	☐	☐	☐	☐
has effective practices in place to move students up to a higher level course when they have been successful.	☐	☐	☐	☐

18. Has the trimester schedule addressed the needs of **struggling** students in your school?

☐ Yes ☐ No

19. Has the trimester schedule addressed the needs of **advanced or accelerated** students in your school?

☐ Yes ☐ No

Section IV: College Access Time (CAT)

Please tell us about your school's CAT or advisory, a designated time for student college preparation and advisory.

20. Rank the following components of CAT in order of importance with 1 being *least important* and 4 being *most important*.

CAT Components	1st	2nd	3rd	4th
a. Advance college-ready skills, monitor student progress, and increase students' sense of affiliation with adults and peers.	☐	☐	◄	►
b. Build knowledge and use of college-ready skills and habits.	☐	☐	◄	►
c. Improve students' sense of affiliation with adults and peers.	☐	☐	◄	►
d. Strengthen peer-to-peer relations and perceptions of peer support, particularly within career themes.	☐	☐	◄	►

21. Do you lead a CAT advisory period?

    ♥ Yes ◉ No (skip to question # 27)

22. Approximately how many students are in your CAT advisory period?

    Students (#): _____

23. How many school days prior to your CAT advisory period do you receive your lesson?

    ` 1 day  ` 4 days
    ` 2 days  ` 5 days
    ` 3 days  ` Other (please specify): _____

24. Please rank the following CAT focus areas from most to least important with 1 being the *least important* and 4 being the *most important*.

CAT Focus Areas	1st	2nd	3rd	4th
a. Monitor students' academic progress and intervene with subject-specific remediation.	☐	☐	◄	►
b. Develop career interests and motivation, and ensure appropriate, related college-bound course taking and ACT preparation.	☐	☐	◄	►
c. Develop 21st century skills including study skills, persistence, independence, adaptation to change, digital literacy, effective communication, inventive thinking, and fostering motivation to high achievement.	☐	☐	◄	►
d. Develop college knowledge and support for application and financial assistance planning.	☐	☐	◄	►

25. How often do CAT lessons follow the elements of the Classroom Instructional Framework?

Elements	Never	Seldom	Sometimes	Almost always
a. Establishing engagement	☐	☐	☐	☐
b. Fostering connections	☐	☐	☐	☐
c. Deepening understanding	☐	☐	☐	☐
d. Making meaning	☐	☐	☐	☐

26. Indicate the extent to which you agree or disagree with the following statements about your school's CAT or advisory time.

Statements	Strongly disagree	Disagree	Agree	Strongly agree
a. I have received sufficient training and coaching to successfully implement CAT.	☐	☐	☐	☐
b. The CAT lessons provided to me can be sufficiently covered during the allotted time.	☐	☐	☐	☐
c. I feel equipped to address social and emotional issues that arise during CAT.	☐	☐	☐	☐
d. I believe that the CAT advisory periods are beneficial to students.	☐	☐	☐	☐
e. I receive the CAT lessons in time to adequately prepare for the lesson.	☐	☐	☐	☐
f. CAT advisory periods increase students' college readiness.	☐	☐	☐	☐
g. Overall, CAT advisory periods are making a positive contribution to the success of our students.	☐	☐	☐	☐

Section V: Teacher Self-Efficacy

Thinking about your teaching experiences this year, please share your thoughts on your sense of confidence to deal with all the demands and challenges that are implied in teachers' professional life by answering the questions below.

27. Indicate how often the following situations have occurred.

How often . . .	Never	Seldom	Sometimes	Almost always
do you feel that you are able to work effectively?	☐	☐	☐	☐
are you satisfied with the quality of your work?	☐	☐	☐	☐
do you feel that you are being successful in your work?	☐	☐	☐	☐
do you have sufficient self-confidence to defend your own points of view?	☐	☐	☐	☐
do you feel adequately prepared to use formative data (e.g., class work, homework, and other instructional activities) to adjust your instruction?	☐	☐	☐	☐
do you feel adequately prepared to use summative data (e.g., end of chapter, unit, or course assessments) to adjust your instruction?	☐	☐	☐	☐
do you feel confident in teaching all required content standards in your subject area?	☐	☐	☐	☐

How often . . .	Never	Seldom	Sometimes	Almost always
do you feel confident in adjusting your instructional practices to meet the needs of individual students?	☐	☐	☐	☐
do you worry about being criticized if positive results are not readily apparent?	☐	☐	☐	☐
does the emphasis on success discourage you from trying new approaches?	☐	☐	☐	☐

Section VI: Student Academic Engagement and Challenge

Please tell us about your teaching experiences this year as it relates to student academic engagement and challenge.

28. Indicate the extent to which you agree or disagree with the following statements.

Teachers at my school . . .	Strongly disagree	Disagree	Agree	Strongly agree
challenge students academically.	☐	☐	☐	☐
encourage students to go beyond stated expectations.	☐	☐	☐	☐
involve students in setting expectations.	☐	☐	☐	☐
involve students in planning lessons.	☐	☐	☐	☐
involve students in developing criteria for assessing their assignments.	☐	☐	☐	☐
work with disenfranchised students to help them feel more connected to school.	☐	☐	☐	☐

29. Indicate the extent to which you agree or disagree with the following statements.

	Strongly disagree	Disagree	Agree	Strongly agree
a. In general, students seem to enjoy my school.	☐	☐	☐	☐
b. High grades at my school are viewed as an indicator of easy course work.	☐	☐	☐	☐
c. In general, students seem to be bored at my school.	☐	☐	☐	☐
d. Students at my school perceive challenge as a way to go beyond expectations.	☐	☐	☐	☐
e. High grades at my school are viewed as an indicator of mastering high standards.	☐	☐	☐	☐
f. In general, students do well in my school.	☐	☐	☐	☐

Section VII: Background

30. What is your highest degree?
    - ` Associate
    - ` Bachelor
    - ` Master
    - ` Ed.D.
    - ` Ph.D.

31. Which grade(s) do you teach? *Select all that apply.*
    - ` Freshman (9th)
    - ` Sophomore (10th)
    - ` Junior (11th)
    - ` Senior (12th)

32. How many years have you been teaching?
    - ` This is my first year
    - ` 2 to 5 years
    - ` 6 to 10 years
    - ` 11 to 20 years
    - ` 21+ years

33. How many years have you been teaching at this school?
    - ` This is my first year
    - ` 2 to 3 years
    - ` 4 to 5 years
    - ` 6 to 10 years
    - ` 11+ years

34. What is your ethnicity/race? *Select all that apply.*
    - ` American Native/Alaska Native
    - ` Asian
    - ` Black/African American
    - ` Hispanic/Latino
    - ` Native Hawaiian/Pacific Islander
    - ` White/Caucasian
    - ` Other (please specify): _____

Thank you so much for taking time to complete this survey!

Appendix E:
Core Course Classification

Core Course Classification

The core courses are: (1) English I-VI, (2) Algebra I and II, (3) Geometry, (4) Senior Math, (5) Life Science, (6) Physical Science, (7) Earth/Space Science, (8) Social Studies, (9) U.S. History, and (10) World Civilization. Within each core course domain, three types of classes are identified: (1) Comprehensive (COMP; regular), (2) Honors (HNR), and (3) others (e.g., Advanced Placement [AP], Advanced [ADV], and Dual Credit).

Table E-1. Breakdown by Core Courses and Class Type

Credit Type	Core Course	Class Type	Course Name *(* added in Y3; ** added in Y5)*	Coding**
English	English (001)	COMP (01)	English 1	001011
			Literacy Lab 1	001011
			English 2	001012
			ESL Trans2*	001012
			Literacy Lab 2	001012
			English 3	001013
			English 4	001014
			English Composition Lab 1	001015
			English Composition Lab 2	001016
		Honor (02)	English 1 HNR	001021
			English 2 HNR	001022
			English 3 HNR	001023
			English 4 HNR	001024
		Others (03)	English Language and Composition AP	001031
			English Literature and Composition AP	001032
			English 1 ADV	001033
			English 2 ADV	001034
			English 3 ADV	001035
			English 4 ADV	001036
			English 4 Dual Credit	001037
Math	Geometry (002)	COMP (01)	Geometry	002011
			Geometry Lab	002011
		Honor (02)	Geometry HNR	002021
		Others (03)	Geometry ADV	002031
			Accelerated Geometry**	002031
	Algebra (003)	COMP (01)	Algebra 1	003011
			Algebra Lab (Algebra 1 Lab)	003011
			Algebra 2	003012
			Algebra 2 Lab	003012
			Algebra 1.5**	003013
		Honor (02)	Algebra 1 HNR	003021
			Algebra 2 HNR	003022
		Others (03)	Algebra 2 ADV	003031

Credit Type	Core Course	Class Type	Course Name *(* added in Y3; ** added in Y5)*	Coding**
Math	SR Math (004)	COMP (01)	Pre-Calculus	004011
			Pre-Calculus Lab	004012
			College Algebra	004013
			Applied Mathematics	004014
			Probability & Statistics**	004015
			Technical Math**	004016
		Honor (02)	Pre-Calculus HNR	004021
			College Algebra HNR	004022
		Others (03)	Pre-Calculus ADV	004031
			Accelerated Pre-Calculus**	004031
			Pre-Calculus MST	004032
			Calculus AB AP	004033
			Statistics AP	004034
			College Algebra Dual Credit**	004035
Science	Life Science (005)	COMP (01)	Anatomy/Physiology	005011
			Biology 1	005012
			Biology Special Topics*	005012
			Biology 2	005013
			Chemistry 1	005014
		Honor (02)	Anatomy/Physiology HNR	005021
			Biology 1 HNR	005022
			Chemistry 1 HNR	005023
		Others (03)	Biology 1 ADV	005031
			Biology2 AP	005032
			Biology AP*	005032
			Chemistry 1 ADV	005033
			Chemistry 2 ADV	005034
			Chemistry AP*	005035
	Earth/Space Science (006)	COMP (01)	Integrated Science 1	006011
			Integrated Science 1A	006011
		Honor (02)	Integrated Science 1A HNR	006021
		Other (03)	Integrated Science 1A ADV	006031
	Physical Science (007)	COMP (01)	Integrated Science 1B	007011
			Physics 1	007012
		Honor (02)	Integrated Science 1B HNR	007021
			Physics 1 HNR	007022
		Others (03)	Physics 1 ADV	007031
			Physics B AP	007032
			AP Physics 1:Algebra-based**	007032
			Integrated Science 1B ADV*	007033
Social Studies	Social Studies (008)	COMP (01)	Exploring Civics	008011
			Social Science	008012
		Honor (02)	Exploring Civics HNR	008021
			Social Science HNR	008022
		Others (03)	Exploring Civics ADV	008031
			Human Geography AP	008032
			Social Science ADV	008033

Credit Type	Core Course	Class Type	Course Name *(* added in Y3; ** added in Y5)*	Coding**
Social Studies	U.S. History (009)	COMP (01)	U.S. History	009011
		Honor (02)	U.S. History HNR	009021
		Other (03	U.S. History ADV	009031
			U.S. History AP	009032
	World Civilization (010)	COMP (01)	World Civilization	010011
		Honor (02)	World Civilization HNR	010022
		Other (03)	World Civilization ADV	010033
			World History AP*	010034

Appendix F:
Core Course Analyses

Core Course Analyses

Table F-1. Pass Rates by Subject and Core Courses by School

Subject	Core Course	Academy @ Shawnee		Fern Creek		Moore		Valley		Waggener		Western		Chi-square test		
		n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	χ^2	*df*	*ES*
English	***Overall English***	686	82.7	2,071	89.1	1,064	88.9	1,080	82.9	1,195	84.2	840	83.6	**46.26**	**5**	**0.03**
Math	Geometry	153	73.9	485	80.2	338	87.3	297	75.4	268	63.4	216	51.9	112.05	5	0.15
	Algebra	282	80.1	758	78.4	525	78.5	444	86.5	418	80.6	401	62.8	74.80	5	0.05
	Senior Math	22	100.0	358	95.5	205	95.6	124	96.0	139	87.8	118	74.6	66.53	5	0.13
	Overall Math	457	79.0	1,601	82.8	1,068	84.6	865	84.0	825	76.2	735	61.5	**187.51**	**5**	**0.10**
Science	Life Science	217	49.3	1,109	75.9	312	88.1	292	82.2	300	85.3	417	65.2	152.96	5	0.06
	Earth/Space Science	164	86.0	373	83.9	292	86.0	301	72.4	182	83.0	299	62.9	73.08	5	0.14
	Physical Science	157	89.2	36	80.6	272	89.3	298	78.9	196	71.9	185	75.1	34.63	5	0.12
	Overall Science	538	72.1	1,518	78.0	876	87.8	693	77.8	678	80.8	901	66.5	**128.91**	**5**	**0.04**
Social Studies	Social Studies	272	67.6	112	86.6	327	87.8	229	81.2	210	85.2	281	69.4	61.03	5	0.003
	U.S. History	89	70.8	355	92.7	167	94.0	262	93.1	204	83.3	194	80.9	57.91	5	0.03
	World Civilization	31	90.3	445	81.3	289	94.5	281	94.3	230	82.2	196	80.1	51.57	5	0.003
	Overall Social Studies	392	70.2	912	86.4	783	91.6	772	90.0	644	83.7	509	75.9	**149.82**	**5**	**0.01**
OVERALL		**2,073**	**76.7**	**6,102**	**84.3**	**3,791**	**88.0**	**3,608**	**83.4**	**3,342**	**81.4**	**3,147**	**71.9**			

*Pearson chi-square tests. Effect sizes were estimated based on Somers' *d* (Ferguson, 2009): A value of 0.2 is small effect size; a value of 0.5 is moderate, and a value of 0.8 is large.

Table F-2. Trimester Schedule Status, Gender, LEP Status, and Grade Level Differences in Student Pass Rates

Subject	Core Course	Trimester Schedule Status [a]		Gender [a]		LEP [a]		Grade Level [a]					
								9th Grade		*10th Grade*		*11th Grade*	
		β	OR	β	OR	β	OR	β	OR	β	OR	β	OR
English	***Overall English***	**-1.19*****	**0.30**	**0.68*****	**1.97**	**0.15**	**1.17**	**-1.15*****	**0.32**	**-0.90*****	**0.41**	**-0.88*****	**0.41**
Math	Geometry	-0.86	0.42	0.16	1.17	-0.08	0.92	0.33	1.39	0.10	1.10	-1.18	0.31
	Algebra	-20.40	0.00	0.50***	1.65	-0.12	0.88	0.10	1.10	0.78*	2.19	-0.02	0.98
	Senior Math	-18.77	0.00	0.60	1.82	-0.78	0.46	-26.84	0.00	--	--	-1.68***	0.19
	Overall Math	**-2.57*****	**0.08**	**0.41*****	**1.51**	**-0.004**	**1.00**	**-0.98*****	**0.38**	**-1.04*****	**1.35**	**-1.09*****	**0.34**
Science	Life Science	-0.92*	0.40	0.50***	1.64	0.18	1.20	-0.09	0.91	-1.49***	0.23	-0.17	0.84
	Earth/Space Science	2.03***	7.63	0.58**	1.79	0.39	1.47	-20.21	0.00	-22.04	0.00	1.27	3.56
	Physical Science	-0.12	0.89	0.60*	1.82	-19.78	0.00	-1.80*	0.17	-0.72	0.49	-0.53	0.59
	Overall Science	**0.04**	**1.04**	**0.52*****	**1.67**	**0.15**	**1.17**	**-0.46***	**0.63**	**-1.09*****	**0.38**	**-0.29**	**0.75**
Social Studies	Social Studies	-1.29***	0.28	0.69***	1.99	0.04	1.04	-21.00	0.00	-21.32	0.00	-21.82	0.00
	U.S. History	-1.62***	0.19	0.54**	1.71	1.09	2.98	--	--	-2.75***	0.06	-0.72***	0.00
	World Civilization	-2.47*	0.09	0.51*	1.67	0.29	1.34	-21.93	0.00	-20.04	0.00	-20.34	0.00
	Overall Social Studies	**-1.59*****	**0.20**	**0.63*****	**1.88**	**0.24**	**1.28**	**-0.97*****	**0.38**	**-0.45***	**0.64**	**-0.76****	**0.47**
OVERALL		**-1.26*****	**0.28**	**0.53**	**1.69**	**0.11**	**1.12**	**-0.95*****	**0.39**	**-0.99*****	**0.37**	**-0.85*****	**0.43**

Note. β = coefficient; *OR* = the odds of passing the course was [odds ratio] times higher (or lower) if the student was a "non-reference group" in comparison with "the reference group".

[a] Three-term courses, male, students with LEP, and 12th graders are the reference groups.

-- the ratio of the two groups was too large for comparison with numeric errors.

$^{***}p < 0.001$

$^{**}p < 0.01$

$^{*}p < 0.05$

Table F-3. FRPM and Race Differences in Student Pass

Subject	Core Course	FRPM Status				Race/Ethnicity							
		Free Meals [a]		*Reduced-Price Meals* [a]		*Asian* [a]		*Black* [a]		*Hispanic* [a]		*Other* [a]	
		β	OR	β	OR	β	OR	β	OR	β	OR	β	OR
English	***Overall English***	**-0.33***	**0.72**	**0.24**	**1.27**	**0.95**	**2.58**	**-0.20**	**0.82**	**-0.05**	**0.96**	**0.28**	**1.32**
Math	Geometry	-0.51*	0.60	-0.07	0.94	1.36	3.88	-0.40*	0.67	0.98*	2.66	0.18	1.20
	Algebra	-0.34	0.72	0.17	1.19	2.22	9.16	-0.31*	0.74	0.31	1.36	0.36	1.43
	Senior Math [b]	-0.39	0.68	0.21	1.24	--	--	-0.83*	0.44	-1.14**	0.32	-0.65	0.52
	Overall Math	**-0.58*****	**0.60**	**0.07**	**1.07**	**1.67****	**5.33**	**-0.48*****	**0.62**	**0.42***	**1.52**	**0.24**	**1.27**
Science	Life Science	-0.64***	0.53	-0.13	0.88	1.09*	2.97	-0.32*	0.73	0.52*	1.68	0.90	2.47
	Earth/Space Science	-0.44	0.64	0.35	1.42	0.18	1.20	-0.51**	0.59	0.56	1.74	-0.13	0.88
	Physical Science	0.31	1.36	-0.21	0.81	0.78	2.18	-0.37	0.69	1.93	6.86	1.09	2.97
	Overall Science	**-0.36****	**0.70**	**-0.01**	**0.99**	**0.71**	**2.04**	**-0.35****	**0.70**	**0.61****	**1.84**	**0.51**	**1.66**
Social Studies	Social Studies	-1.20***	0.30	-0.10	0.90	1.40	4.06	0.23	1.25	1.22**	3.40	0.75	2.12
	U.S. History	-0.54*	0.58	-0.24	0.78	--	--	-0.01	1.00	0.16	1.18	--	--
	World Civilization	-0.25	0.78	-0.11	0.89	20.51	0.00	-0.13	0.88	0.03	1.03	-0.01	0.99
	Overall Social Studies	**-0.69*****	**0.50**	**-0.13**	**0.88**	**2.59****	**13.38**	**0.03**	**1.03**	**0.58***	**1.79**	**0.75**	**2.11**
OVERALL		**-0.44*****	**0.64**	**0.06**	**1.01**	**1.21*****	**3.34**	**-0.27*****	**0.76**	**0.38****	**1.46**	**0.42**	**1.53**

Note. Some odds ratios are extremely large because of the extreme unbalance sample size between groups. β = coefficient; *OR* = the odds of passing the course was [odds ratio] times higher (or lower) if the student was a "non-reference group" in comparison with "the reference group".

[a] Students with paid meal status and White students are the reference groups.

-- the ratio of the two groups was too large for comparison with numeric errors.

***$p < 0.001$

**$p < 0.01$

*$p < 0.05$

Appendix G:
Means and Standard Deviations of Student Perceptions of the Academic Challenge Item Index by School

Means and Standard Deviations of Student Perceptions of the Academic Challenge Item Index by School

	All Schools			Academy @ Shawnee			Fern Creek			Moore			Valley			Waggener			Western		
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
B2	4,637	2.56	0.85	350	2.43	0.93	1,378	2.52	0.79	803	2.46	0.78	871	2.73	1.07	717	2.60	0.74	518	2.52	0.71
E2	4,580	2.91	0.64	338	2.86	0.76	1,365	3.00	0.56	798	2.82	0.70	859	2.90	0.64	711	2.92	0.66	509	2.90	0.63
E3	4,571	2.68	0.76	337	2.44	0.91	1,365	2.78	0.70	794	2.62	0.76	859	2.73	0.74	709	2.60	0.80	507	2.66	0.74
CSS Mean	**4,643**	**2.71**	**0.57**	**351**	**2.56**	**0.63**	**1,380**	**2.76**	**0.52**	**805**	**2.63**	**0.60**	**871**	**2.78**	**0.60**	**718**	**2.70**	**0.57**	**518**	**2.68**	**0.54**

Note. B2 = "I think school is fun and challenging"; E2 = "My teachers provide academically challenging content"; E3 = "Teachers at my school assign meaningful homework on a regular basis."

Appendix H:
Teacher Survey Aggregate Means, Standard Deviations, and Percentages for Scales by Item

Teacher Survey Aggregate Means, Standard Deviations, and Percentages for Scales by Item

Item	*n*	*M*	*SD*	Strongly Disagree	Disagree	Agree	Strongly Agree
Student Academic Engagement							
Teachers at my school challenge students academically.	86	2.93	0.59	1.2%	17.4%	68.6%	12.8%
Teachers at my school encourage students to go beyond stated expectations.	86	2.97	0.66	1.2%	19.8%	60.5%	18.6%
Teachers at my school involve students in setting expectations.	86	2.73	0.64	1.2%	33.7%	55.8%	9.3%
Teachers at my school involve students in planning lessons.	86	2.17	0.65	10.5%	65.1%	20.9%	3.5%
Teachers at my school involve students in developing criteria for assessing their assignments.	86	2.44	0.66	4.7%	51.2%	39.5%	4.7%
Teachers at my school work with disenfranchised students to help them feel more connected to school.	86	3.07	0.59	--	14.0%	65.1%	20.9%
Scale Total		**16.31**	**2.72**				
Student Academic Challenge							
In general, students seem to enjoy my school.	86	2.72	0.64	3.5%	27.9%	61.6%	7.0%
In general, high grades at my school are viewed as an indicator of easy course work.	86	2.34	0.59	2.3%	65.1%	29.1%	3.5%
In general, students seem to be bored at my school.	86	2.38	0.58	1.2%	62.8%	32.6%	3.5%
In general, students at my school perceive challenge as a way to go beyond expectations.	86	2.24	0.72	12.8%	53.5%	30.2%	3.5%
In general, high grades at my school are viewed as an indicator of mastering high standards.	86	2.84	0.67	3.5%	20.9%	64.0%	11.6%
In general, students do well in my school.	86	2.55	0.61	3.5%	40.7%	53.5%	2.3%
Scale Total		**15.07**	**2.09**				
Teacher Collaboration and Support							
Teachers have sufficient time to collaborate with colleagues to plan and improve instruction.	94	2.83	0.79	3.2%	18.1%	58.5%	20.2%
Collaboration is seen as an important part of this school's culture.	94	3.28	0.65	2.1%	4.3%	57.4%	36.2%
Teachers have sufficient resources to provide quality instruction.	94	2.96	0.72	8.5%	14.9%	61.7%	14.9%

Item	*n*	*M*	*SD*	Strongly Disagree	Disagree	Agree	Strongly Agree
Teachers are generally willing to try new ideas.	94	3.13	0.47	--	5.3%	76.6%	18.1%
Teachers in this school trust each other.	94	2.84	0.61	2.1%	21.3%	67.0%	9.6%
It is okay in this school to discuss with other teachers positive and/or negative feelings, concerns, and frustrations related to instruction and practice.	94	2.98	0.60	1.1%	16.0%	67.0%	16.0%
Teachers discuss difficulties and work together to develop solutions.	94	3.02	0.62	--	18.1%	61.7%	20.2%
Teachers support each other's efforts to make improvements.	94	3.10	0.55	--	10.6%	69.1%	20.2%
Access to expertise and resources is available and provided in a timely manner.	94	2.87	0.66	3.2%	19.1%	64.9%	12.8%
Scale Total		**27.00**	**3.69**				
Teacher Self-Efficacy							
How often . . .	***n***	***M***	***SD***	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
does the emphasis on success discourage you from trying new approaches?	87	2.59	1.03	21.8%	16.1%	43.7%	18.4%
do you feel that you are able to work effectively?	87	3.48	0.59	--	4.6%	42.5%	52.9%
are you satisfied with the quality of your work?	87	3.55	0.57	--	3.4%	37.9%	58.6%
do you feel that you are being successful in your work?	87	3.44	0.59	--	4.7%	46.5%	48.8%
do you have sufficient self-confidence to defend your own points of view?	87	3.69	0.52	--	2.3%	26.7%	70.9%
do you feel adequately prepared to use formative data (e.g., class work, homework, and other instructional activities) to adjust your instruction?	87	3.52	0.57	--	3.4%	41.4%	55.2%
do you feel adequately prepared to use summative data (e.g., end of chapter, unit, or course assessments) to adjust your instruction?	87	3.51	0.59	--	4.6%	40.2%	55.2%
do you feel confident in teaching all required content standards in your subject area?	87	3.61	0.65	1.1%	5.7%	24.1%	69.0%

Item	*n*	*M*	*SD*	Strongly Disagree	Disagree	Agree	Strongly Agree
do you feel confident in adjusting your instructional practices to meet the needs of individual students?	87	3.48	0.61	--	5.7%	40.2%	54.0%
do you worry about being criticized if positive results are not readily apparent?	87	2.82	1.01	12.6%	24.1%	32.2%	31.0%
Scale Total		**33.73**	**3.62**				
Perceptions of Professional Learning Communities							
I feel that my contribution to the PLC is valued.	92	3.16	0.70	2.2%	10.9%	55.4%	31.5%
Successful results with students are a regular part of discussions during PLCs.	92	3.08	0.73	2.2%	16.3%	53.3%	28.3%
Teacher collaboration related to instruction has increased as a result of my school's PLCs.	92	3.03	0.78	5.4%	12.0%	56.5%	26.1%
The PLC facilitator is adequately prepared for all PLC meetings.	92	3.14	0.76	5.4%	6.5%	56.5%	31.5%
School administrators (e.g., principal and assistant principal) attend the PLC meetings.	91	2.60	0.99	19.8%	16.5%	47.3%	16.5%
I feel that my instructional practice has improved as a result of participating in PLCs.	92	2.92	0.83	6.5%	18.5%	51.1%	23.9%
Time for collaborative planning is uninterrupted.	92	2.50	0.87	15.2%	29.3%	45.7%	9.8%
New ideas are welcomed and supported.	92	3.10	0.61	--	14.1%	62.0%	23.9%
The PLC facilitator encourages all voices to be heard.	92	3.24	0.70	3.3%	5.4%	55.4%	35.9%
Scale Total		**23.35**	**4.83**				
PLC Big Idea #1: Building a Collaborative Culture							
Collaboration focuses on the group learning together.	88	3.07	0.68	3.4%	9.1%	64.8%	22.7%
The PLC team is focused on critical questions.	88	3.06	0.67	1.1%	15.9%	59.1%	23.9%
Products of collaboration efforts are explicit (e.g., norms, goals, outcomes, assessments, and lesson plans).	88	3.18	0.64	--	12.5%	56.8%	30.7%
Subscale Total		**9.31**	**2.88**				
PLC Big Idea #2: Ensuring All Students Learn							
The PLC identifies/discusses essential common outcomes.	88	3.23	0.56	1.1%	3.4%	67.0%	28.4%
Outcomes align with content standards/pacing guides.	88	3.31	0.61	--	8.0%	53.4%	38.6%

Item	*n*	*M*	*SD*	Strongly Disagree	Disagree	Agree	Strongly Agree
Instructional plans include specific learning targets.	88	3.33	0.62	--	8.0%	51.1%	40.9%
PLC teams develop multiple common formative assessments/tasks.	88	3.23	0.71	2.3%	9.1%	52.3%	36.4%
Instructional plans and activities include strategies to increase the use of higher order thinking skills.	88	3.10	0.71	1.1%	17.0%	52.3%	29.5%
Instructional plans provide support for students at different learning levels.	88	3.03	0.70	1.1%	19.3%	54.5%	25.0%
Subscale Total		**19.23**	**3.25**				
PLC Big Idea #3: Establishing a Focus on Results							
PLCs pursue specific and measurable team performance goals (S.M.A.R.T.).	88	3.19	0.62	--	11.4%	58.0%	30.7%
PLCs access relevant student information to monitor progress toward goals.	88	3.26	0.62	1.1%	5.7%	59.1%	34.1%
PLCs utilize common assessments and formative tasks to monitor student progress.	88	3.31	0.68	2.3%	5.7%	51.1%	40.9%
PLCs reflect on data to identify students in need of intervention (enrichment) and plans for strategies, activities, and interventions.	88	3.27	0.64	1.1%	6.8%	55.7%	36.4%
PLCs utilize an increasingly directive, timely, and systematic response to students not meeting established outcomes and learning targets.	88	3.11	0.73	2.3%	14.8%	52.3%	30.7%
Subscale Total		**16.15**	**2.88**				
PLC Big Ideas Scale Total		**44.68**	**7.32**				
Course Assignment Process							
My school has a course assignment process that results in the best placement for students.	87	2.43	0.87	17.2%	31.0%	43.7%	8.0%
My school has a clear process for identifying students early when they are struggling.	87	2.62	0.81	9.2%	31.0%	48.3%	11.5%
My school has effective practices in place to successfully intervene with students who are struggling in a course.	87	2.68	0.83	9.2%	27.6%	49.4%	13.8%
My school has effective practices in place to move students up to a higher-level course when they have been successful.	87	2.67	0.80	8.0%	29.9%	49.4%	12.6%
Scale Total		**10.39**	**2.79**				

Item	*n*	*M*	*SD*	Never	Seldom	Sometimes	Almost Always
How Often Do CAT Lessons Follow the Elements of the Classroom Instructional Framework?							
Establishing engagement	42	3.12	0.94	9.5%	9.5%	40.5%	40.5%
Fostering connections	42	3.21	0.98	11.9%	2.4%	38.1%	47.6%
Deepening understanding	42	2.88	1.02	14.3%	14.3%	40.5%	31.0%
Making meaning	42	2.98	0.95	11.9%	9.5%	47.6%	31.0%
Scale Total		**12.19**	**3.61**				
Item	***n***	***M***	***SD***	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
CAT Preparation and Impact							
I have received sufficient training and coaching to successfully implement CAT.	42	2.86	0.90	9.5%	19.0%	47.6%	23.8%
The CAT lessons provided to me can be sufficiently covered during the allotted time.	42	2.86	0.87	11.9%	9.5%	59.5%	19.0%
I feel equipped to address social and emotional issues that arise during CAT.	42	2.98	0.84	9.5%	7.1%	59.5%	23.8%
I believe that the CAT advisory periods are beneficial to students.	42	2.64	1.03	19.0%	19.0%	40.5%	21.4%
I receive the CAT lessons in time to adequately prepare for the lesson.	42	2.83	0.82	9.5%	14.3%	59.5%	16.7%
CAT advisory periods increase students' college readiness.	42	2.36	0.93	19.0%	38.1%	31.0%	11.9%
Overall, CAT advisory periods are making a positive contribution to the success of our students.	42	2.62	0.94	11.9%	33.3%	35.7%	19.0%
Scale Total		**19.14**	**5.34**				