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# BLOCK SCHEDULING FOR THE 21ST CENTURY HIGH SCHOOL: A CHANGE LEADERSHIP PLAN

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BLOCK SCHEDULING FOR THE 21<sup>ST</sup> CENTURY HIGH SCHOOL:

A CHANGE LEADERSHIP PLAN

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Educational Leadership Doctoral Program

Submitted in partial fulfillment

of the requirements of

Doctor of Education

In the Foster G. McGaw Graduate School

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## Document Origination Statement Digital Commons @ NLU

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This document was created as *one* part of the three-part dissertation requirement of the National Louis University (NLU) Educational Leadership (EDL) Doctoral Program. The National Louis Educational Leadership EdD is a professional practice degree program (Shulman et al., 2006).

For the dissertation requirement, doctoral candidates are required to plan, research, and implement three major projects, one each year, within their school or district with a focus on professional practice. The three projects are:

- Program Evaluation
- Change Leadership Plan
- Policy Advocacy Document

For the **Program Evaluation** candidates are required to identify and evaluate a program or practice within their school or district. The “program” can be a current initiative; a grant project; a common practice; or a movement. Focused on utilization, the evaluation can be formative, summative, or developmental (Patton, 2008). The candidate must demonstrate how the evaluation directly relates to student learning.

In the **Change Leadership Plan** candidates develop a plan that considers organizational possibilities for renewal. The plan for organizational change may be at the building or district level. It must be related to an area in need of improvement, and have a clear target in mind. The candidate must be able to identify noticeable and feasible differences that should exist as a result of the change plan (Wagner et al., 2006).

In the **Policy Advocacy Document** candidates develop and advocate for a policy at the local, state or national level using reflective practice and research as a means for supporting and promoting reforms in education. Policy advocacy dissertations use critical theory to address moral and ethical issues of policy formation and administrative decision making (i.e., what ought to be). The purpose is to develop reflective, humane and social critics, moral leaders, and competent professionals, guided by a critical practical rational model (Browder, 1995).

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## ABSTRACT

The needs of 21<sup>st</sup> Century learners require an overhaul in the way classroom instruction is organized and delivered. This Change Plan outlines how and why high schools may consider modifying the bell schedule to support needed change. The current high school structure was developed at the turn of the 20<sup>th</sup> Century, over 100 years ago, when the world was much smaller, and the vast majority of students did not go on to college or need advanced coursework to enter and compete in the workforce. Yet, this late 19<sup>th</sup> century concept is still the basic organizing structure of our modern day high school that must meet the needs of a much more diverse group of students requiring very different skill sets (DiMartino and Clarke, 2008, p. 7). This Change Plan is about whether and to what extent the traditional 8-period, 50-minute school day effectively meets the needs of 21<sup>st</sup> century schools as compared to a block or modified block schedule. Three schools are featured in this Change Plan. One traditionally scheduled school (District A), one A/B modified block school (District B) and one 4x4 block schedule school (District C). The results clearly demonstrate dissatisfaction by the teachers and students in the traditionally scheduled school because they feel overwhelmed, disconnected with one another, and unable to dive deeply into needed content and skills. However, teachers in the 4x4 block schedule expressed equal frustration because they feel the schedule is more limiting, not less. The only schedule of the three which seems to hold some promise is the A/B modified block schedule which blends a traditional and block approach. Whatever the final solution, District A needs to study what schedule will best allow their 21<sup>st</sup> century students to apply needed skills and demonstrate mastery over them.

## PREFACE

The leadership lessons learned from this Change Plan center on the multifaceted nature of system-wide change. Consideration must be given not only to varied stakeholders but to the context in which change is taking place. In addition, the culture and conditions in the school building and the competencies needed to successfully implement needed change necessarily impact how it is received. By examining large scale change through the lens of Wagner’s 2008 “Four C’s” framework, leaders can review the “as-is” and imagine the “to-be” in each of the fundamental school constructs. Context, culture, conditions, and competencies of an organization explain both the status quo illuminate needed shifts to improve practice.

Understanding the desired outcomes allows a vision to be communicated in “bite-sized” pieces and enables change agents to build a manageable change plan while anticipating potential road blocks. While having a vision is essential in any change plan, it is equally important to create a sense of urgency in others for the suggested change. In the case of this study of the strengths and weakness of a traditional versus a block schedule, the data collected from the students and staff demonstrate dissatisfaction for the currently traditional schedule. This data, along with student performance data, will help other leaders to understand the “as-is” created by the current schedule.

Once a sense of urgency is fostered, the input and participation of many stakeholders in the research and recommendation process is essential for effective change. Teachers, students, board members, parents, and leaders must all have a chance to give input to create buy-in. And, communication with stakeholders is vital throughout the process.

Finally, the most well-conceived plan will not survive the test of time if all affected stakeholders are not trained to understand the required shifts in practice associated with the change. In this study, not only do parents and students need to be well prepared for the change and understand any and all implications, teachers must have ongoing training in how to maximize student learning in the new schedule. Training must be convenient, applicable, and whenever possible, led by internal experts.

To create meaningful and lasting change, organizations must be viewed through the Four C's, the context, culture, conditions and competencies needed make a successful transition from the "as-is" to the "to-be".

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## SECTION ONE: INTRODUCTION

### Problem Statement

Rooted in pre-industrialized America, the structure of American schools developed as an outgrowth of the need to pass information from those who had it (the teacher) to those who didn't (the students) in an age when information was not readily accessible, and teachers were amongst the most highly educated people in the community (Rury, 2016, p.12). Prior to the information age, the most common structure to pass knowledge from teacher to student was in a teacher-centered classroom where students passively absorbed information in the "sit and get" method. Author Paulo Friere called this the "banking method" of education, where children are treated as one-way receptacles of information (Friere, 2000, p.72). At a time when farming and factory work were the primary forms of employment for men, and the competition with other nations was limited to the political and international trade arenas, instructors needed only to teach basic reading, writing, and arithmetic to ensure students' success in adult life. Students practiced skills at the bottom end of Benjamin Bloom's as yet undeveloped taxonomy through rote practice and regurgitation (Bloom, 1982). Teachers typically measured student success based on their compliance and performance on straightforward skill assessments. The traditional high school schedule consisting of short classes, offered in succession and isolated from other subjects, might have met the needs of the 19<sup>th</sup> American student (Wagner, 2002, p. 30). However, the needs of the 21<sup>st</sup> Century student are more complex and require changes to the delivery models used in schools over the last century. Thus, the purpose of this Change Plan is to investigate the effectiveness of our traditional daily schedule in meeting the needs of the 21<sup>st</sup> century classroom.

According to the Partnership for 21<sup>st</sup> Century Skills, “A new nationwide poll of registered voters reveals that Americans are deeply concerned that the United States is not preparing young people with the skills they need to compete in the global economy” (Partnership, 2015). Among those skills are critical thinking and problem solving, communication, technological savvy, collaboration and team building, and creativity and innovation (Critical, 2012). Such skill development requires time for practice with peers, interdisciplinary collaboration, reflection upon feedback and findings, and the opportunity to take risks in a safe environment that fosters curiosity. The traditional eight period, 50-minute class structure found in many American high schools does not best allow for that kind of learning, according to a recent study on the impact of block scheduling. The conclusions of a 2011 study, *The impact of block scheduling on student achievement, attendance, and discipline at the high school level*, shows that schools under a block schedule experienced increased test scores, and the student and teacher perceptions indicated fewer discipline problems, better student attendance, and more varied teaching techniques that valued depth over breadth (Williams, 2011). District A would benefit from a new structure that allows students longer blocks of time to dig deeply into authentic inquiry-based tasks which support the development of 21<sup>st</sup> century skills.

### Rationale

My recent research into the effectiveness of a remedial two-period math class raised questions about the efficacy of the traditional high school schedule (Landry, 2014). Interviewed teachers indicated that inserting longer classes for the purposes of remediation of skills within an otherwise traditional high school schedule was not

effective. Instead, teachers wondered about the impact on learning if all classes met for longer periods, and suggested consideration of a model that either extends the learning calendar or better uses the allotted time (Landry, 2014). Students also raised questions about the traditional daily schedule. Within my earlier study, 80% of student respondents to a survey about their experiences in the two-period math class indicated that while longer class periods helped them better learn math, without a full block schedule, their ability to take other elective courses was hampered by the traditional high school schedule (Landry, 2014).

In addition to the questions raised by my earlier research, our district, like many around the country, is in the midst of a paradigm shift brought on by technology that makes information instantly accessible and offers students new and very public ways to exercise their voice on matters big and small. Time is needed to maximize this technology, to meaningfully teach students how to succeed in the 21<sup>st</sup> century, and how to use their voice in thoughtful and impactful ways. In my current role as Director of Curriculum, the number one complaint from the teaching staff is the lack of time to teach the necessary skills and to collaborate with colleagues to do the necessary planning and reflection. Teachers and administrators alike understand that the combination of new and more challenging learning standards, more rigorous state tests like PARCC, increased access to technology, and increasingly competitive colleges and careers require new approaches to teaching and learning. However, no real consideration to changing the learning calendar has occurred. To maximize 21<sup>st</sup> skill development in students and shift the curriculum from one grounded in content to one grounded in skills, modified block schedules should be considered. Though by no means a new idea, schools around the

country that have made the shift to a block schedule are enjoying great success with the model, and the new emphasis on meaningful, performance-based learning and assessment increases the importance of implementing such a schedule. According to a 1996 Brown University study, the benefits of block scheduling, regardless of the specific type of model implemented, include improved teaching and learning, ability to focus attention, cohesive content, individualized pacing, more course offerings, stronger interpersonal relationships, increased teacher collaboration, increased student achievement, attitude and attention improvements, consistency in standardized test scores, fewer discipline problems, and a slower pace during the day (Block, 1996, p.1). Part of instating this change plan will involve evaluating block schedule models to consider the benefits and consequences of implementing such a schedule in our buildings.

As the Director for Curriculum and Instruction in the district, I am tasked with leading teachers and department chairs in the use of best instructional practice. As a district, our test scores the have stagnated for years (see Chart 1). While we want to raise test scores, we also believe strongly in preparing students for the ever changing and ever growing world into which they will graduate. As such, it is our responsibility to investigate improvements into delivery models and teaching schedules that will allow us to meet the goal of 21<sup>st</sup> Century preparation while maximizing student success on all measures of progress, be they standardized tests, authentic performance tasks, or indicators of social-emotional well-being like attendance and discipline rates.

If the data and research on block scheduling indicates a positive impact on teaching and learning, we further have a responsibility to our stakeholders, students, parents, community members, area businesses and colleges, to investigate and consider

any structural changes that might improve the student experience in our district. A decision such as this, however, should include input from all stakeholders. Members of the parent advisory committees and school boards should be included and transparent communication with teachers, students, and families of our district is essential for successful implementation of such a change.

### Goals

The intended goal of the change plan, to implement a block or modified block schedule, begins with an investigation into alternative calendars and schedules, including those in place at other area high schools. The outcome of said investigations may lead to recommended changes to our existing traditional schedule in favor of a block schedule. Making such a change will emphasize depth over breadth in our various courses, better enable interdisciplinary projects, offer teachers more time with fewer students, create more collaborative time for teachers and students alike, and foster student inquiry into the authentic tasks and 21<sup>st</sup> century skills which will better prepare them for adult life.

Central to the investigation of a block schedule is its potential impact on student achievement and building climate and culture. In conducting such investigations, our committee will wrangle with our own performance and culture and climate. As such, a secondary goal will be to identify areas of improvement in our own district, even if it is decided that a change to a block schedule is not desirable amongst our stakeholders.

### Demographics

District A is a two high school district of just over 3000 students. Located in the far northern suburbs of major metropolitan city, the student body is predominantly white



and middle class, with only 11.7% qualifying as low income. However, the district has increasing diversity within the student body.

**Figure 1**  
2014 Demographic information for District A

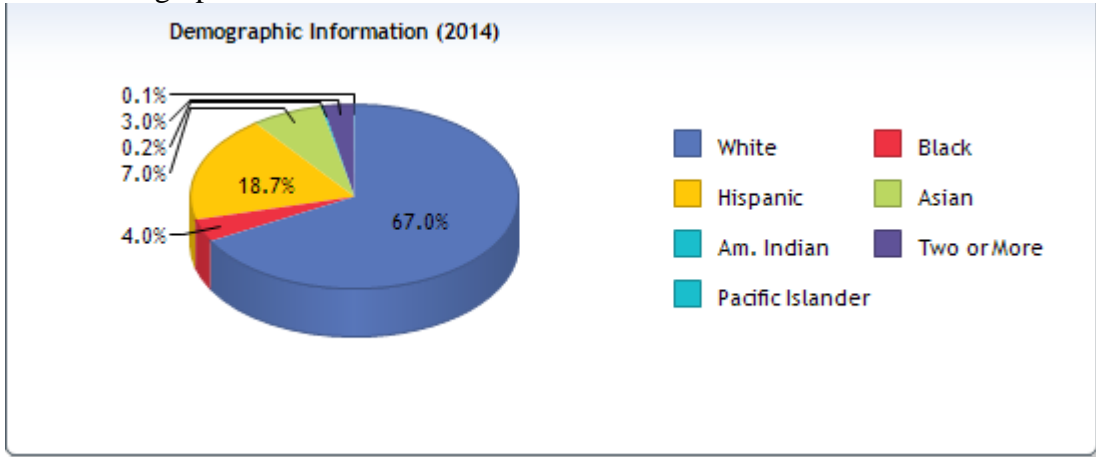


Figure 1 shows that in 2014, District A students were 67% white, 18.7 % Hispanic, 7% Asian, 4% Black, 3% multi-racial, and .1% American Indian. Comparatively, in 2001, whites comprised 87% of the student body while Hispanic students represented 6.9%, and black students were about 2% of the population (Illinois, 2015).

In 2014, the district had 69% of students meeting or exceeding (M/E) standards based upon their composite score on the Prairie State Achievement Examination (PSAE). In reading, 69% of students met or exceeded standards and the same percentage held true for math. Science had a slightly lower M/E percentage, coming in at 64%. Figure 2 below summarizes District A student performance data from 2009-2014 (Illinois, 2015).

**Figure 2**  
2009-2014 PSAE Performance

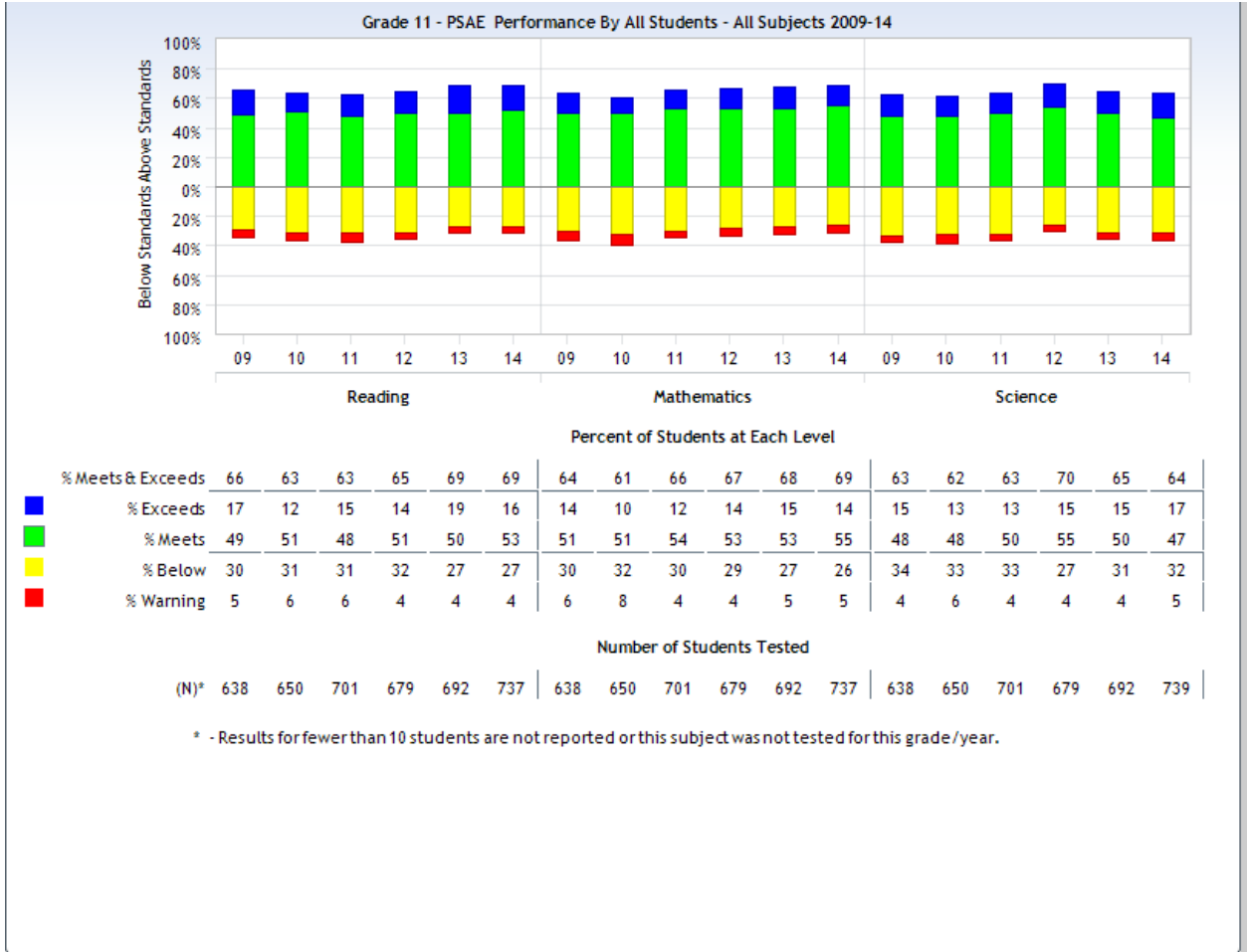
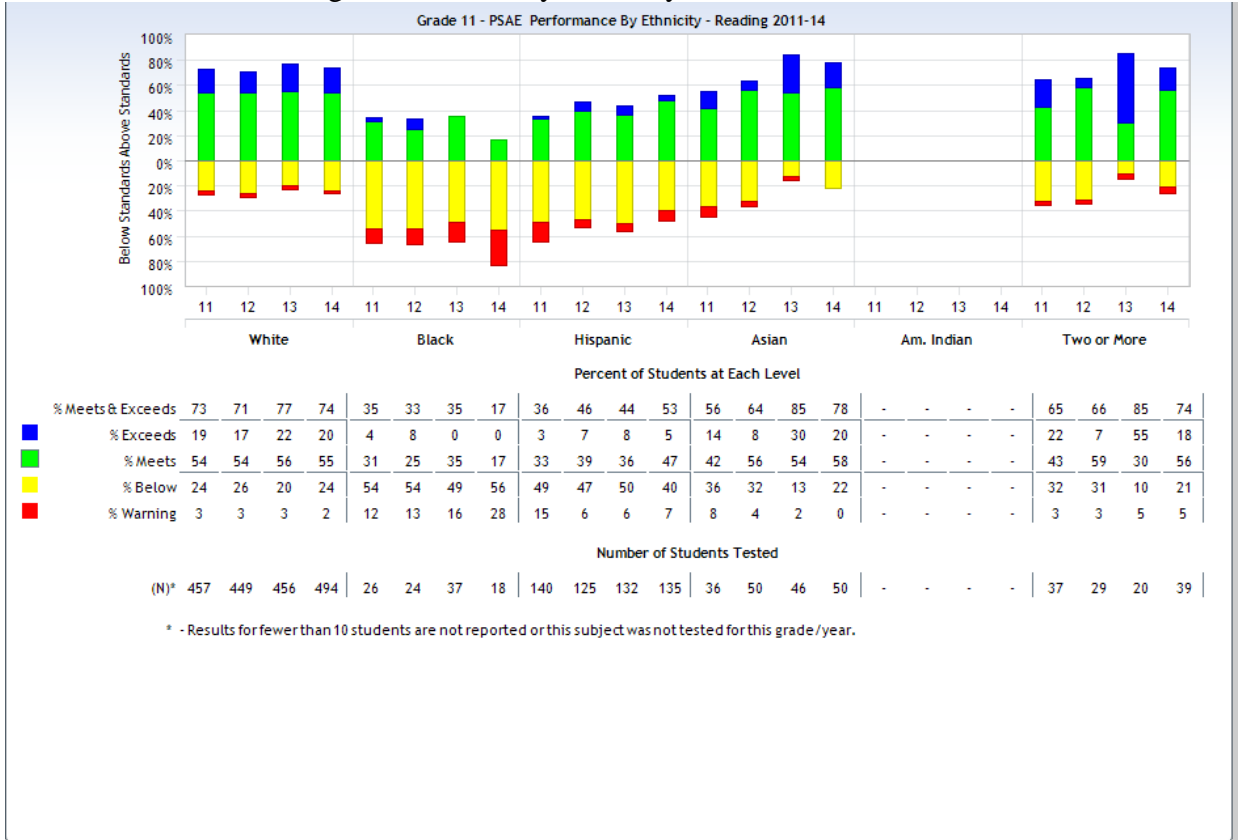


Figure 2 clearly demonstrates the relatively flat scores in reading, math, and science in District A. The M/E percentage in District A is not equal amongst subgroups, however. Figure 3 below summarizes the 2014 PSAE performance levels by ethnicity from 2009-2014 (Illinois, 2015).

**Figure 3**  
**2011-2014 PSAE Reading Performance by Ethnicity**



In 2014, 74 % of white students met or exceeded reading standards, while only 17% of black students and 53% of Hispanic students did the same. Asian students, at 78% meeting and exceeding, outperformed all other subgroups. Similar trends hold true in science and math scores. However, the percent of Hispanic students meeting and exceeding standards has grown significantly from 2011, when only 36% of students met or exceeded standards in reading. The increasing scores are likely reflective of significant staff training and student interventions implemented over the last four years to support the growing numbers of Limited English Proficient students.

Overall, District A is facing what many suburban high schools across the country are also facing: increasingly diverse student bodies, tougher standards and accountability

measures, and entirely new and more complex skill and content instruction necessary for success in the 21<sup>st</sup> century which require a fundamental shift in teaching and learning.

We need to close the gap between the performance levels of subgroups while simultaneously raising the performance of all students. One important component in fostering such changes is to restructure how and when we ask students to engage in learning. A block schedule is one small step in making that possible.

## SECTION TWO: ASSESSING THE FOUR C'S

Before imparting on a change process as significant as altering our daily class structure from a traditional to a block format, a systemic review of the four C's, context, culture, competencies, and conditions of District A must occur. Tony Wagner, in *Change Leadership: A Practical Guide to Transforming Our Schools* (2006) outlined the importance of this “analytic framework for understanding the interrelated parts or elements of the change process in school and districts” (p. 98). Without understanding how the individual components of an organization impact the larger system, effective change is stymied or later derailed by unintended causes and effects and an organization won't move from “AS-IS” to “TO-BE”. My study is rooted in this framework. To that end, what follows is a summary of each of the four C's in District A.

### Context

Tony Wagner defines context as, “the larger organizational systems within which we work, and their demands and expectations, formal and informal” (Wagner, 2006, p.104). For the purposes of this study, context is described from the high school district perspective, though District A consists of two separate 4-year high schools. Understanding the context within which District A exists is essential to understanding the factors which influence change, and to unearth those elements which create and sustain our system.

District A is in the middle of a paradigm shift from an instructional methodology grounded in traditional, content- driven structures to one which harnesses 21<sup>st</sup> Century technology to maximize student learning in authentic, real-world ways. This new approach focuses more on skill goals than content goals. Such a shift requires changes in

how instruction is delivered and how feedback is offered. Students participating in collaborative, application-based projects requires time to dig deeply, to research meaningfully, to get and give feedback from peers and teachers, to share findings, and to develop products. Teachers must not only structure projects which allow for such student investigation, but must have time to give meaningful feedback to students and to articulate and collaborate with colleagues. As a result, our district is moving to a once-a-week late start model next year that should enable increased collaboration time for teachers to incorporate best instructional practices and make tweaks to instruction based on student performance. This change, in addition to new state mandates which require the inclusion of student growth data from pre-and post-tests in teacher evaluation as of 2016-2017, alignment to Common Core and Next Generation Science Standards (NGSS), and new state assessments like the Partnership for Assessment of Readiness in College and Career (PARCC) test have raised teacher anxiety in general.

In addition to new mandates, assessments, and learning goals, our district superintendent is retiring soon, and as such, is preparing for a leadership transition which may make wide-spread change challenging. Though a change in schedules might alleviate stress and maximize meaningful student learning, this major shift is one that may be difficult for an outgoing superintendent.

### Culture

Culture is defined as, “the shared values, belief, assumptions, expectations, and behaviors related to students and learning, teacher and teaching, instructional leadership, and the quality of relationships within and beyond the school” (Wagner, 2006, p. 102). The culture of District A is complex one. While both high schools in the district enjoy

significant community support and function under the same mission statement, the culture within in each building is quite different. The older building is steeped in tradition, set in its ways, masterful at managing logistical systems, and enjoys a slightly higher meets and exceeds percentage on state assessments than the other building. Its parents would have it no other way. The building is a staple in the community, one that many of the parents attended themselves, and the expectation is that their own children will have experiences similar to their own. As a result, the staff and administration are averse to any adaptive changes, opting instead to maintain the status quo, or at best streamline processes to improve the status quo.

On the other hand, the newer building is a risk-taking one. If the older building is an elder statesman, the newer building is a rebellious teenager. Willing and able to think out of the box, ideas are generated freely and learning experiments occur regularly. Free from traditions of old, the school's teachers and administrators grow frustrated at the unwillingness of their counterparts to change. However, the lack of systems and structures in place sometimes results in inefficiencies or an inability to measure the success of good ideas. This has made collaboration across the district challenging, with each school somewhat resenting the other.

Despite different approaches to teaching and learning, the schools have clear similarities. First, there have been some changes in the administrative teams in each building and in the district office. This has enabled improved relationships between district and the buildings by repairing damage done by a former principal and creating a healthier environment in district leadership meetings to have conversations about our "As Is" and "To Be". Furthermore, the teaching staff at both buildings is clamoring for more

time to collaborate and to assess student work. In addition, both staffs have asked for more training on the use of technology in the classroom and for time to better leverage our Technology Instructional Coaches in the buildings.

Other similarities in school culture include the overwhelmed feelings of staff at the many initiatives and, as a result, a growing union presence unduly influenced by a few particularly cantankerous support staff members and an increasing unwillingness for staff to participate in anything outside of the contracted day unless paid for it, and even then, it is sometimes difficult to entice participants.

#### Conditions

Conditions are defined as, “the external architecture surrounding student learning, the tangible arrangements of time, space, and resources” (Wagner, 2006, p. 101). The conditions in District A are such that students typically attend up to eight, 50 minute classes per day. There are a couple of courses which fall outside of the 50-minute structure. A remedial Algebra course is 100 minutes long, and some AP science courses are one and a half periods in length to allow for lab set up and take down. Most students have six to seven classes plus a lunch, though some students forgo lunch to take an eighth class. Teachers instruct five classes per day, with a district class average of about 23 students per section, though many classes are as high as 30 students. Teachers also have a duty, a lunch, and a prep period each day. This schedule results in teachers feeling like there is not enough time inside or outside the classroom to complete necessary tasks and to meet with students and teaching team members.

Within the classroom, teachers are delivering instruction with content aligned to Common Core or other state standards, and teachers are making use of the many



Chromebooks available in both buildings. The number of Chromebook carts available to teachers will increase in each building next year from about 7 to about 11, and those are in addition to stationary computer labs and some classrooms outfitted with iPads. In addition, students are able to check out Chromebook devices from the library for the day. The district just completed a 1:1 Chromebook pilot this year and is considering moving to a 1:1 in the next two years.

Despite an award-winning Advanced Placement program, an impressive 94% of students going on to a 2 or 4-year college after high school, a high percentage of students qualifying for National Honors Society, and a gradual shift in instructional strategies to student-driven learning, our performance on national achievement tests has remained stagnant for years, hovering at or just below 70% meeting and exceeding standards.

#### Competencies

Competencies are, “the repertoire of skills and knowledge that influences student learning” (Wagner, 2006, p. 99). The competencies in District A are varied. We have an impressive set of highly qualified teachers, 99% of whom achieved a proficient or better rating on their evaluations. This group of teachers uses Understanding by Design to create units of instruction that begin with the end in mind and incorporate authentic assessments to increase transfer of learning outside of the classroom walls (Wiggins, 2001). To develop these lessons, our teachers work in collaborative teams and will be better able to do that next year with weekly late start dates for students. Teachers use Mastery Manager, our assessment data warehouse, to track performance on assessments tied to standards, and are becoming increasingly adept at incorporating technology into lessons and lesson design.

Given the increased technology use in the District, we recently adopted a new learning management software called Schoology ([www.schoology.com](http://www.schoology.com)). This system, in its basest form, is a resource library for teachers, students, and parents. But when used well, houses all classroom materials, electronic discussions, work submission and feedback, calendars, assessments, electronic links, etc., in a “walled” platform protected from unwanted advertisements or external parties. This resource also allows parents to see all posted classroom materials and all of their own student’s work. It allows for parents to join online groups created by teachers so communication is seamless. Parents, teachers, and students alike have enjoyed the many benefits of this system.

In addition to Schoology, our teachers use Google and Google Apps in a great many ways to foster student collaboration and access to resources, and use software like Camtasia (<https://www.techsmith.com/camtasia.html>) to “flip” the classroom. We have many teacher experts who present at national conferences on technology in the classroom.

Our approach to grading and assessment has shifted as well, so much so that many of our teachers present on standards-based-grading and how to implement it in a high school. Though not a district wide mandate, many teachers have shifted to this model to better measure student mastery of concepts so grades are reflective of understanding and not of compliance in the form of homework completion. But, this approach to grading takes more time to conference with students, to offer opportunities for application-based learning and assessments, and to give feedback on performance assessments and assessment retakes. The lack of time to do this in a 50-minute class

period has limited the ability of all staff to more comprehensively switch to a standards-based grading methodology.

## SECTION THREE: METHODOLOGY

### Research Design Overview

To assess the “As Is” perceptions in our district regarding the current daily schedule and how it impacts teaching and learning I used various forms of quantitative data comprised of surveys and data comparisons. Data was mined from the Illinois Interactive Report Card (IIRC) in an effort to compare academic performance data from high school districts in our area that use a block or modified block schedule. Data regarding state assessment performance and demographic information was used to determine if schools using a block schedule outperformed our own, or at least showed more growth than has ours over the last decade.

Data was also gathered through surveys. In an effort to understand how well the current structure is meeting students’ academic and social-emotional needs, I surveyed both teachers and students. I created surveys to gauge teachers’ and students’ perceptions about the amount and use of time available during the school day. The answers to these questions informed conclusions about how successfully our current structure is meeting our needs and “create[d] an understanding and sense of urgency among teachers and the larger community around the necessity...” of considering a schedule change (Wagner, 2006, p.139). I also surveyed the staff of two other high schools using block scheduling to get the input of those familiar with the model.

### Participants

The participants from whom data was collected included the teachers and students of District A and the teachers of other districts already employing a block or modified

block schedule. There were a total of about 200 senior students in District A aged 18 and over and 300 teachers.

### *Teachers*

All teachers in District A were emailed a link to a survey created in Survey Monkey and invited to participate. A total of 85 teachers took the survey from District A. Participants also included teachers in other area districts already implementing a block schedule. The collected data was used to understand the perceptions of those teachers familiar with the block model regarding the strengths and limitations of the block schedule. A combined 75 teachers from the other two high schools took the survey.

### *Students*

Only students aged 18 and over were invited to participate in the Survey Monkey student survey. This approach was chosen for two reasons. First, those students 18 and over were seniors who had 4 years under the current schedule, and thus could offer the most perspective on what works and what does not under a traditional schedule. Second, targeting a larger student population required the collection of parent consent forms, which proved difficult to obtain and limited my pool of respondents to only those students responsible enough to get the forms signed and returned, instead of soliciting information from a more varied student population. Students were given the opportunity to offer written comments in the survey itself. Data gathered from this survey indicated the degree to which students were satisfied with the current structure of their day.

### Data Gathering Techniques

In an effort to gather multiple sources of quantitative data, several different sources of information were analyzed. Quantitative data included surveys and data

collected from the Illinois Interactive Report Card. The intention was to gather sufficient and varied evidence regarding the effectiveness of our current model in achieving our desired student outcomes.

### *Performance Data*

Using the Illinois Interactive Report Card (IIRC) housed through Northern Illinois University, I mined student performance data for area schools already implementing a block schedule. Both schools were within 25 miles of our own. Because our standardized test scores were relatively stagnant for the last decade, a desired outcome of switching to a block schedule is an increase in performance measures. The state assessment data used was the former Prairie State Achievement Exam (PSAE) and the percent meeting and exceeding standards on that exam. Though this assessment is no longer the required state assessment, as it has been replaced by the PARCC exam, using PSAE data allowed a consistent measure of student performance between districts.

### *Teacher Survey*

Teachers from within the district were surveyed using an electronic survey created through Survey Monkey (see Appendix A for survey). The purpose of this survey was to measure the ability of teachers to instruct in the desired way given the current daily schedule. Teachers were first asked about the types of instructional techniques he/she uses to determine if teaching technique effects perceptions of the daily schedule. I further attempted to discern if a different method of teaching was preferred but not carried out because of time constraints. Collaborative time with students and colleagues, number of student contacts in a day, assessment and grading methods were ascertained through this survey to understand our “AS-IS” more completely and the

degree to which longer class period may help or hamper our desire to move to inquiry or project-based learning.

In addition to surveying teachers within District A, a survey was made available to teachers in two other high school districts which already use a block or modified block schedule. Teacher perceptions of a block schedule by those already using it allowed for a better understanding of how District A's "TO-BE" might be realized. Approximately 75 teachers from outside of District A participated.

### *Student Survey*

Students of District A who are 18 years and older were surveyed to better understand the daily student experience in an eight-period day structure. Questions included: Do you feel overwhelmed by the number of classes or amount of nightly homework? Do you prefer longer classes that meet less often? How do your teachers currently teach and assess, and do you have enough time to work with teachers and peers? Students were emailed a link to the survey once they returned the necessary consent forms (see Appendix B for survey). The brief survey took no more than ten minutes to complete.

### Data Analysis Techniques

All collected data was quantitative. The results of student and teacher surveys were analyzed through the analytics pages of Survey Monkey to identify response trends. Within administered surveys, Likert scale responses were used as variables in data analysis to find patterns in responses and descriptive statistics generated from any written comments made.

We believe that gathering the perceptions of student and adult stakeholders led to a deeper understanding of the implications of our current daily schedule and what discrepancies exist between our “AS-IS” and our “TO-BE”.



## SECTION FOUR: LITERATURE REVIEW

Much research has been done on the efficacy of block scheduling in high schools. Since the model gained popularity in the late 1990's many schools across the country, have instituted the model in some form. Met with mixed reviews, the degree to which a block schedule improves student academic and social-emotional growth seems dependent on how class time is used, the instructional strategies implemented in a block classroom, and the amount of professional development and common vision in the school organization. What follows is a review of relevant literature on the instructional shifts necessary in the 21<sup>st</sup> century classroom that might require a rethinking of the traditional schedule, as well as a review of research done on the impact of block scheduling on students and teachers.

### 21<sup>st</sup> Century Learning

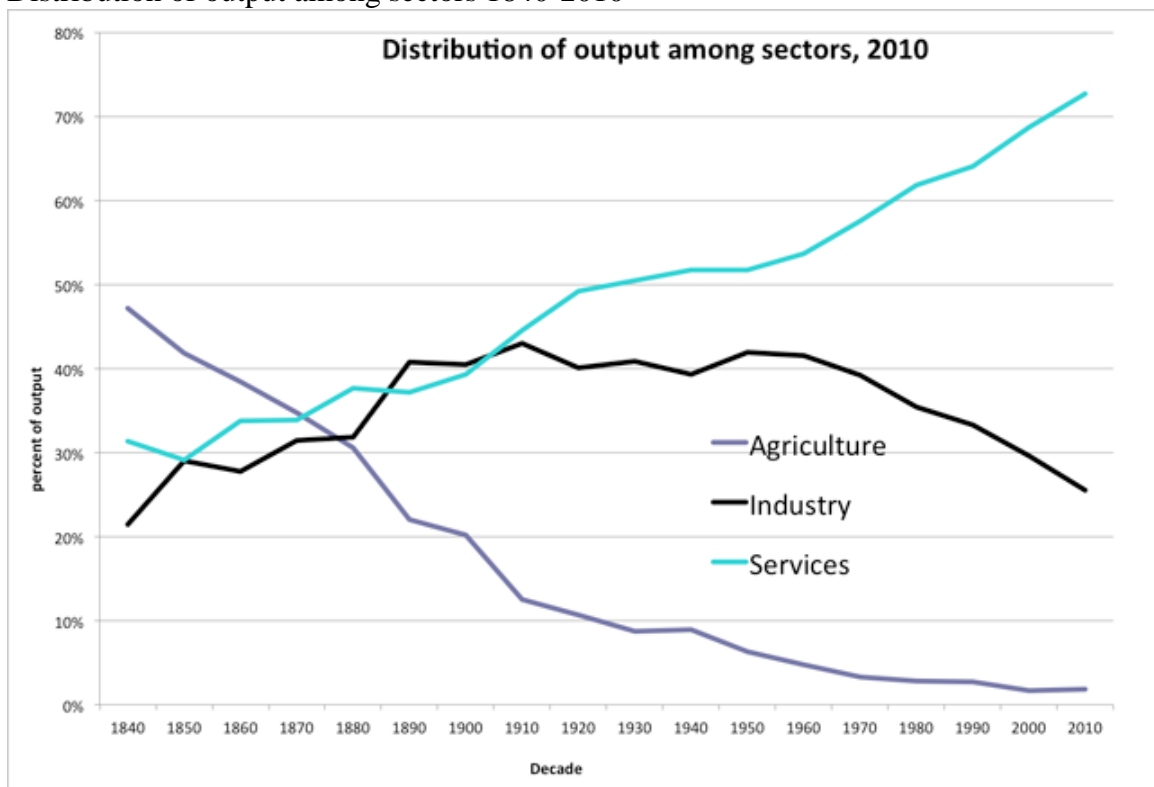
The needs of 21<sup>st</sup> Century learners require an overhaul in the way classroom instruction is organized and delivered. The current structure of high school was developed in the 1890's when Harvard College convened the Carnegie Commission to determine how to ensure high school students across the country were prepared for higher education. By 1906, The Carnegie Commission implemented the "Carnegie credit system" which awarded students course credit based on seat time (Wagner, 2002, p. 30). The more courses in which students had "seat time" the more Carnegie Units they could potentially earn. "Over time, the Carnegie Unit became the building block of modern American education, serving as the foundation for everything from daily school schedules to graduation requirements" (Silva, White & Toch, p. 1). In the 1890's, only about 5% of men went on to high school, since it was only seen as necessary for those

going on to higher education. Yet, this 19<sup>th</sup> Century concept is still the basic organizing structure of our modern day high school which must meet the needs of a much more diverse group of students requiring very different skill sets (DiMartino and Clarke, 2008, p. 7). Silva, White & Toch (2015) recently conducted a study of the Carnegie method's efficacy in a modern education system and found, "places where the Carnegie Unit has been a barrier to [making education more transparent and flexible]" (p. 30). This desire to make education more transparent and flexible stems from the need to adjust education to meet the needs of 21<sup>st</sup> century learners. The study of the Carnegie method (2015) summarizes that reformers have argued reliance on the Carnegie Unit as a measure of student progress toward diplomas and degrees has in fact slowed progress toward those goals [of transparency and flexibility]. By stressing the amount of time students spend in the classroom rather than the mastery of subjects, the Carnegie Unit discourages educators from examining more closely students' strengths and weaknesses (p. 3), This examination of student strengths and weakness is a component essential to creating a system that makes student learning the constant, instead of the learning calendar. Even if the Carnegie system of measuring student progress remains, the daily schedule which allows students to earn those units must be revisited to prepare the 21<sup>st</sup> century student.

It is a fundamental mission of school to prepare students to be successful and be able to make living after high school and college. The skills once required to do that were simple and mundane; learn basic reading, writing, and arithmetic. If students did their homework, and studied for tests long enough to successfully regurgitate basic facts, they would succeed in school and life. However, modern students have a greater need to learn higher-order thinking skills than those of earlier centuries in order to earn a living.

Tony Wagner (2006) reminds us that, “our economy has transitioned to one in which most people earned their living with skilled hands to one in which all employees need to be intellectually skilled if they hope to make more than minimum wage” (p. 3). Figure 4 below shows this economic transition in America from an agriculturally dominated economy to one more heavily dependent upon the service sector. This shift requires our students learn new and different skills (Johnston, 2012).

**Figure 4**  
Distribution of output among sectors 1840-2010



Wagner asserts that this shift has left both colleges and businesses demanding the ability to reason, analyze, hypothesize, find, assess, apply and transfer knowledge, and communicate clearly and concisely (p. 4). The 21<sup>st</sup> century learner needs not only to keep our economic engine running, but also must become a contributing member in our increasingly complex democracy. No longer are six Carnegie Units, earned by sitting

through 6 or more 50 minute disconnected classes each day, enough to prepare our students.

Students find themselves increasingly uninterested and unmotivated by a school structure that doesn't meet their learning needs. "When interviewed...the majority of high school students acknowledge that they are often bored in class...and that to be motivated they need more opportunities for hands-on learning and closer relationships with their teachers" (Wagner 2006, p. 7). Part of the reason for student boredom is that modern, technology savvy students, "now have the experience, outside of school, of diving into worlds that are richer and more relevant than anything they get in school" (Toppo, 2015, p. 1). According to Partnership for 21<sup>st</sup> Century Skills (2015), unless the gap is bridged between how students learn and how they live, today's education system will face irrelevance (p. 1). The way people work and live has been transformed by demographic, economic, political, technological, and informational forces. Schools must adapt to these changing conditions in order to thrive. Students must be equipped to live in a multifaceted, multitasking, technology-driven world. The current construct of a traditional high school schedule, consisting of 50 minute courses, does not allow for the deep, project-based, student-driven learning that is required to prepare the modern student for his or her future.

Eleanor Drago-Severson (2009) asserts that, "the new demands of the 21<sup>st</sup> century are adaptive [educational] challenges and will require new approaches" (p.7). Adaptive challenges are those for which no clear solution exists and are addressed, "in the act of working on it" (p. 6). Adaptive changes, like those to the school day schedule, are necessary as, "a response to the call for increased accountability, greater diversity in the

student population, and standards-based reform” that require schools to revamp the way schooling is delivered (p. 6).

### Effectiveness of a Block Schedule

The findings on the effectiveness of block scheduling are mixed. What follows are the results of studies ranging from 1997 to 2015 on block scheduling in the areas of student achievement, student and teacher perceptions, classroom practice, and professional development.

For the purposes of this study, findings of the impact of block scheduling are generalized across all forms and types of such scheduling unless otherwise noted. When specific forms of block scheduling were studied, they will be noted and defined.

#### *Impact on classroom instruction*

There is significant potential for block scheduling to address the needs of the 21<sup>st</sup> century learner who requires more time to master skills and content and more time with the teacher to facilitate that process. Corley (2003) gave a survey to students four years into a block schedule system. His survey revealed that students agreed or strongly agreed that block scheduling provided more total learning time to learn concepts better, more opportunities to work with other students, more individual help from teachers, and the ability to finish homework in class, better grades, and a liking for the schedule (p. 6).

Ipswich (2005), indicated that “students under a block schedule mentioned that teachers were trying different modes of instruction in class where traditional students saw none or very little change in teaching practice” (p. 5). Specifically, block schedule teachers more often incorporated projects, cooperative learning and individualized instruction than teachers in a traditional schedule. Ipswich further determined that

positive changes in relationships were attributed to an increase in daily contact as well as seeing fewer students each day (p. 6). In a study of two schools both on a block format, “teachers at both schools commented on improved discipline and academic performance.” However, one school had “positive, visionary leadership, professional activities in a departmental structure that encouraged collegiality, and a commitment to uninterrupted instructional time” which led to high teacher satisfaction (McCoy, M.S. & Taylor, D.L., 2000, p.16).

A 1998 study of the Copernican Plan<sup>1</sup> outlined the major effects of the block schedule to be “1. More manageable workloads for both faculty and students because of fewer preparations. 2. More opportunities for connections between faculty and students because of [more contact time]. 3. Larger blocks of time for achieving mastery of content in both depth and breadth and for drawing interdisciplinary connections” (Soares, p. 218).

### *Professional Development*

What seems to be consistent across studies is that switching to a block schedule requires significant staff training and preparation to be successful. If teachers do not change how they instruct, but rather only give longer lectures in longer blocks of time, students and teachers alike will grow fatigued and uninterested. In nearly every study, researchers cited a lack of professional development in student-centered teaching practices as a reason for limited or negative results of block scheduling (Huelskamp, D., 2015; Veal W. & Flinders, D., 2001; McCoy, M.S., & Taylor, D.L. 2000; Soares, L.M., 1998; Wronkovich, M., 1998; Schlutz, R.A., 2000).

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<sup>1</sup> The Copernican Plan is the same as a 4x4 block schedule wherein students meet for two 90-minute classes and one or two electives each day. The year is divided into trimesters wherein courses end 1/3 of the way through and new ones begin.

As described above, Soares' 1998 study of the Copernican Plan outlines the promise of block scheduling, but also acknowledges the importance of professional development in making it successful. "If we are to go beyond the university's traditional hold on the theories and practices of teacher training, then we must search for solutions in actual practices of teachers" (p. 217). If teachers aren't trained properly to redefine their teaching to focus on depth over breadth, students indicate that teachers seem rushed to get through the material covered and students have a hard time keeping up (Ipswich, 2015, p. 5).

As with any new skill, development and training is crucial. Teachers shifting from a traditional to a block schedule requires teacher training on how best to use that time. When combined with the fact that teachers are being asked to teach 21<sup>st</sup> century skills they never learned themselves, with methods that go beyond lecture and student memorization, the notion of switching to a longer class period is a daunting one. Many teachers, particularly more experienced ones, continue to cling onto old, traditional methods of instruction. Though effective methods of professional development are not the focus of this research, until the teaching paradigm changes to reflect a rethinking of effective pedagogy, the impact of a block scheduling on student achievement will continue to be uneven and uncertain.

### *Student Achievement*

A number studies on the efficacy of block scheduling reveal mixed reviews of its success as a method by which to improve student performance. A study of eight Virginia schools showed that grades overall seemed to improve under a block schedule. Students were found to be more responsible for their own learning and the verbal SAT scores of

students in such a schedule improved (Pisapia, J. & Westfall, A., 1997, p. 27). Another study of a 4 X 4 block schedule<sup>2</sup> had “results indicate that students had greater gains in reading and math than did students in both traditional scheduling and A/B block”<sup>3</sup> (Lewis C., Winokur M., & Cobb R., 2005, p.1.).

Despite the studies done which showed positive academic gains for students under a block schedule, more studies demonstrate that student academic performance actually suffers under a block schedule as compared to those under a traditional schedule, especially in math. A longitudinal study of block scheduling (Wright, 2010) found that students under a traditional schedule performed better at a statistically significant rate on standardized math and reading tests than those students on a 4x4 block schedule (p. 19). Similarly, Byers’ study published in 2011 indicating that, “block scheduling had a negative effect upon the scores” on the Georgia High School Graduation Test (p. 3). A 2010 study of college readiness in math also found that “students enrolled in 90-minute semester blocked classes scored on average two thirds of an academic year of ability in math lower than students enrolled in 50-minute year-long classes” (p. 13). Diane Huelskamp (2014) conducted a review of several studies on block scheduling. “The general consensus of these four studies in the science and math realm, at least, is that there is little evidence to conclude that block scheduling has any positive long-term effect” (p. 124). Trenta and Newman (2002) also found that there was no relationship between years in block scheduling and ACT scores (p. 61).

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<sup>2</sup> A 4x4 block schedule is the same as a Copernican Plan described in footnote number one.

<sup>3</sup> An A/B block is one in which students have two 90-minute courses followed by two 50-minute courses each day. Of the eight classes a student might have, the student meets with four of them every other day, with the fifth day allowing all classes to meet for a shorter period of time.



The mixed findings of the effectiveness of block scheduling on student achievement raise questions about whether switching to a block schedule would be advantageous. However, there is very little research that clearly links new classroom strategy and instructional methods with student performance under a block model. Much of the existing research was conducted prior to the formal adoption of the Common Core in 2010 and to the real standards-based movement which occurred in the last couple of years. The combination of these two phenomenon, coupled with the increased need for a 21<sup>st</sup> century skills-based curriculum and the nation-wide shift toward 1:1 computer models, raise new questions about pedagogy, daily school structure, and the impact block scheduling would have on student achievement under these new conditions. As such, this complex issue is in need of further study and consideration.

## SECTION FIVE: DATA ANALYSIS AND INTERPRETATION

### Introduction

This study was conducted with the primary research question, “Would a block schedule be a more effective structure for teaching and learning in the 21<sup>st</sup> Century high school than is a traditional 8-period schedule?” Research was conducted through quantitative methods which included a comparison of student and school achievement data on standardized assessments and other measures of school performance, between District A, which uses a traditional schedule, and that of two regionally similar school districts which operate under a block schedule. This data was mined from the Illinois Interactive School Report Card (IIRC), available online at <http://iirc.niu.edu/Classic/Default.aspx>. In addition to the IIRC Data, student and teacher survey from District A as well as survey data from teachers already functioning under a block schedule will be analyzed.

First I will present the IIRC data to reveal what differences in school and student performance, if any, exist between schools regionally close to one another but which operate under different schedules. After district performance data is analyzed, the survey data from teachers and students of District A will be examined followed by survey data from teachers working in block schedule schools. The survey data will reveal whether the perceived shortcomings of a traditional schedule are improved upon under a block schedule.

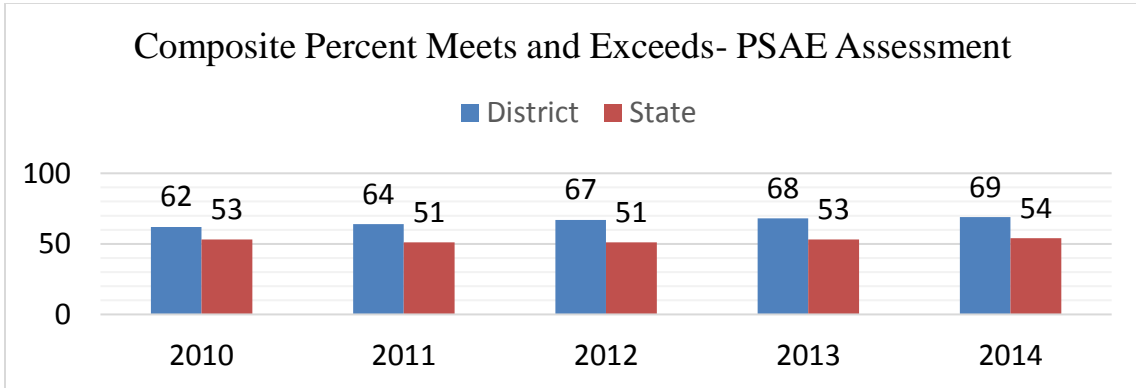
## School Performance and Demographic Data

The figures below contain information collected from the Illinois Interactive Report Card and demonstrate student performance at the non-block high school (District A) as compared to the performance of two block high schools (Districts B and C) regionally close to District A. Districts B and C have had a block schedule for no less than 5 years. Examination of performance data informed the investigation into whether schools under a block schedule perform better than those in a traditional schedule on standardized measures of performance.

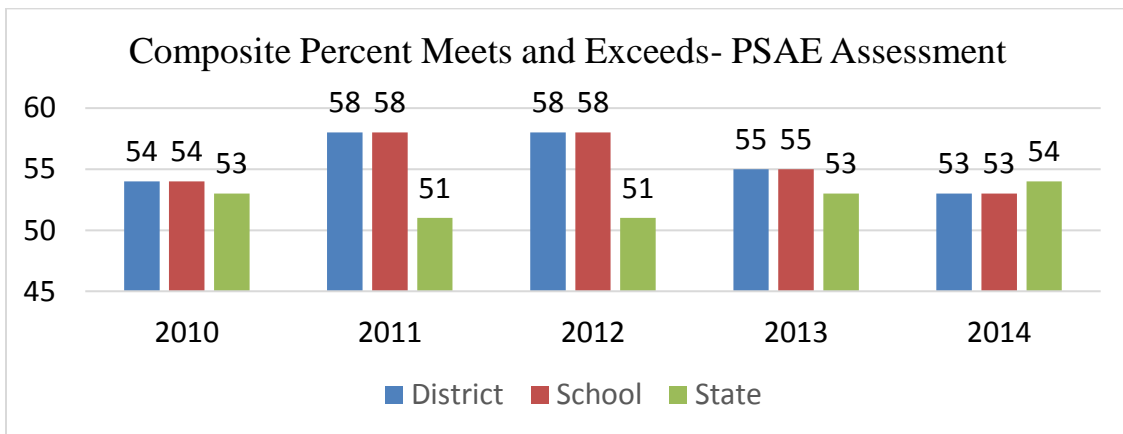
**Figure 5**

Overall School Performance on Standardized Tests Over Time

District A: Traditional Schedule



District B: Block Schedule



District C: Block Schedule

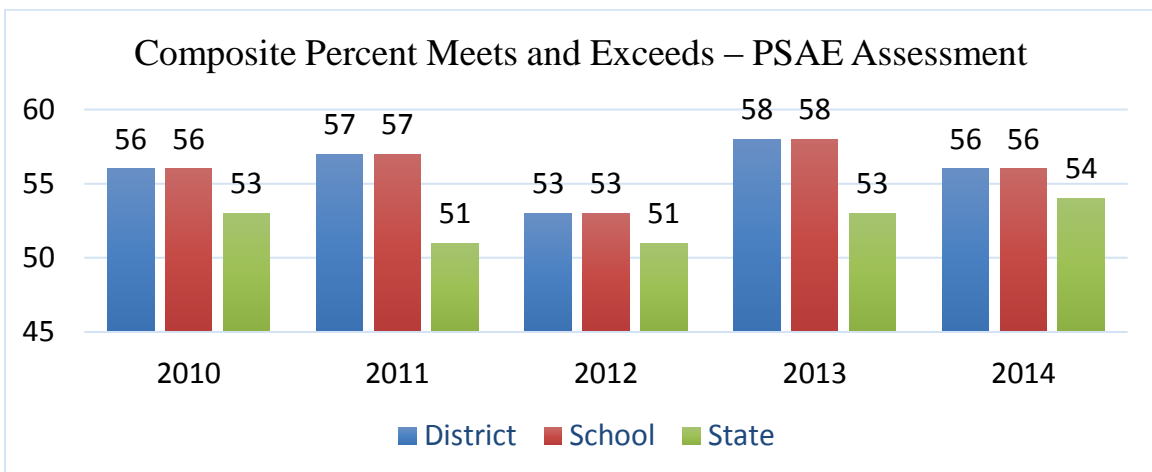


Figure 5 shows the percent of students who met or exceeded standards on a state-wide standardized exam called the Prairie State Achievement Exam or PSAE. This exam consists of two components, the ACT test and a basic skills test called the Work Keys test. The Work Keys assesses basic skills in reading, math, and science. The graphs reveal some important distinctions between the traditional and block districts. The high schools represented in this study that function under a block schedule are both part of unit districts, where the elementary, middle, and high school are part of one school district, with one superintendent and one school board. District A, the traditionally scheduled high school, is part of a two- high school district. The middle and elementary districts which send students to District A are separate and distinct from the high school district. This variable is one that could affect student performance on these and other assessments in ways not measured in this study. Because of this difference in structure, District A has only district performance data listed in Figure 5, while Districts B and C have both school and district data listed. For consistency, only the district performance data will be considered.

Because both District B and C have functioned under a block schedule for at least 5 years, this analysis will focus on score improvement, as opposed to attainment, since 2010. Figure 5 reveals that neither of the two block schedule high schools demonstrated an upward trend in scores since 2010. District B increased by 4% the number of students meeting and exceeding standards in 2011, but dropped by 3% and 5%, respectively over the next two years. District C remained fairly stagnant from 2010-2014, beginning and ending at 56% of students meeting and exceeding standards. District A, on the other hand, demonstrated a slightly upward trend from 2010-2014, beginning at 62% of

students meeting and exceeding and ending at 69% in 2014. In this direct comparison, District A, which functions under a traditional schedule, experienced the most improvement in scores over time as compared to two other area high schools functioning under a block schedule.

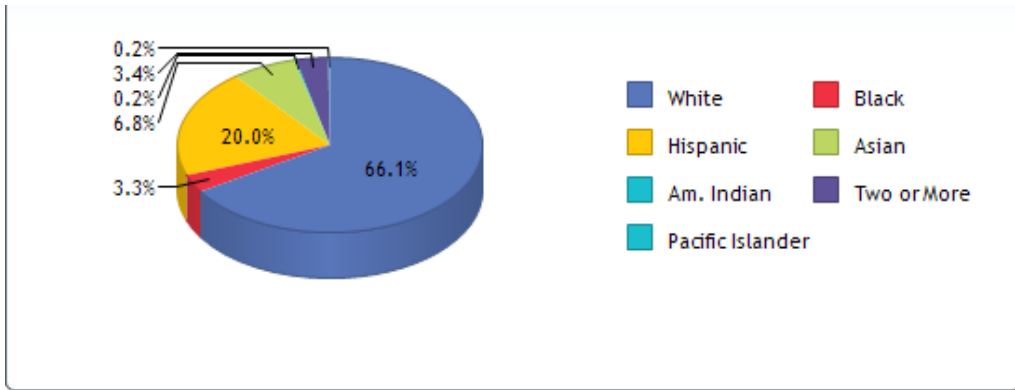
### *Demographic Comparisons*

Figure 6 below shows the demographic distributions in each of the three high schools included in this data analysis. The data reveals differences in the student populations of each school. District A, the traditionally scheduled school, is the most homogenous, with 66% of population being white. The largest subgroup of District A is Hispanic at 20% of the population. District B is also majority white but at 53%, to a much lesser degree than District A. Their largest subgroup is also Hispanic but at a larger 39% of the population. District C is the most diverse with 47.5% of the student population being white and 42.5% Hispanic. Consideration must be given to the effect of a more diverse student population on school performance on standardized assessments. Cultural bias in such assessments may be a factor in student success on norm referenced exams (Reynolds, Livingston, & Willson, 2010, p. 395). Interestingly, none of the three schools reports a large number of Limited English Proficiency number of students as is demonstrated in Figure 7. This limits, but does not eliminate the concern of the impact of English Learners on overall school performance.

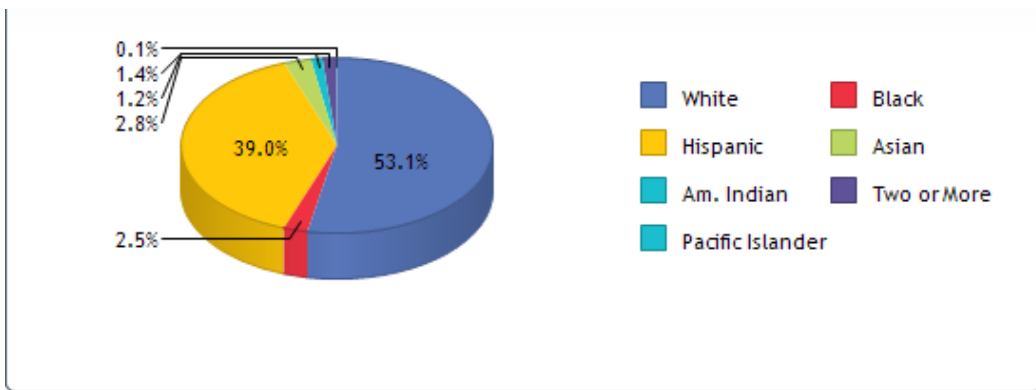
**Figure 6**

Demographic information of block and traditionally scheduled schools in this study.

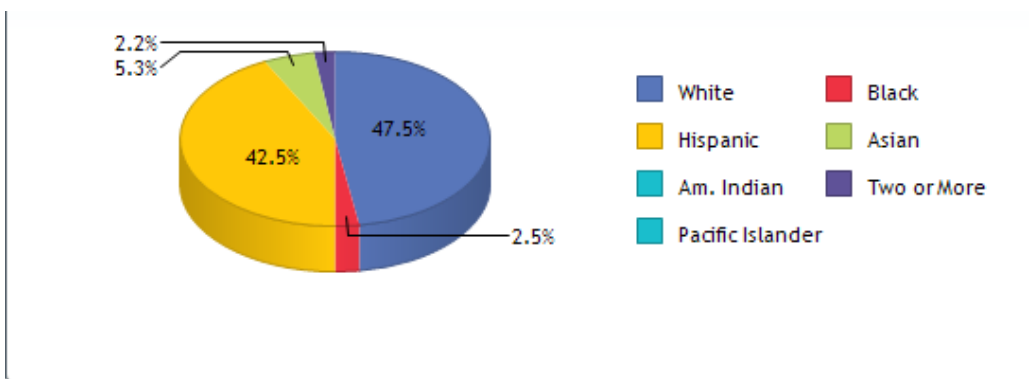
District A: Traditionally Scheduled



District B: Block Schedule



District C: Block Schedule



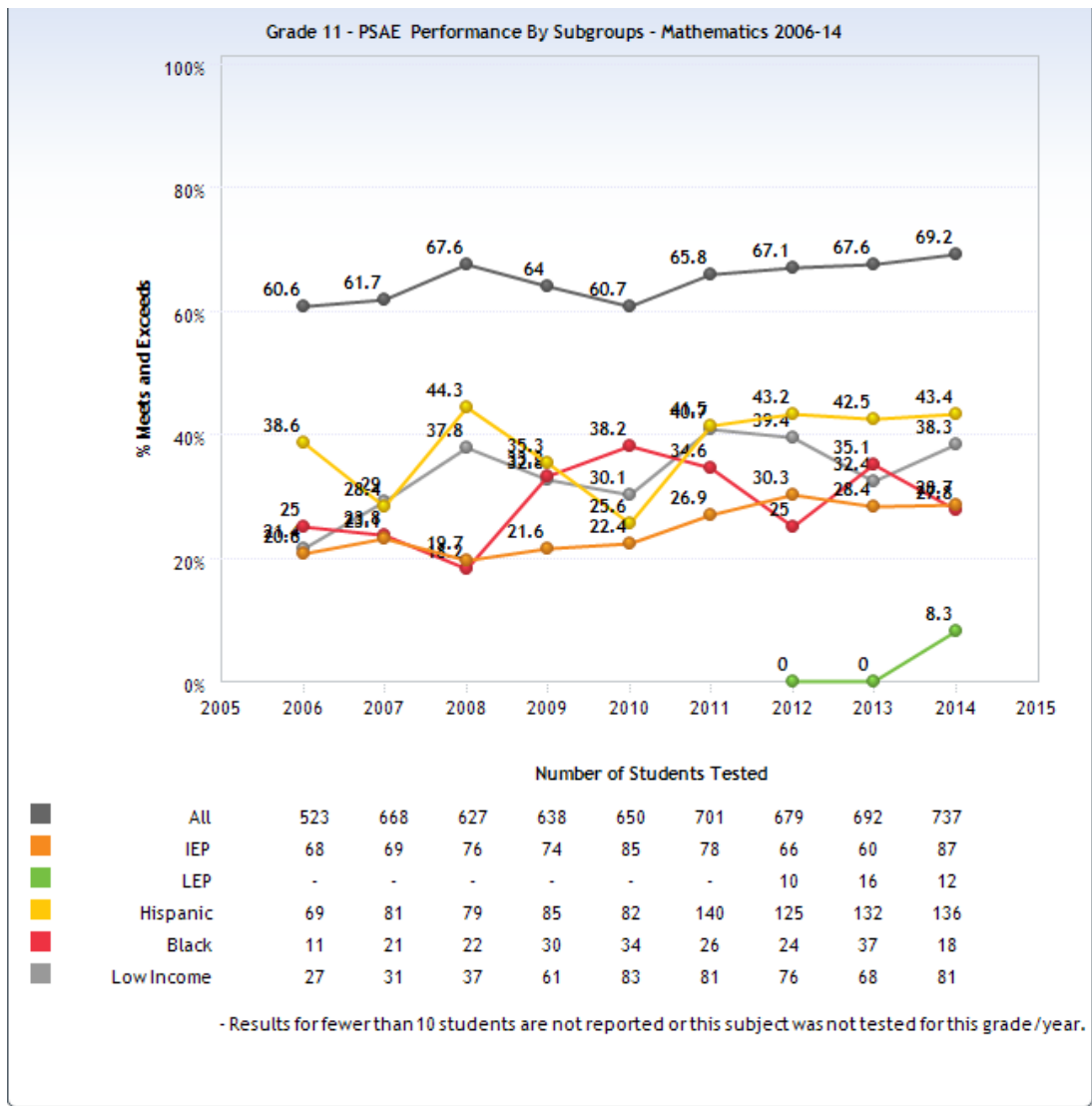
*Performance On Standardized Assessment by Subgroup*

After examining the differences in student demographics, Figures 7 through 12 show performance data by each subgroup in the two core academic areas of math and reading. The information does not indicate a significant improvement in the performance trends of subgroups in block schedule high schools over that of the tradiionaly scheduled school.

**Figure 7**

District A Performance On Standardized Assessment by Subgroup

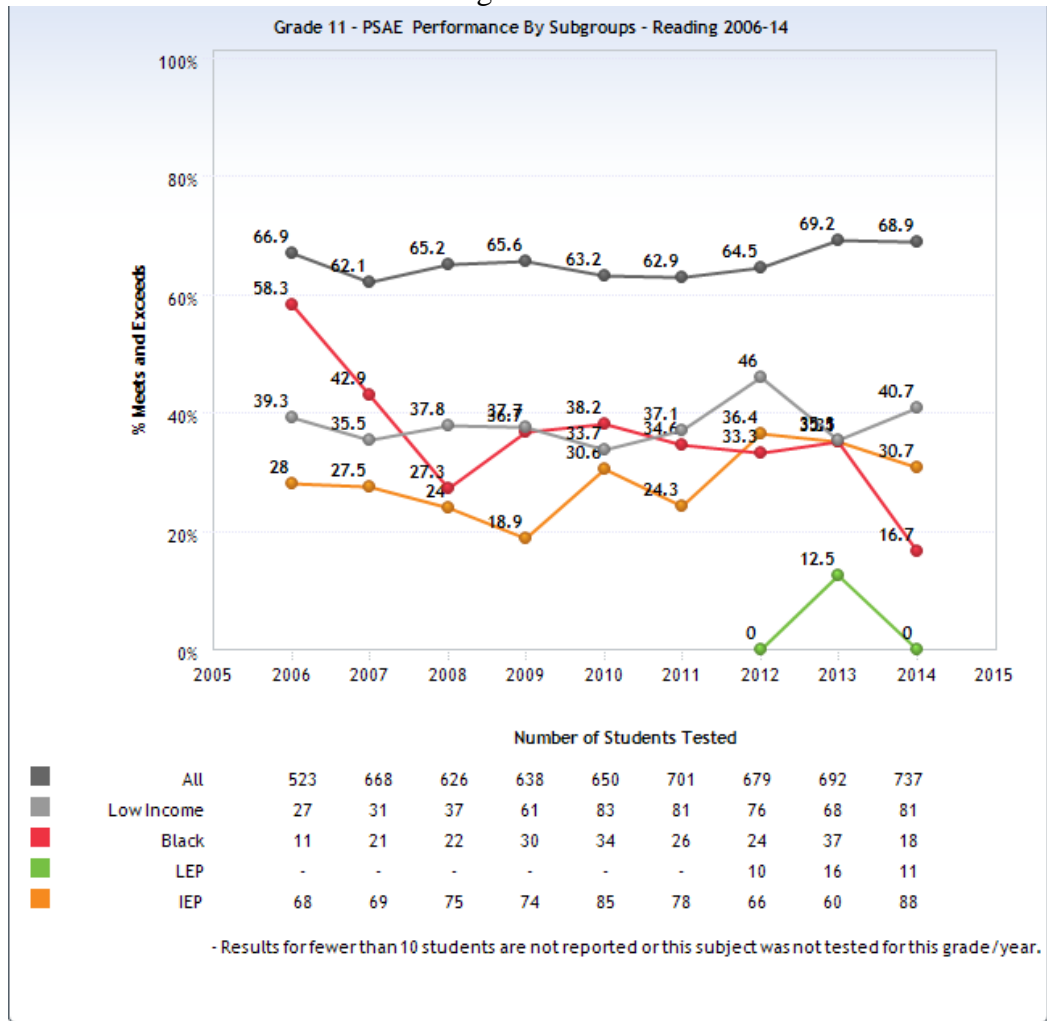
**District A: Traditional Schedule- Math Performance**





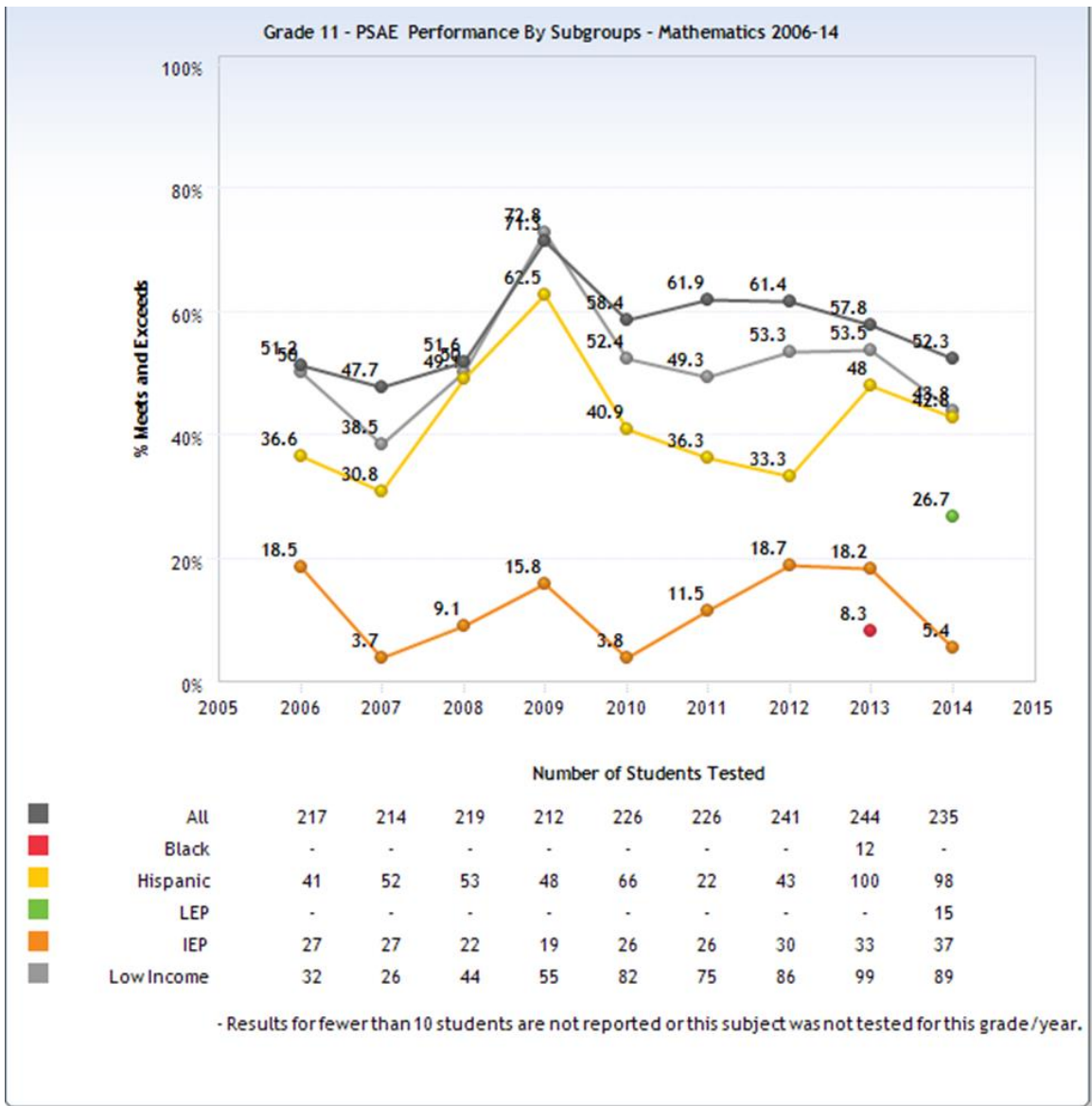
Based on the data in figure above, most sub groups in District A had a stagnant or slightly increasing trend line in performance on PSAE in mathematics. The exception is 18 black students who dropped in 2014 to 27.8 from 35.1. It is important to note that the number of black students also dropped by half in 2014. This anomaly can be explained in one of three ways. It is possible the graduating class of 2014 had a much higher percent of black students than other classes, but it is more likely that there was a data submission error when uploading state reports, or it is possible that this self-reported data was not an accurate reflection of the make-up of student body.

**Figure 8**  
District A: Traditional Schedule- Reading Performance



As seen in Figure 8 above, the same trend did not appear for reading performance as it did in math in District A. Unlike in math, where the trend line is increasing slightly, the entire student population dropped slightly from 69.2% to 68.9% in reading. All subgroups except low-income likewise dropped. Though not a significant drop, a measurable decline nonetheless.

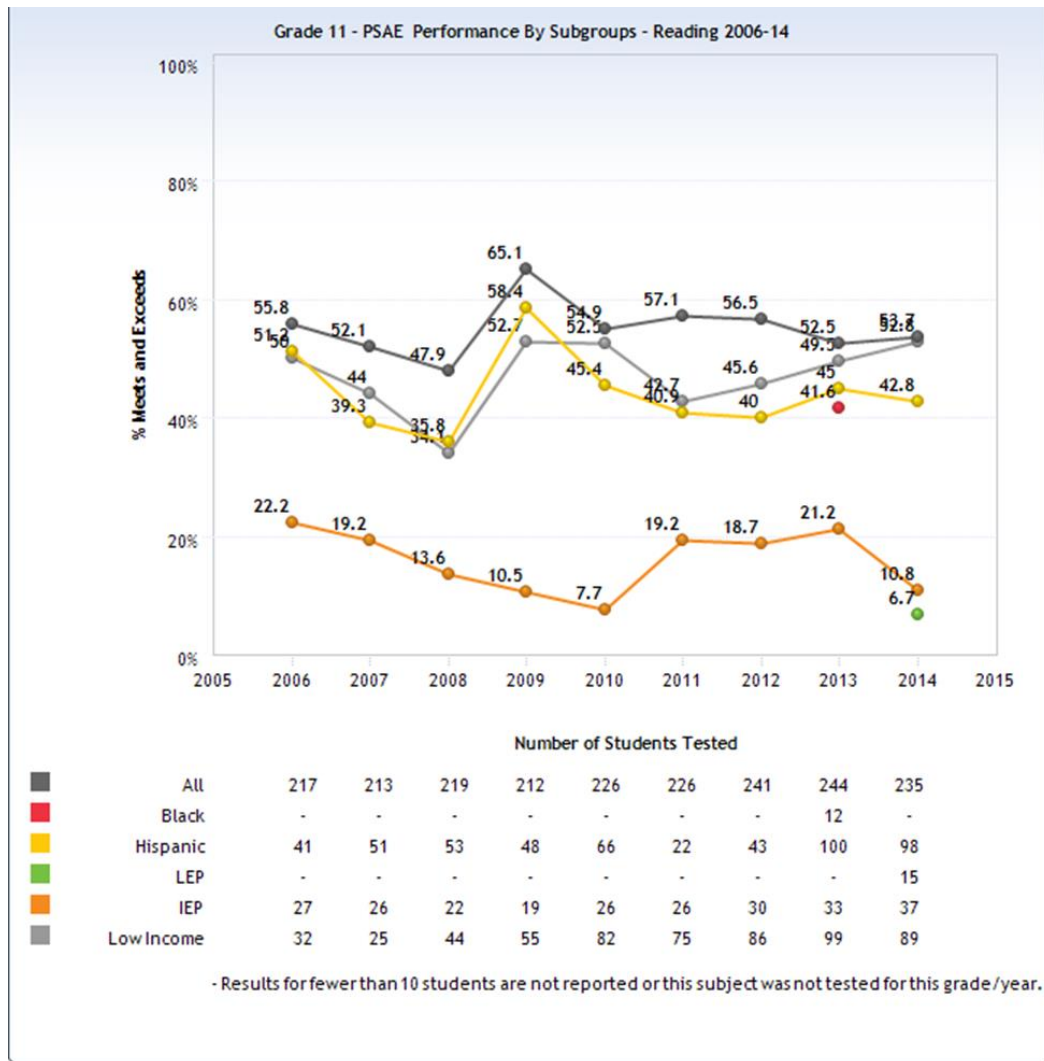
**Figure 9**  
 District B: Performance On Standardized Assessment by Subgroup  
**District B: Block Schedule- Math Performance**



Based on Figure 9 above, District B did not fare as well as District A in math.

With the exception of students with an Individualized Education Plan (IEP) who seemed to have a bump in the early years of block scheduling, the trend line for all subgroups is negative in math since 2010 in District B. This raises questions about the efficacy of block scheduling in improving student academic performance in math and supports the previously cited research indicating the limited impact of block scheduling on improved student performance in science and math (Wright, 2010; Byers, 2011; Huelskamp, 2014).

**Figure 10**  
**District B: Block Schedule: Reading Performance**



From 2010-2014, District B students performed inconsistently in reading. IEP students received an early bump in scores in 2010, and trended slightly upward until 2014 when they demonstrated a precipitous drop from 21.2 to 10.8. Their low income population has had a consistently upward trend throughout the 5 year span, while the Hispanic population has a relatively flat trend line. The data on the potential impact of the implementation of a block schedule on student performance is more hopeful in reading in District B, but not overwhelming.

**Figure 11**  
 District C: Performance On Standardized Assessments by Subgroups  
**District C: Block Schedule- Reading Performance**

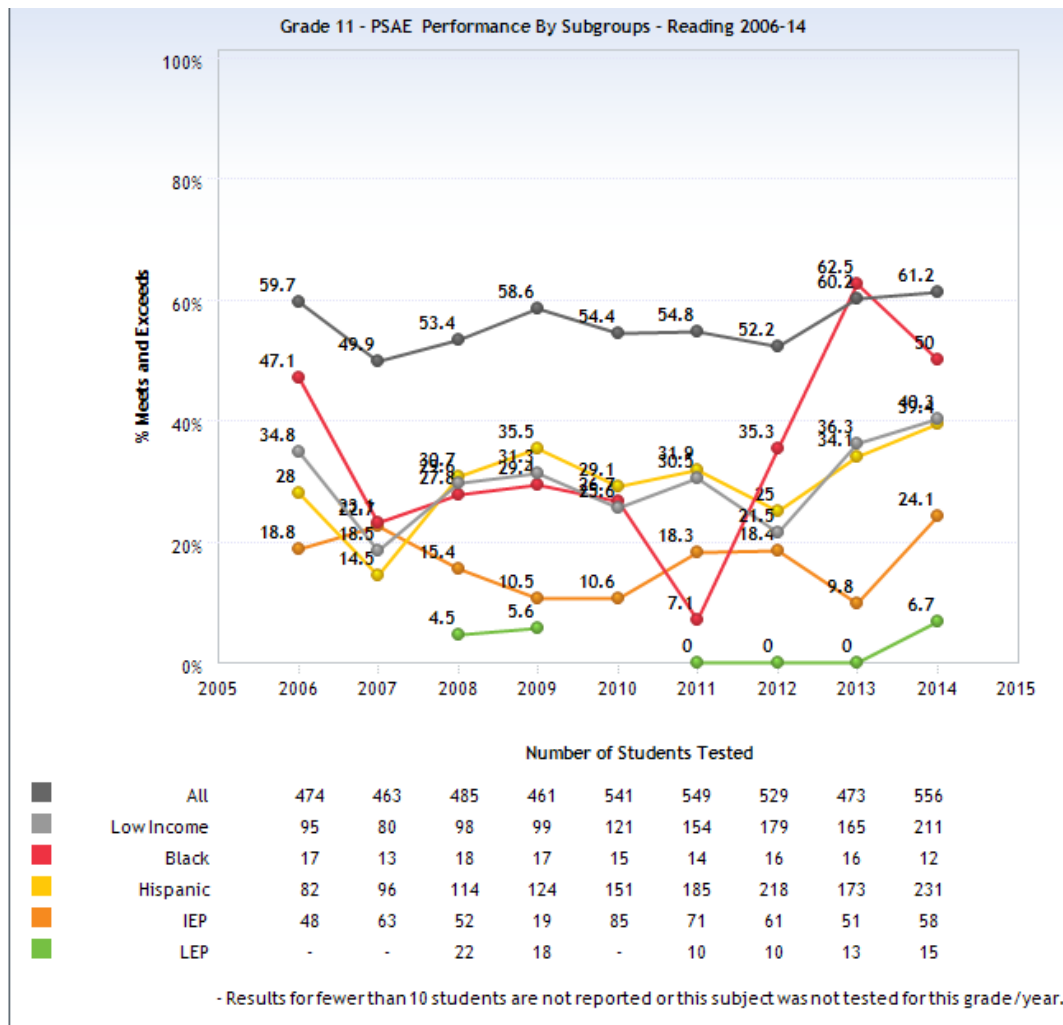
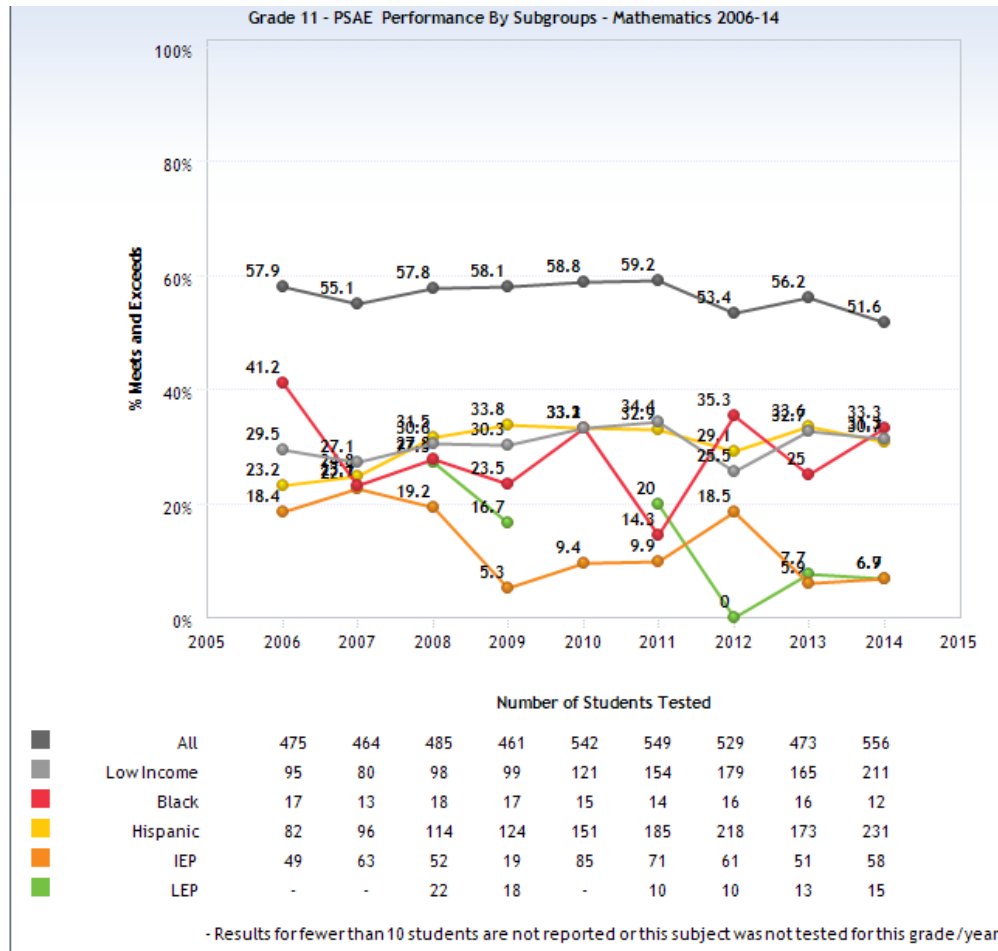


Figure 11 above shows performance in reading in District C has been on an upward trend since 2012. All sub groups have increased their reading scores. It is also important to note that all subgroups except black increased in number in 2014, and the black subgroup is the only one to experience a decline in that year. While we cannot attribute the increase in scores in 2012 and beyond to block scheduling alone, it raises questions that merit further investigation.

Figure 12 below shows a less impressive trend in mathematics in District C. Except for 2012, where IEP and black students saw a temporary improvement in scores. The trend line is flat or slightly downward for students since 2010.

**Figure 12**  
**District C: Block Schedule- Math Performance**



Of the three districts included in this analysis, only the school on the traditional schedule demonstrated a consistent improvement in scores on the PSAE. While many variables other than schedule help determine student performance on such exams, it seems that a block schedule did not combine with other variables in such a way as to produce a consistently positive trend of improved student outcomes as measured by the state-wide norm referenced exam. More study is needed to control for other variables and better determine a correlation between scheduling and student achievement.

#### Perceptions of Teachers and Students in a Traditional Schedule

To gather information on whether and to what extent a traditional 8-period schedule is meeting the needs of teachers and students, a survey was given to the teachers and students of District A (see appendix A and B). What follows are the results of those surveys, beginning with the students and followed by the teachers of District A.

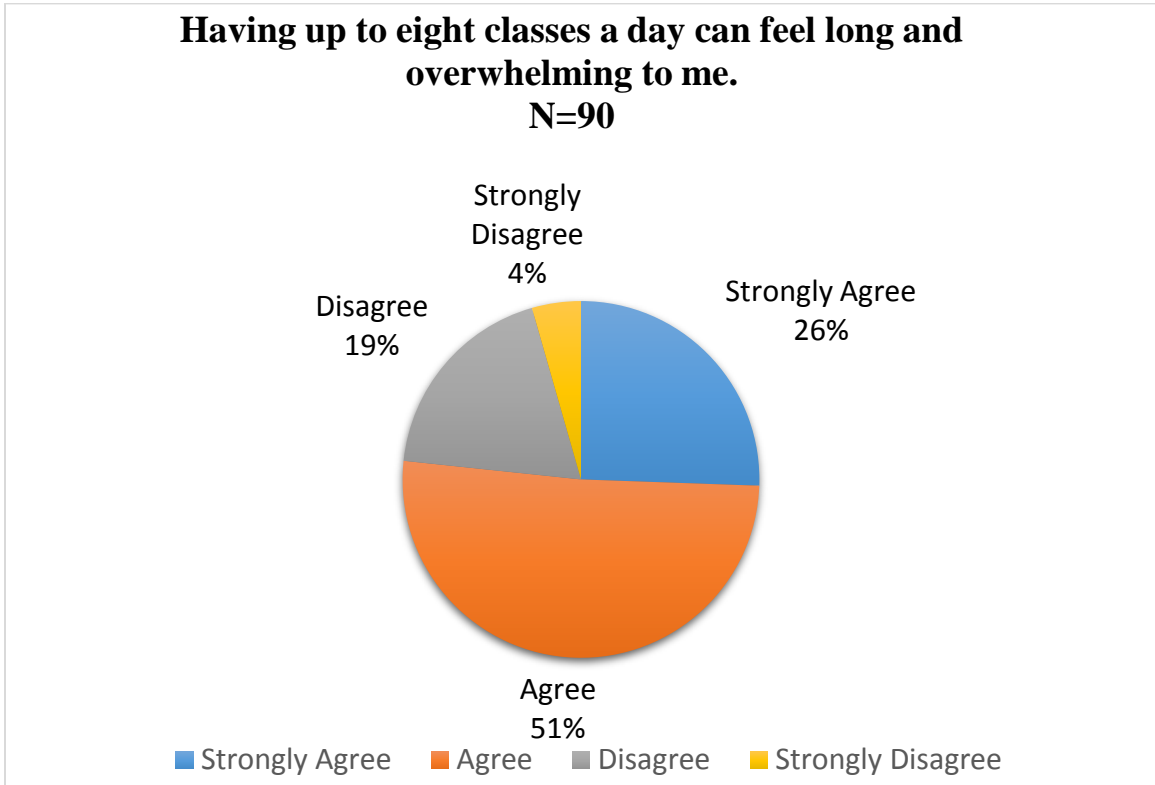
##### *Survey of Students in District A- The Traditionally Scheduled School*

Student respondents of District A were all seniors aged 18 years or older. Student participants represented both male and female students as well as a cross section of all ethnicities in the schools. Of the 90 student respondents, 10 were black, 20 were Hispanic, 13 were Asian, and 45 were white. Two students preferred not to indicate ethnicity. 42 respondents were male and 48 were female.

The results of the survey reveal that a majority of students indicated a desire to have longer class periods in which they could work with peers and meet with teachers on skills that are required for 21<sup>st</sup> century students. When asked if having 8, 50 minute periods is long and overwhelming, the majority of students responded in the affirmative.

**Figure 13**

District A student responses to having to attend 8, 50 minute periods each day.



Approximately 77% of students agreed that moving between 8 different classes each day feels long and overwhelming. Regarding the current schedule, one student commented “I think it is a lot of work in one day. At the end I’m tired and can’t focus on my homework.” Another student remarked, “I have no lunch period or free-period. The school day itself isn’t too tiring, but the amount of homework can be overwhelming at times.” Though the vast majority of students believe that eight periods a day is too many, not all do. Students who disagreed or strongly disagreed with the above question also wrote comments. One student not concerned about the current structure, commented “I feel that it is very manageable.”

In addition to expressing concern that the eight period day is too long, students articulated a desire to have more time during the day to meet with peers and teachers as seen in Figures 14 a, b, and c below.

**Figure 14a**

District A student time with teachers and tutors

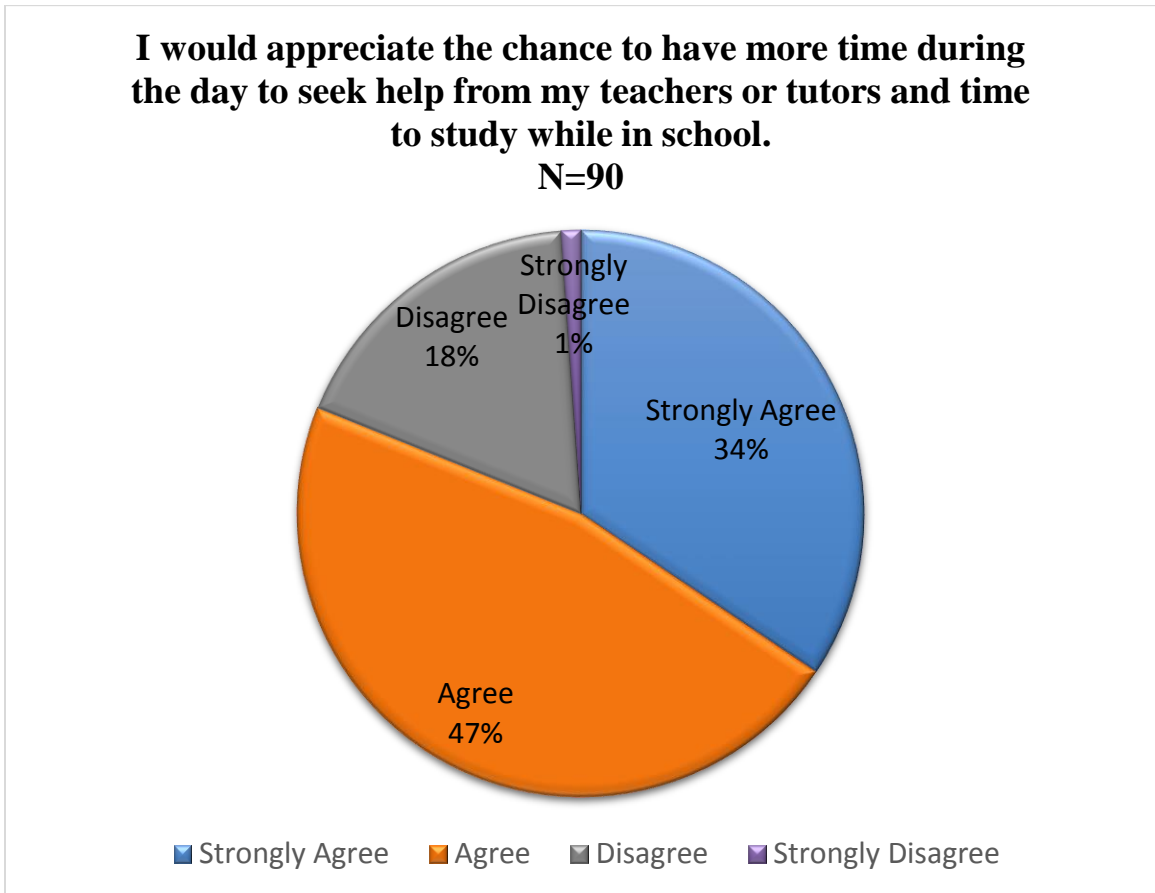


Figure 14a represents that the majority of students would like more time to work with teachers or tutors during the school day. Figure 14b below similarly indicates that many students have experienced a time when they needed to talk with a teacher but had not time in which to do so.



**Figure 14b**

District A student time to meet with my teachers

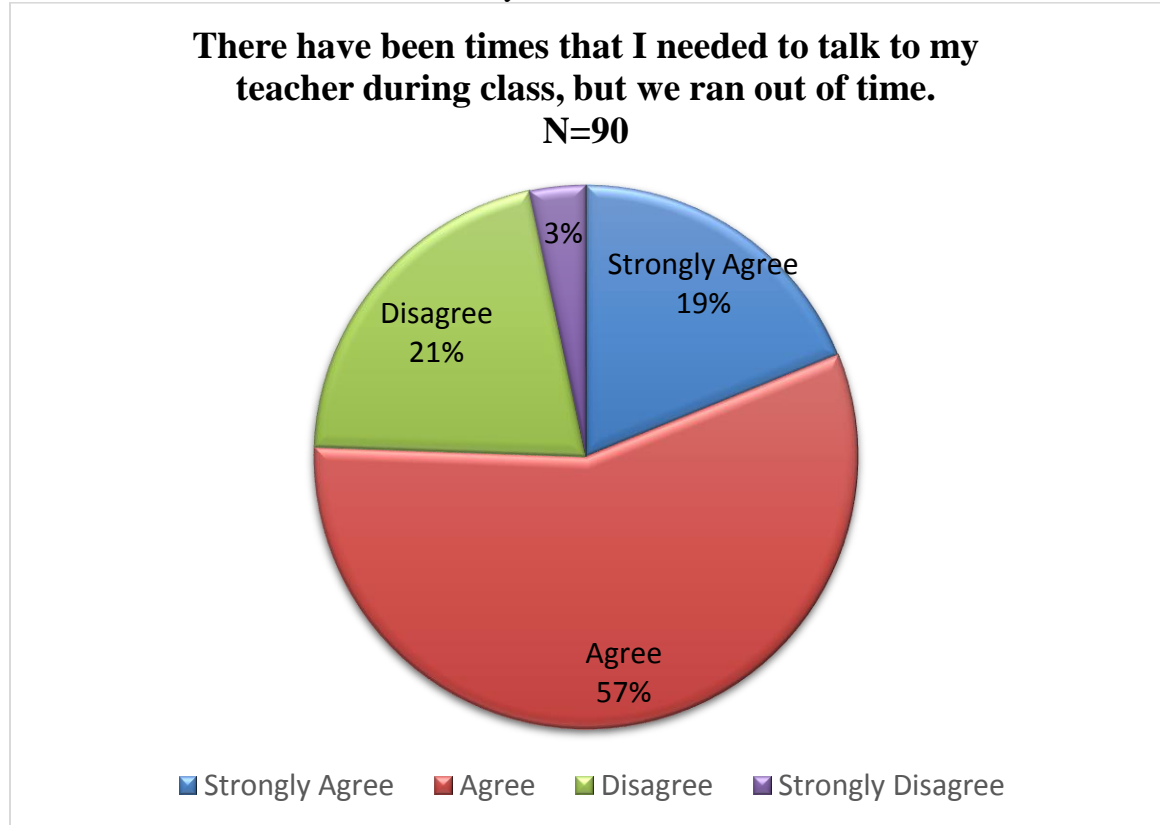
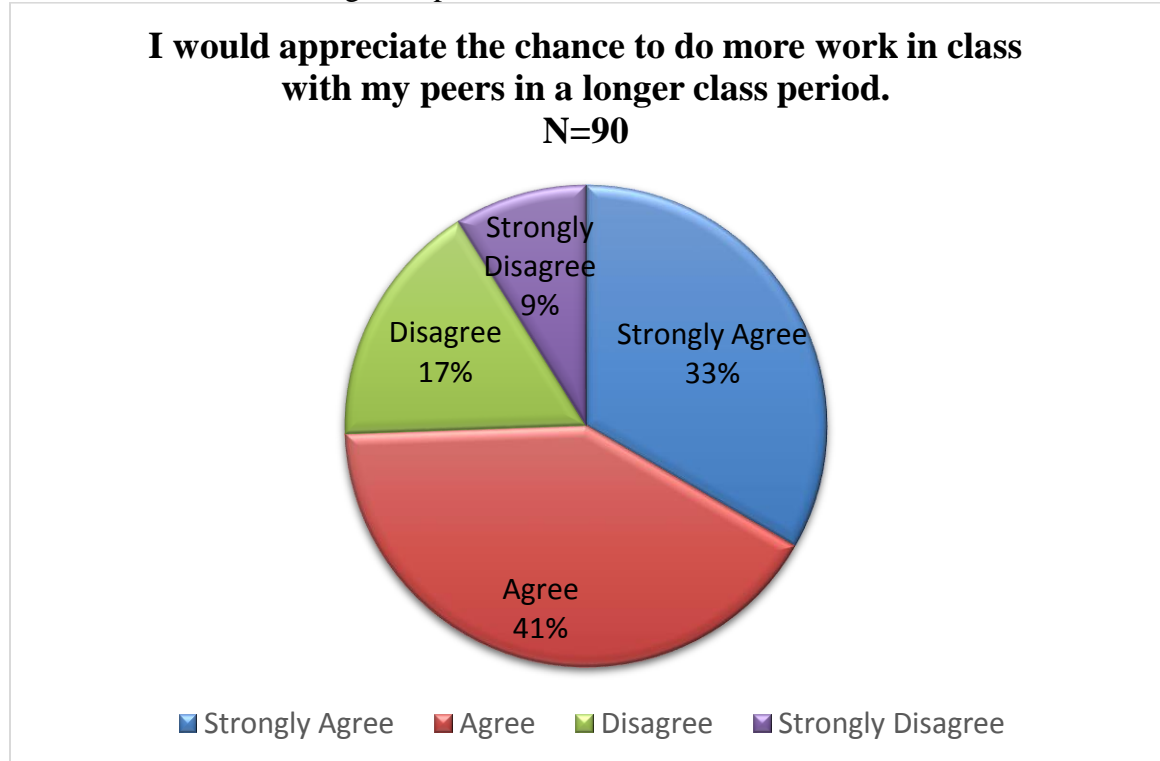


Figure 14c below shows that an overwhelming majority of students would like more time to work with their peers during class. In the case of these student respondents, the 50-minute period of the traditional schedule prohibits student collaboration to the degree that students desire it.

**Figure 14c**

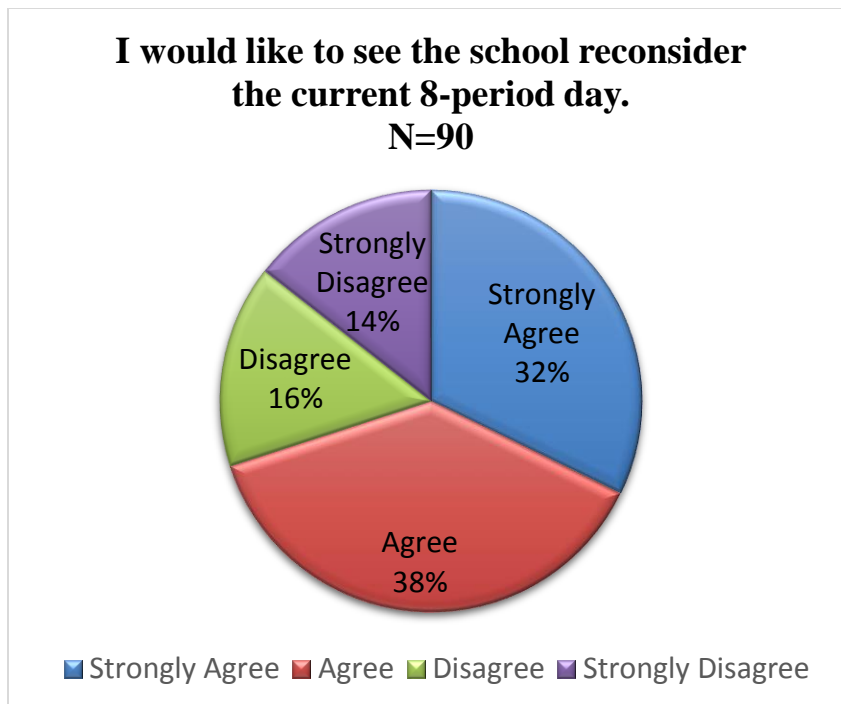
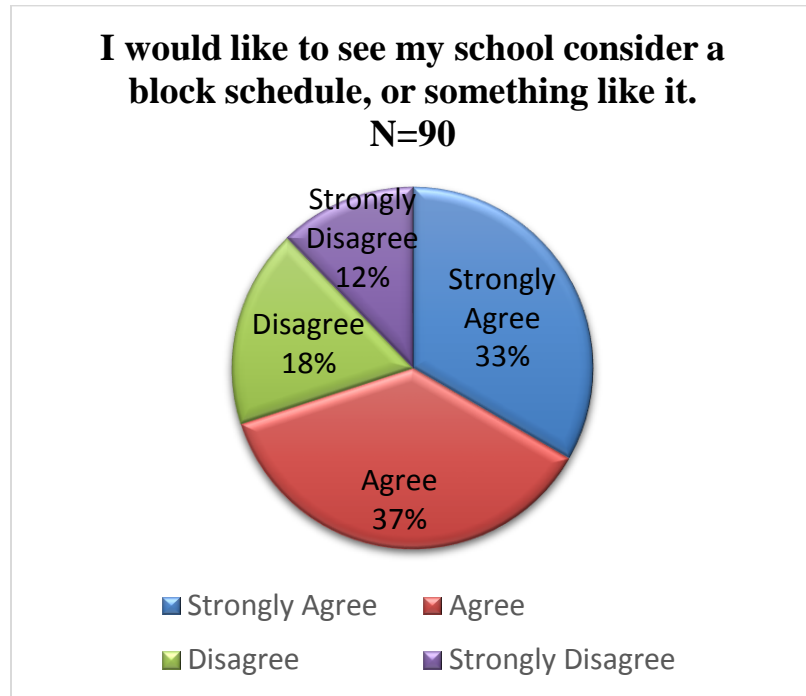
District A students meeting with peers



In all, student responses demonstrate that the majority of student respondents in District A would appreciate an increased amount of time to meet with teachers and peers than is currently allotted in the traditional schedule. 80% of students indicated they would like more time in the school day to meet with teachers and peers while 74% showed they would like longer periods in which to work with classmates. In fact, when asked if it was desirable for the school to reconsider the current schedule and investigate the possibility of block schedule, most students agreed or strongly agreed, see Figure 15 below for details.

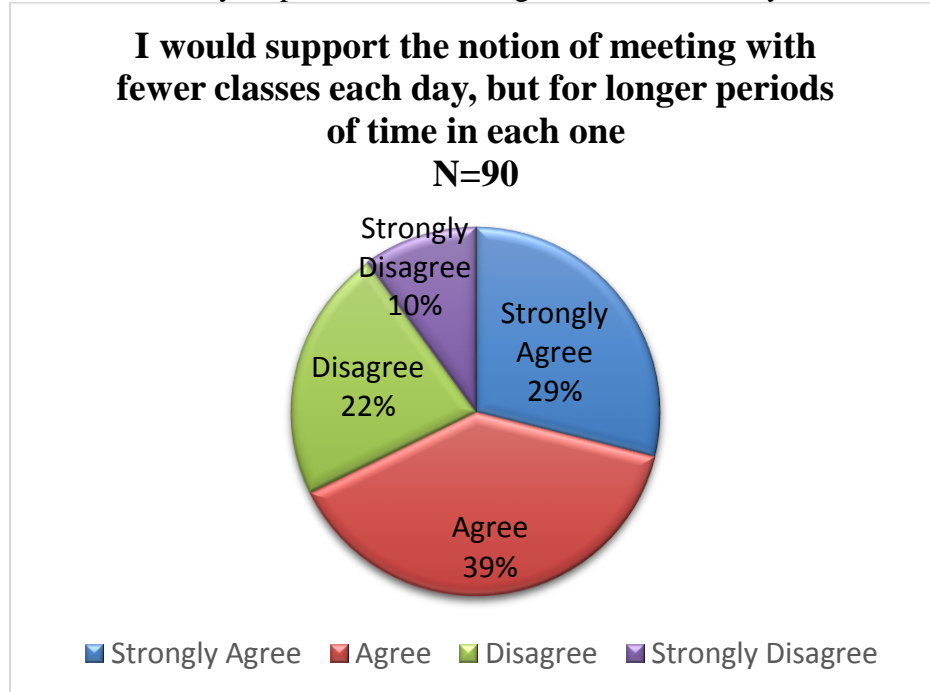
**Figure 15**

District A student survey responses about changes in the school day



**Figure 15** Cont'd

District A student survey responses about changes in the school day



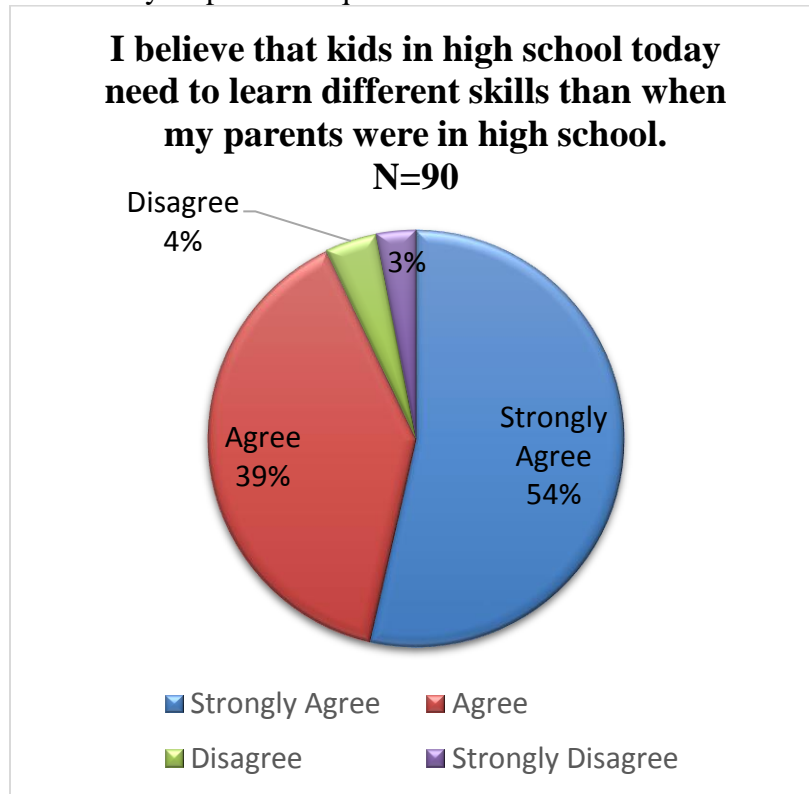
Approximately 70% of students agreed or strongly agreed that the district should reconsider the eight period school day and investigate some form of block scheduling. A lesser majority of 67% agreed that meeting with fewer classes each day for a longer period of time was desirable. One student comment in support of a block schedule reads, “This also puts less stress on students when it comes to the work load outside of school. Instead of having one night to complete an assignment, they can complete it thoughtfully and have more time to have questions answered.” Another comment expands on the previous one, “I feel like, as a student, there is not enough time to study or do homework during school and even after school.” One student remarked that the current schedule makes participating in extracurricular activities more challenging. “We are encouraged to be involved in activities after school but there is not always time or room to fit them in with the rest of my day or schedule due to the school schedule.” Some students who

answered in support of a larger schedule change wrote comments focusing on specific concerns about start times, for example. As one student wrote, “it would be so much better if the day started later.”

Nearly all students agree that despite the daily schedule, students need different skill sets than earlier generations. Figure 16 summarizes the student responses.

**Figure 16**

District A student survey responses to question about skill sets for modern students.

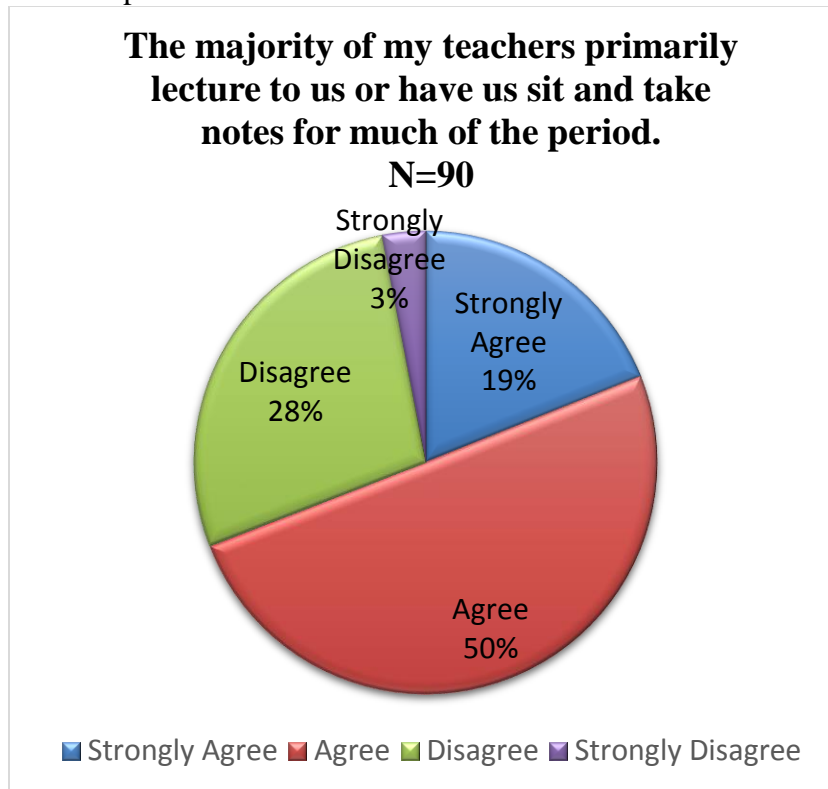


Approximately 93% of students agree that high school students need skills different than those learned by their parents. Adoption of the Common Core learning standards, access to technology, and an ever more complex world require that students have the ability not only to remember information, but to use what they learned to solve problems, draw, explain, and defend conclusions, and communicate effectively with a world-wide audience. In a separate survey question, students identified problem solving,

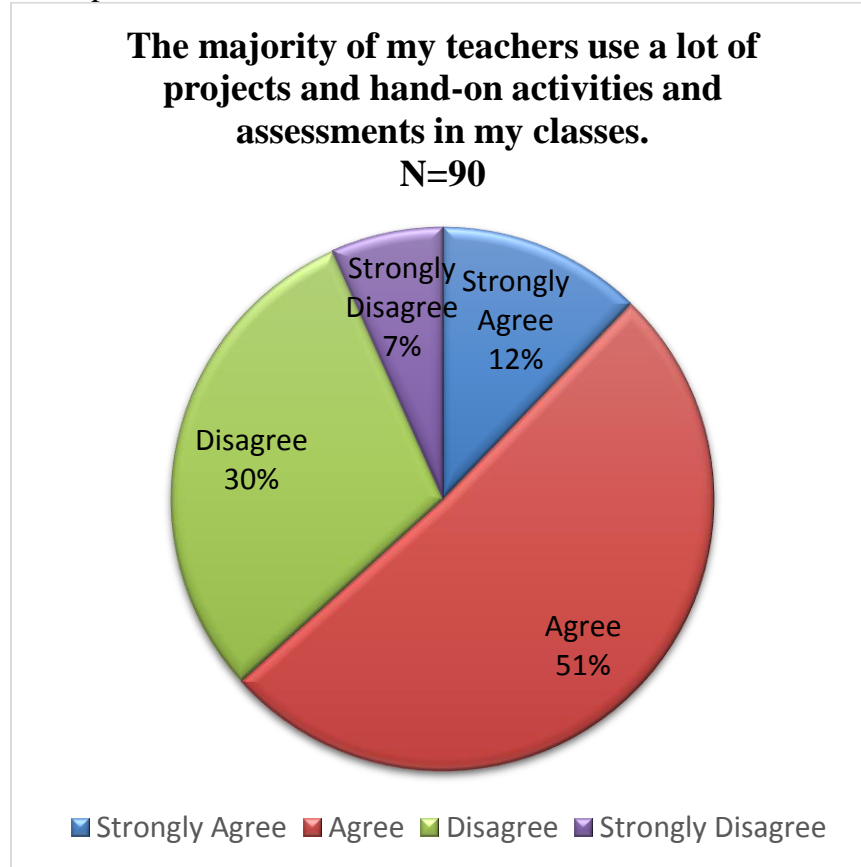
critical thinking and effective communication as skills most needed for their future. These skills require longer periods of time to master. However, there was much less agreement by students that teachers are moving away from traditional teaching methodologies of lecture and note taking to student-driven, inquiry-based projects. When asked about the most common teaching methodologies, about 68% of respondents indicate that the majority of their teachers primarily lecture and give notes. Interestingly, 63% of students also indicate that their teachers use a lot of hand-on activities and assessments. These mixed results raise questions about the consistency with which teachers across courses and teaching teams are incorporating student-driven learning.

**Figure 17**

District A student responses about classroom activities



**Figure 17** Cont'd  
District A student responses



The student survey results reveal that they generally feel the current traditional schedule is inadequate in allowing them to meet with teachers and peers as needed during the school day and they would like the school to consider revamping the school day to better accommodate student learning. Under the current schedule, students indicate teaching methods appear to have at least partially remained traditional, using teacher-centered lectures to deliver information to students.

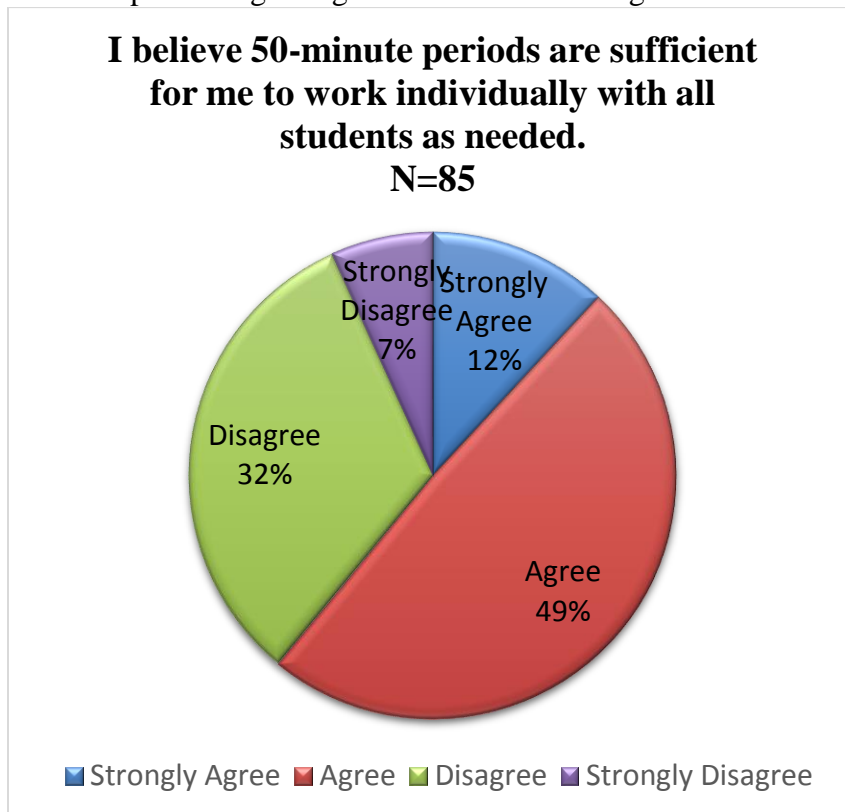
*Survey of Teachers in District A- The Traditional Schedule*

Eighty-five teachers of District A responded to a survey about their perceptions of the daily schedule, focusing on whether they have enough time to meet learning objectives, conference with students, parents, and colleagues, plan lessons and instruct in

the most meaningful ways for 21<sup>st</sup> century students. The 85 teacher respondents were split fairly evenly between the two high schools at approximately at 52% and 46%, respectively. All academic departments were represented in the pool of respondents, with the largest numbers coming from English, science and math. Generally, teacher responses indicate they would like more time to plan, grade, tutor, and call parents, but not necessarily longer block periods of classes. However, most teachers agreed that they would move more to inquiry based learning if they had more class time in which to do so. Some teachers articulated an interest in a hybrid schedule which allows for greater flexibility in how to use the allotted time each day. Figure 18 below summarizes the results of teacher questions about whether 50 minutes is enough time to meet with students and set up and take down labs and other classroom activities.

**Figure 18**

District A teacher responses regarding the 50 minute learning block





**Figure 18 cont'd**

District A teacher responses regarding the 50-minute learning block

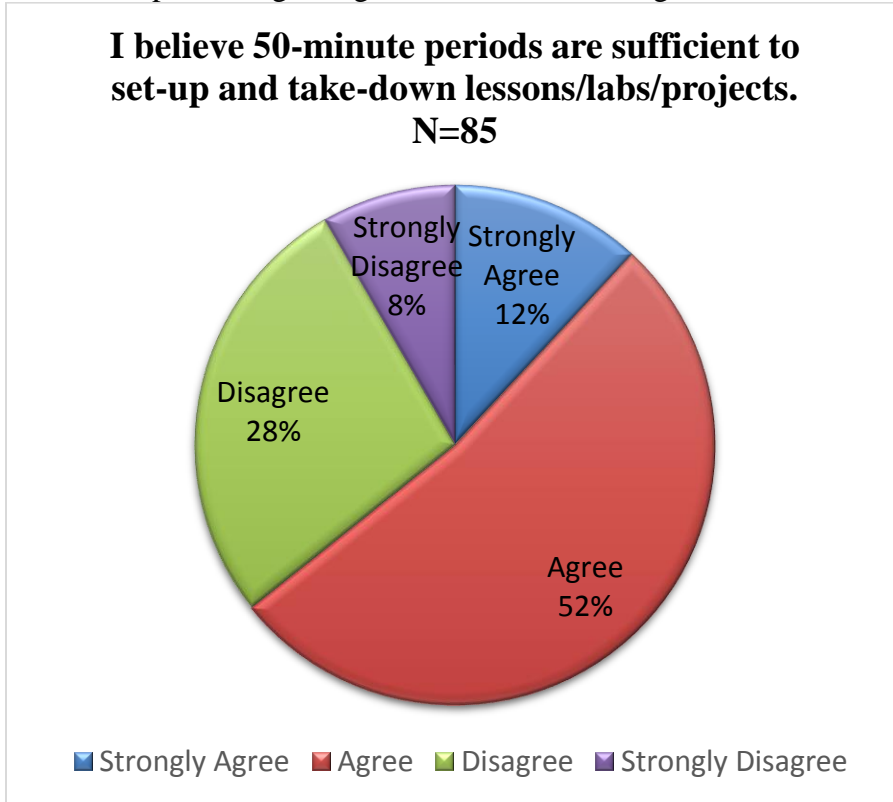
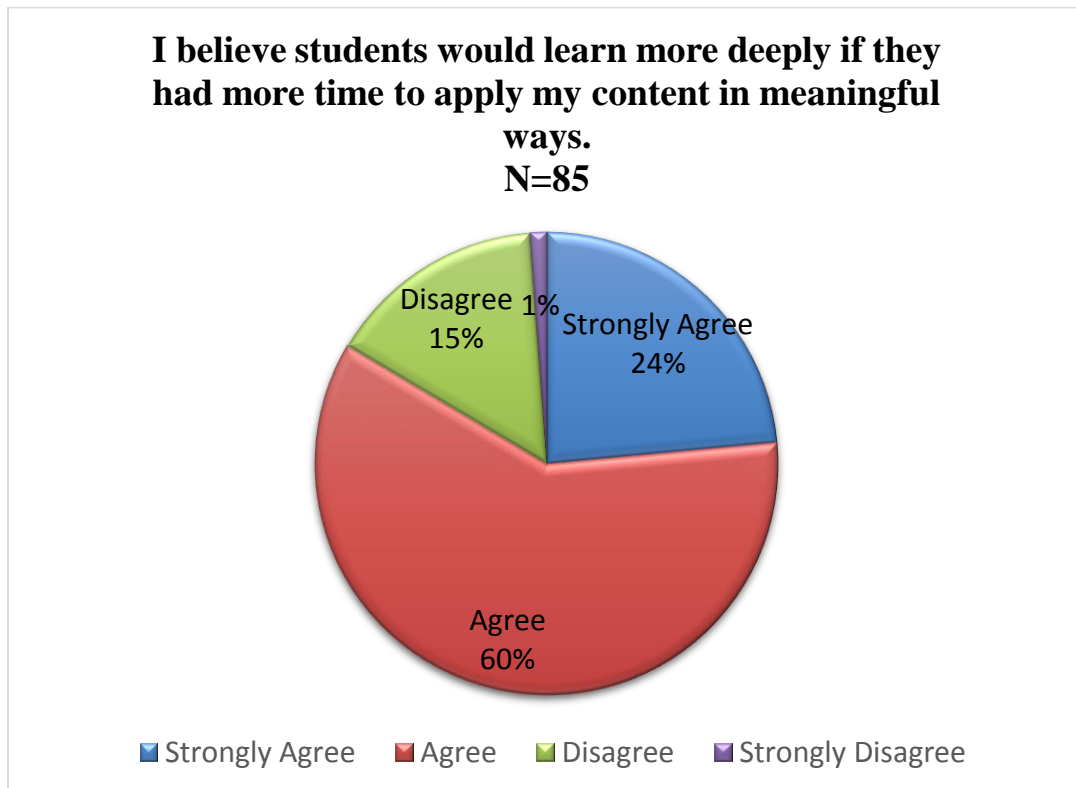
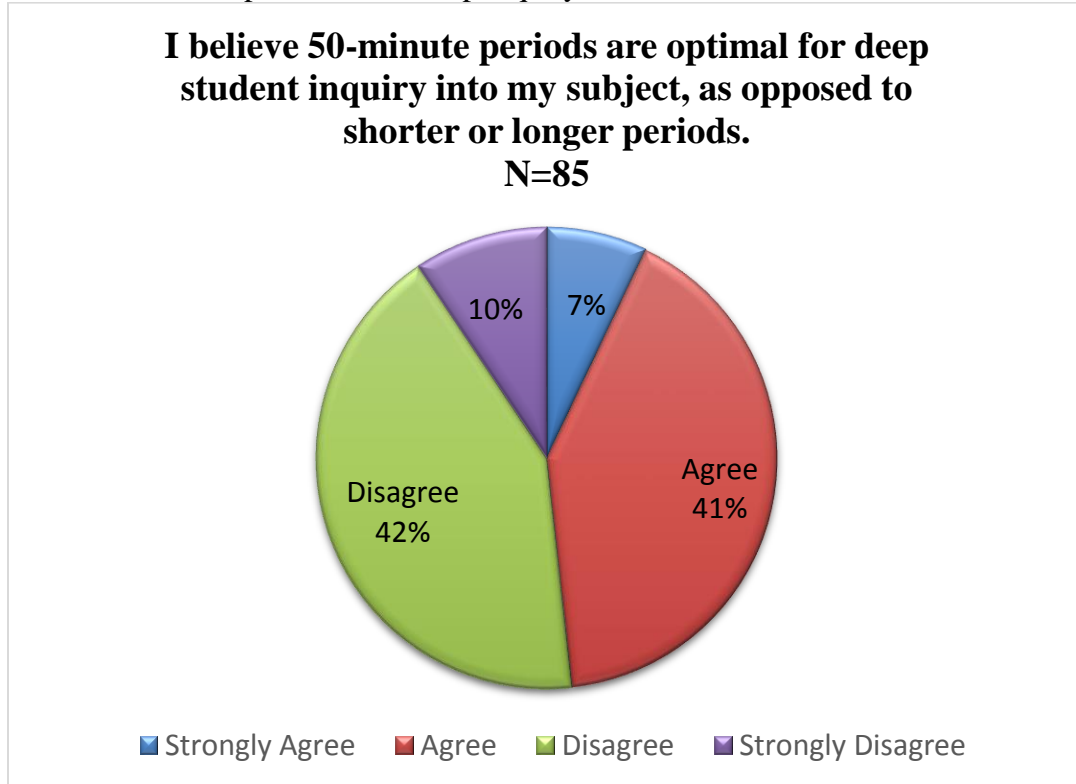


Figure 18 shows that the majority of teachers, between 60 and 62%, believe 50 minutes are adequate to work with students and set-up or take-down projects. However, slightly less than half of the staff believe 50 minutes is sufficient for student to engage in deep inquiry and over 70% indicate students would be able to learn their content more deeply and meaningfully if they had more time in which to learn it. One teacher comment regarding the need for more time to engage in deep learning supports this data, “The 8, 50-minute class period schedule trains kids to have a short attention span. They can never "go deep" and therefore come into class and behave in class as if they don't want to get too into it because they know it will end soon”. See Figure 19 below for teacher responses regarding deep inquiry.

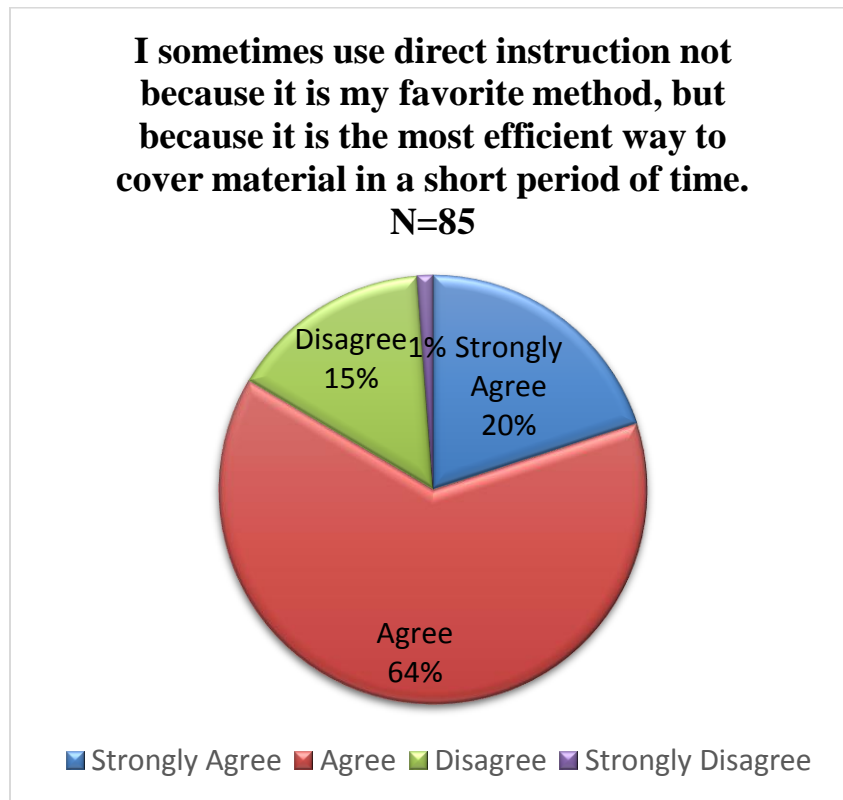
**Figure 19**

District A teacher responses about deep inquiry



In addition to showing that the current schedule is not seen as optimal for deep inquiry among the teachers of District A, the survey also reveals that their instructional methods are limited because of the 50-minute restriction. One teacher commented, “It is difficult to fit in meaningful, student-designed lab experiences in such a short amount of time available each day.” Figure 20 below shows teachers generally agree that more class time would allow for the increased use of student-directed and technology assisted lessons.

**Figure 20**  
District A teacher responses to methods of instruction.

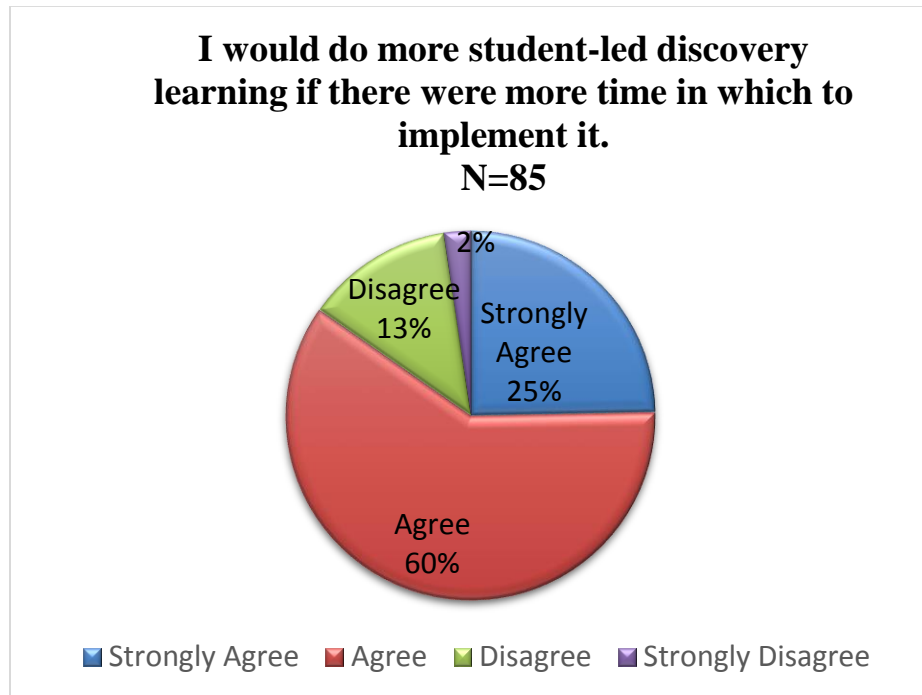
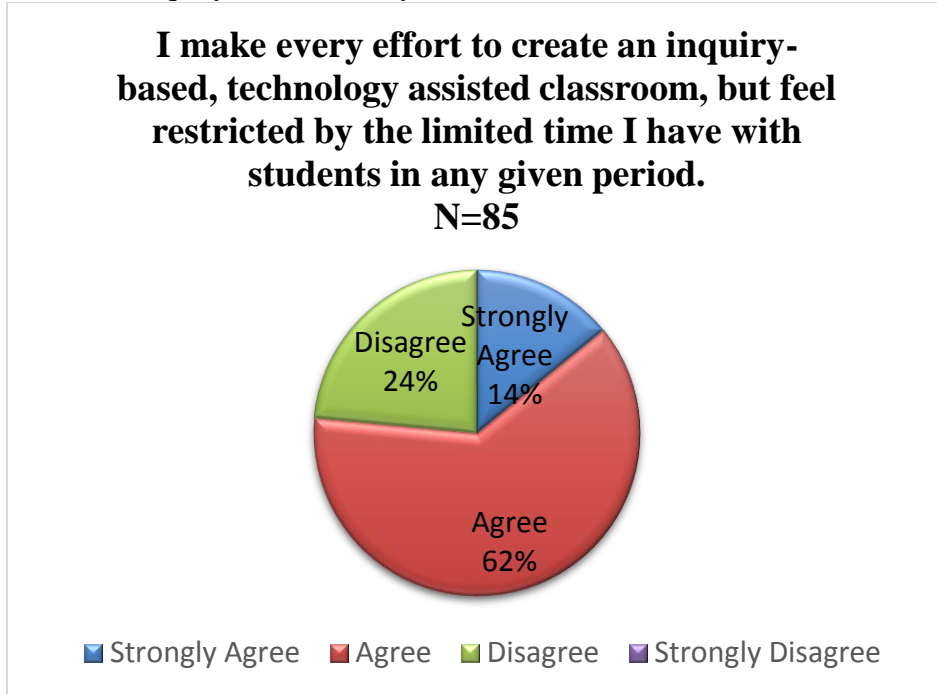


Based on teacher responses to the above question, over 83% agree that they use direct instruction because of its efficiency rather than its effectiveness. In addition, Figure 21 below indicates that 76% of teachers feel that time restrictions limit the switch to an

inquiry based classroom. Furthermore, teachers agreed with an 85% majority that they would do more student-led learning if they had more time in which to do it.

**Figure 21**

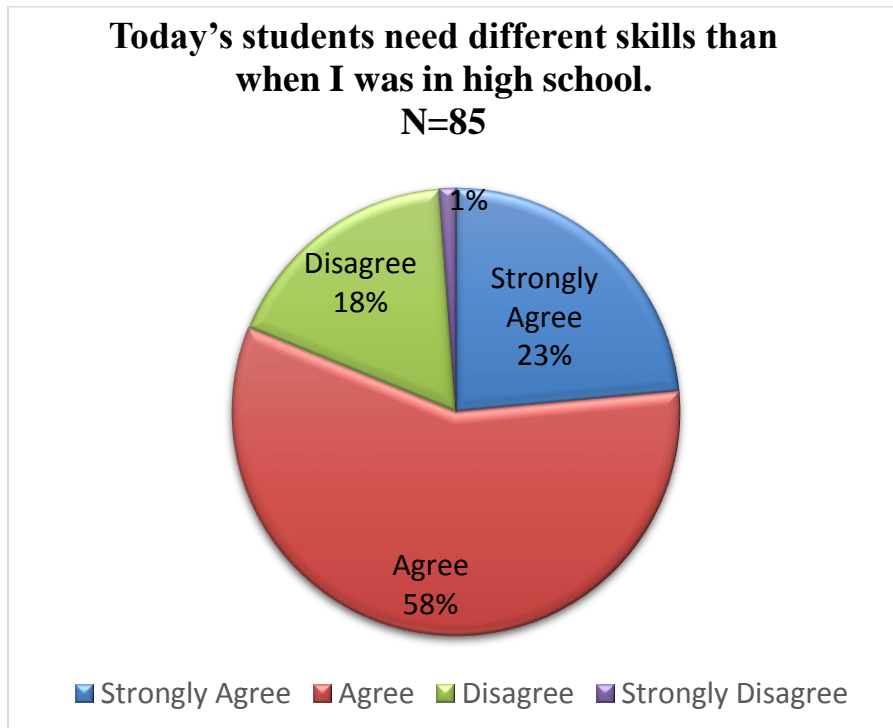
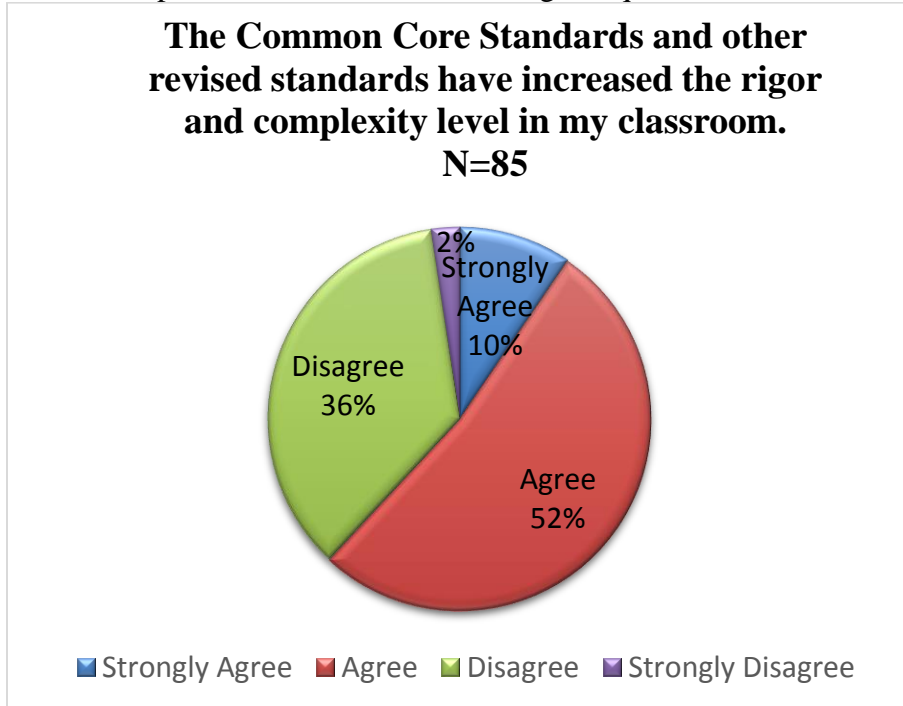
District A teacher inquiry and discovery-based classrooms



It appears that teachers recognize the need for more opportunities to engage students in deep learning. The need for more deep inquiry may be in response to the need for more inclusion of 21<sup>st</sup> century skills triggered both by modern real-world skills like those identified by The Partnership for 21<sup>st</sup> Century Skills (2015) and the adoption of the Common Core standards. As stated on the Common Core website, “Today’s students are preparing to enter a world in which colleges and businesses are demanding more than ever before” (Common Core, 2015). One teacher response indicates the need for more time to break-down the traditional barriers inherent in subject-based, 50-minute classes, “Class periods are a restriction based on learning. It tells the students that ‘this is the 50 minutes for social studies, math, English etc...’ However, students need to know how to apply all learning. The walls of time put a major restriction on true application of learning.” Based on the responses in Figure 22 below, teachers believe the adoption of the Common Core requires a more rigorous classroom and that 21<sup>st</sup> century students need different skills sets than students of previous decades.

**Figure 22**

District A teacher responses to new skill sets and rigor requirements.



Teachers seem to believe that they need more time to plan, grade, and conference with parents and students to improve the classroom experience for students. One teacher articulated this in a comment written in the survey, “flexible, more modular schedules with larger blocks of time is needed so the students could use their off time checking in where they need the help and teachers would have more blocked time to meet and discuss student work, assessment and standards with their colleagues in a more concentrated way.” Another teacher remarked on the large amount of grading required to teach English, “The amount of time English teachers need to spend grading outside of the school day is exorbitant, and students need one-on-one time that isn't available during the school day (meaning they often can't get that one-on-one help).”

Figures 23 and 24 below reveal that teachers do not have enough time each day to do the work necessary outside of the classroom to support students within the classroom.

**Figure 23**  
District A teacher time with colleagues

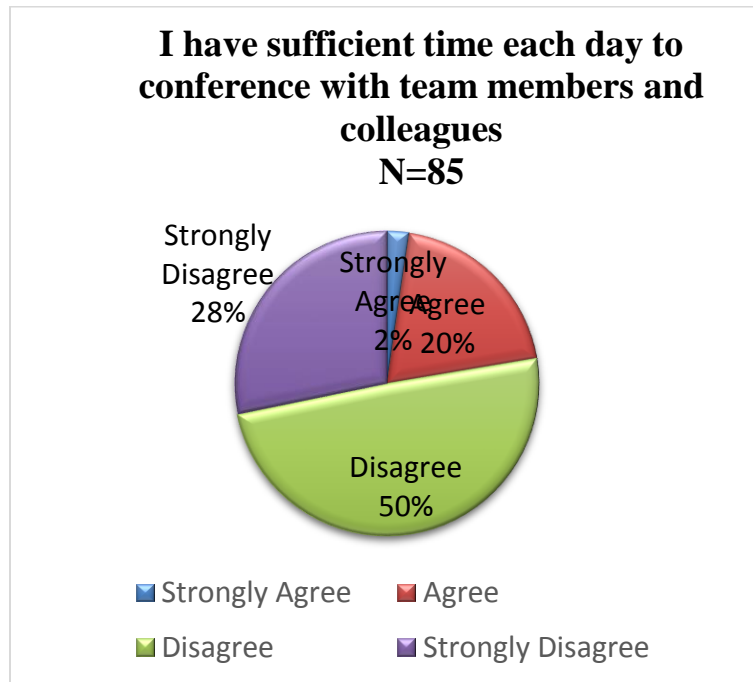
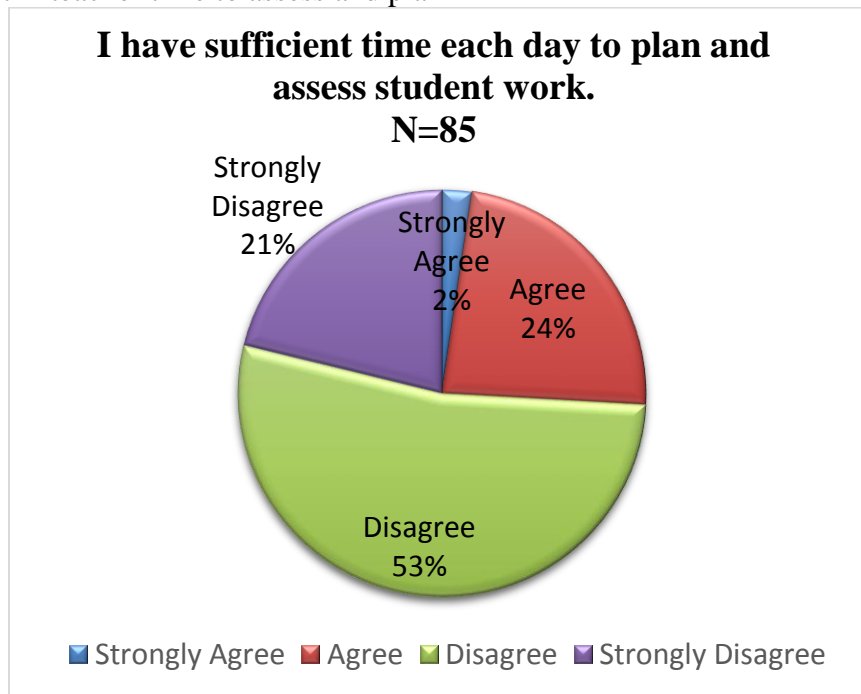


Figure 23 reveals nearly 80% of the teachers of District A believe they don't have enough time to conference with colleagues each day. It is important to note that teachers have responded as such despite the fact they have 75 minutes every Wednesday to meet and plan with teaching teams. It appears teachers would appreciate having more regular opportunities to collaborate with their peers.

**Figure 24**  
District A teacher time to assess and plan



According to Figure 24, approximately 74% of teacher respondents want more time to plan and assess student work. In conjunction with earlier results indicating a desire by teachers to provide more inquiry based learning for students, questions emerge about whether more time for teachers to create and provide feedback on meaningful tasks would result in wider implementation of them.

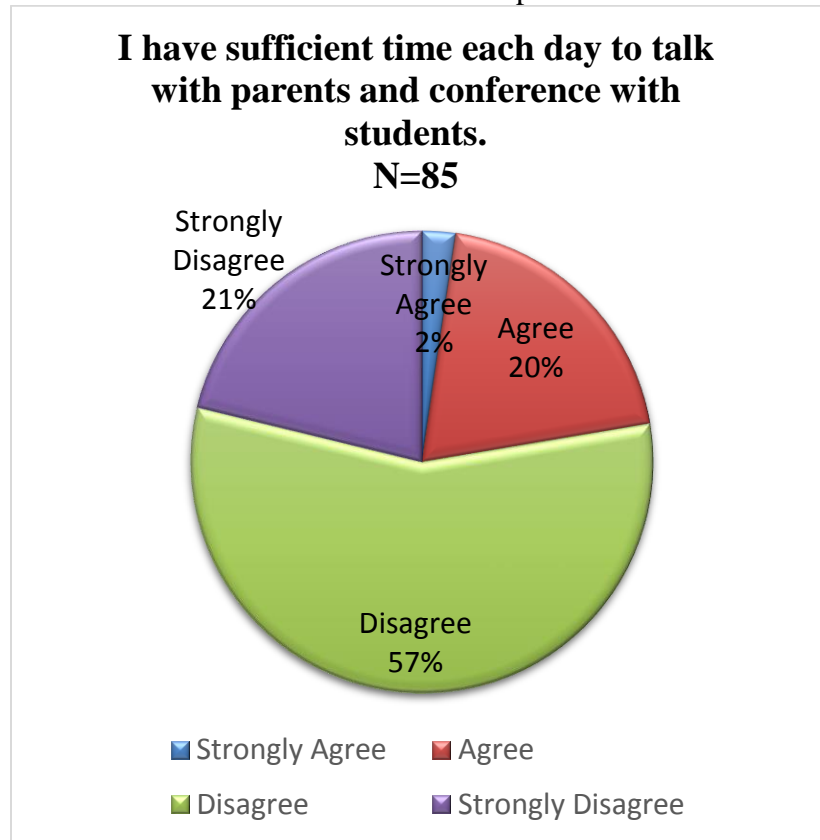
Finally, as seen in Figure 25 below, teachers indicated a desire, with a majority of about 78% of respondents, to have more time to conference with students and parents. It



would follow that more inquiry-based and student-led classrooms would also require more time to provide coaching and feedback to students and their families.

**Figure 25**

District A teacher time to talk with students and parents.

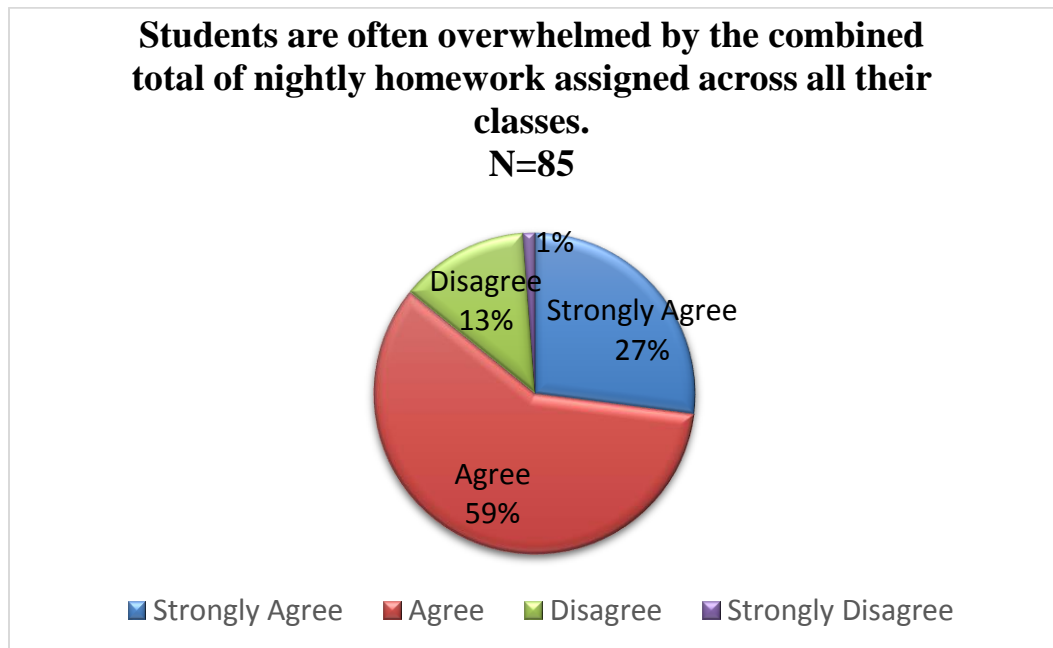
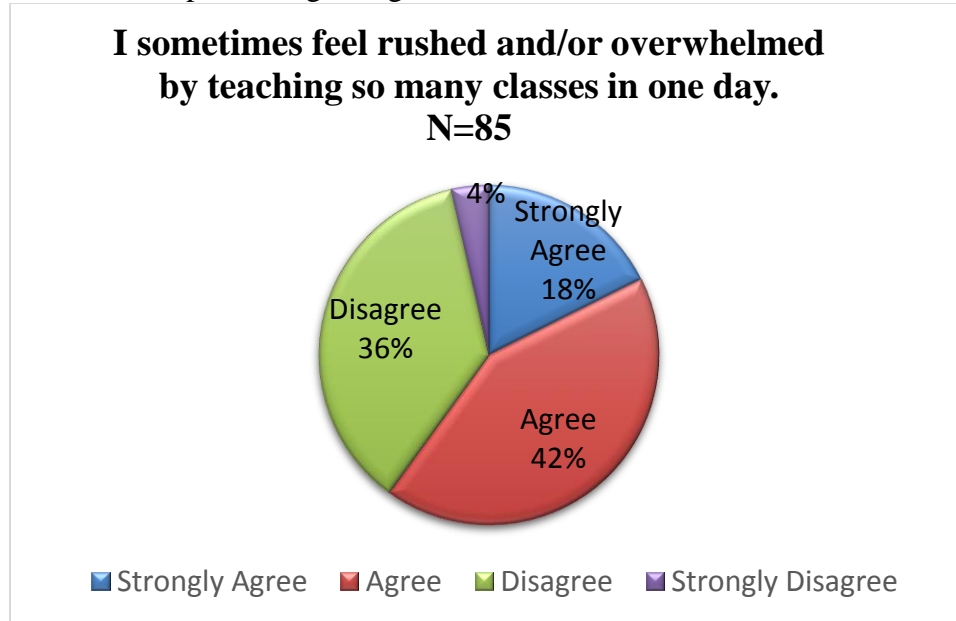


In the end, the teachers of District A indicate that though they have enough time to set up basic lessons and work with students under the current schedule, they also relay that they feel overwhelmed and would be willing to have fewer classes each day in order to have a longer time in each. One teacher comment reflected the concern of too many classes in one day, “Having several preps makes it difficult to be innovative as a teacher. The students don’t always have adequate time to deeply consider/discuss/work with the pressure of the bells. Their minds, and ours, are transitioning from one class to the next so quickly.” Another teacher indicated that while he or she feels rushed, one wonders if

making the classes longer would in fact fix the problem. “I do feel rushed sometimes. But I don't know if I making the class periods longer everyday would help?” Figure 26 below demonstrates that approximately 60% of respondents feel overwhelmed under the current schedule and over 90% are concerned that students are similarly overwhelmed.

**Figure 26**

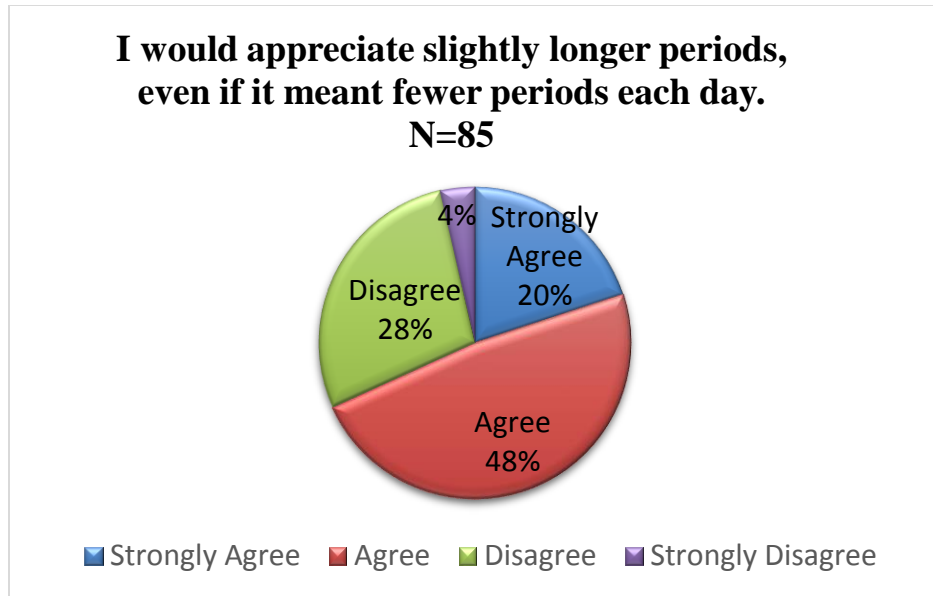
District A teacher responses regarding the level of overwhelm in a traditional schedule



68% of teachers who responded to the survey in District A indicated that would appreciate longer periods, even if it meant having fewer of them each day. Figure 27 below shows the breakdown of how many staff would be interested in periods being structured differently than they are now. Of the 85 respondents, 18 of them left their name and contact information in a comment box so they could participate in larger scale conversations about revisiting the schedule.

**Figure 27**

Distict A teacher responses regarding longer periods



While comments left by some teachers indicate full support of moving to a block schedule, other comments suggest alternatives. Some teachers indicated full support for block scheduling, “Let’s go block scheduling!” or “The 8 period schedule is not enough time for students to do meaningful work or develop deep content understandings. It is also not authentic to real world environments, such as College or Career settings.” Another remarked on the outdated nature of traditional schedules, “It is antiquated and does not allow for me to truly understand my student's needs within the

first few weeks of school, let alone teach at the level they require.” Others, however indicated support for alternative options, “I would be strongly in favor of a nine periods day.” Another comment reflects a desire to have more time for student interventions. “More time would be great, but I also think we need an extra period in the day so that we could do proper RTI intervention programs for math. So I am torn because we can’t have both.” The teachers of District A seem to agree that the current schedule is not ideal to meet the needs of a 21<sup>st</sup> century school. However, there is lack of agreement on what exactly a different model should include.

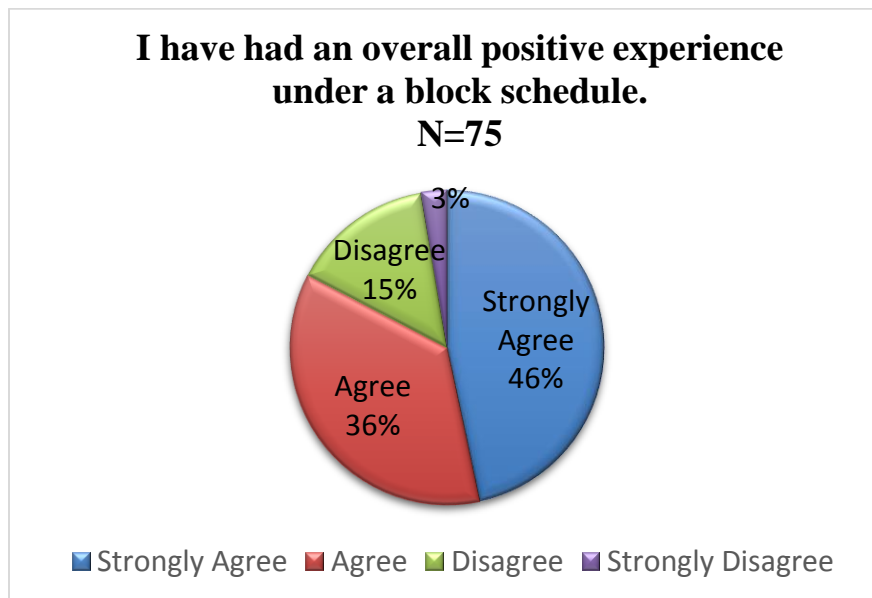
#### *Survey of Teachers in Districts B and C: Block Scheduled*

To better understand the experience of districts already using a block schedule of some kind, teachers in two other high schools were given an online survey to remark on their experiences (See Appendix C). The other high schools range from 12 to 30 miles from District A. The demographic information from the other two schools, previously referred to as District B and District C, is highlighted in the beginning of this chapter. Both high schools are part of separate unit districts and function under two different block scheduling models. District B has a modified block schedule, known as an A/B block, wherein students have a traditional schedule three days per week, and four 90 minute blocks on Tuesday and Thursday. District C has a 4x4 block schedule in which students meet with four classes each day for 90 minutes, in every other day structure. Under this structure, year-long classes are taught in one semester, but elective courses are difficult to fit in to a student schedule. There were a total of 75 teacher respondents from the two districts. Sixty percent of the participants were working in the 4x4 block and forty percent in an A/B block. The degree of experience under a block schedule ranged

from those new to it to those with years of experience. 61% percent began teaching under a block schedule but moved to a block format many years ago, 22% have only taught under a block format, and 8% taught for year under a traditional schedule and are new to the block format. The remainder have more unique circumstances for which they marked “other”.

Teachers in both block settings overwhelmingly agreed that they have had an overall positive experience in a block setting. An examination of Figure 28 below shows approximately 82% of teachers agreed or strongly agreed that they would describe their overall experiences under a block schedule as positive.

**Figure 28**  
Overall experience under a block schedule



As indicated in Figure 28, most of the teachers felt positively about a block format. One teacher commented that, “I love block schedule. It allows my students to dive deep into a subject, and do variety of activities during one meeting”. However, not all teachers were as positive. Many of the teachers who left comments after this question

were among the approximately 18% who have not had a positive experience. One such teacher remarked, “In the 21st century, American students have very short attention spans and need a regular schedule. Our schedule does nothing to help student achievement”. A similarly positioned teacher wrote, “I would much rather have more contact days. The schedule is inconsistent and I don't see any significant advantages. Sustaining 80 minutes of instruction is neither easy nor desirable.” Another teacher who seems cautiously optimistic about the block schedule suggested “I would have liked to put neutral. The experience has shown to be both good and bad. However, from the instructional side it is awesome to be able to go over multiple topics in a day but I think the kids are unable to maintain focus the whole time.”

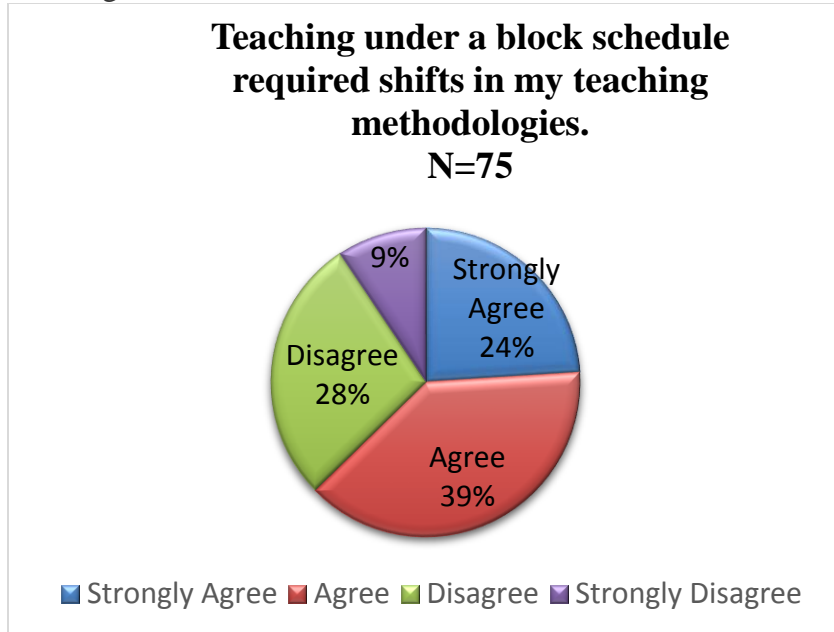
The comment above reveals what could have been a flaw in this survey data. Several teachers indicated they wished there was a neutral option on many of the questions. There was not one. Only four options were given in each question to force teachers to choose a position. In this particular case, it may be that the data was skewed in one direction of the other since some teachers chose a position but would have preferred not to.

In answering questions regarding teaching methodologies in a block schedule, a majority indicated that switching to a block requires changes to instructional methodologies. Figure 29 below shows approximately 63% of teachers believe different teaching strategies are required. Of those that didn't, many of them were in the modified block and used the longer days to simply carry out bigger projects or labs in one day what would otherwise have taken two. When reflecting on how dramatically his or her teaching strategies needed to change, one teacher wrote, “not dramatically, but I had

more time to complete some activities (and needed to have students change what they were doing more often).” A different teacher who agreed that adjustments needed to be made to instruction wrote, “Longer time periods need to be more paced as to cover more material and not just spread out a fifty-minute lesson.”

**Figure 29**

Shifts in methodologies under a block schedule

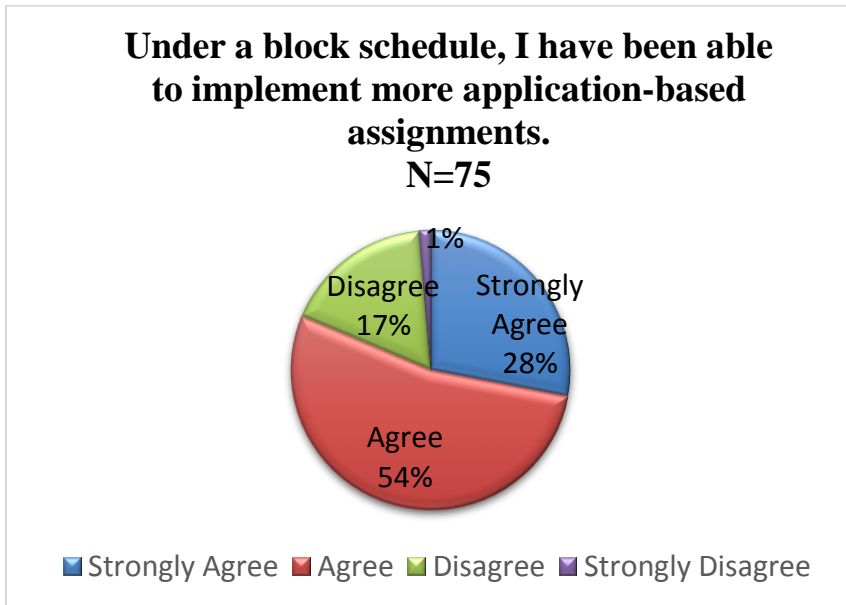
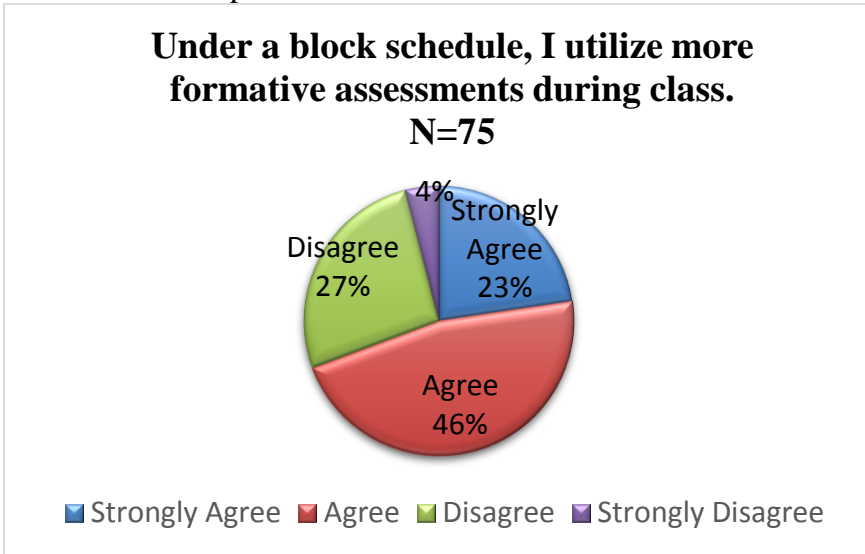


The specific ways in which lessons change in a block schedule seem to include an increase in formative assessments and application-based assignments. Figure 30 below shows that close to 70% of block teachers use more formative assessments and approximately 82% implement more application-based assignments, something the teachers of District A, the traditionally scheduled school, indicated they would do more of if time allowed. Interestingly, the survey results show only about 60% of teachers in a block schedule spend more time with individual students in longer periods. Some teachers explained that it was due to the fact they didn't need to because had more time to learn the material already, while others said the additional 30 minutes does not increase

substantially the number of kids they meet with. Finally, one teacher indicated that he felt the longer periods had no bearing on student conferences.

**Figure 30**

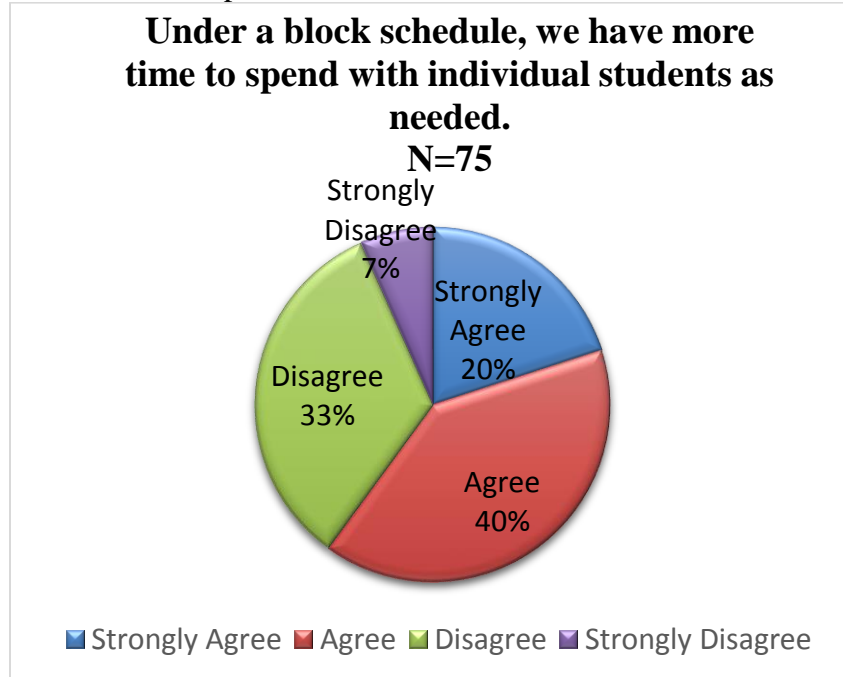
Types of instructional shifts possible in a block schedule





**Figure 30 continued**

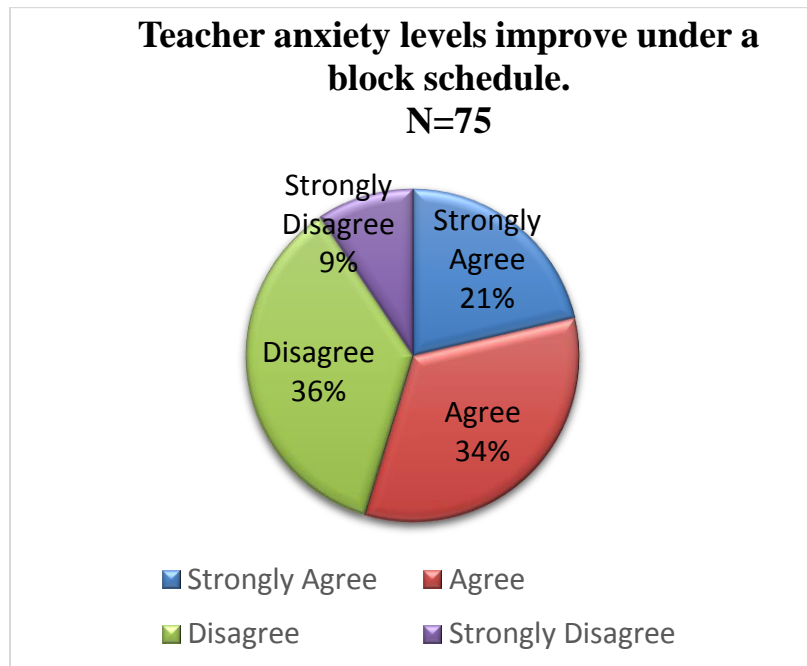
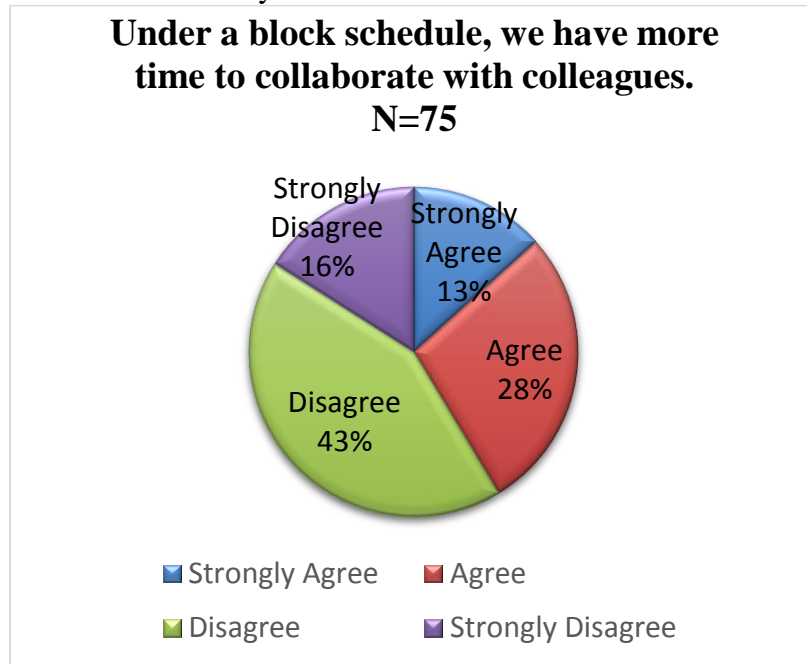
Types of instructional shifts possible in a block schedule



One of the concerns raised by teachers in District A was the lack of time to meet with colleagues in a traditional schedule as well as the feelings of being overwhelmed that can accompany having to teach so many different classes in a day. Based on the survey with block teachers, the need for more collaborative time is still an issue, and while fewer teachers indicate feeling overwhelmed, nearly half do. Figure 31 shows that nearly 60% of teachers on a block schedule disagree that they have more time to collaborate with colleagues. Most teachers indicated that the days of a 4x4, they might not even get a planning period. Other said that it was an issue of “institutional will” to make it a priority. Still another said that was a theoretical benefit of block schedule that didn’t manifest because of so many other things pulling their time away. This, in conjunction with the required shifts in teaching methods, may explain why only 55% of teachers in a block schedule agree that teacher anxiety reduces under a block schedule.

**Figure 31**

Teacher collaboration and anxiety in a block schedule



When asked about the impact of block scheduling on student anxiety, performance, and attendance, the results were mixed. When asked if they believed

student achievement increases under a block schedule, about 55% agreed or strongly agreed. However, many comments left regarding this question indicated they have no data to support it, or that they haven't noticed if students performed better or worse after shifting from a traditional to a block schedule. Based solely on the performance data on standardized exams as the start of this chapter, there does not seem to be a clear connection between block scheduling and improved student performance. When asked about student engagement, the teachers were split 50/50 on whether they agreed or disagreed that block scheduling impacted student engagement. One teacher wrote, "This all depends on the planning done by the teacher. It is hard to keep students engaged for 81 minutes without having some enrichment activities." Another remarked that it was difficult to keep students who struggle socially or academically engaged for such long periods of time.

There was a similar response to a question about whether student anxiety lessens under a block schedule. While more disagreed than agreed, most replied that there wasn't overwhelming evidence either way, and most comments indicated as much.

Teachers had a more unified position on whether block scheduling improved student attendance. Only 24% of respondents agreed this was the case. All others disagreed or disagreed strongly that there was a correlation between improved student attendance and block scheduling. Some indicated they didn't have enough data to say, while others indicated that while kids still missed as frequently, it is harder to get them caught up. "When a student is sick on a block day, it may result in only seeing a student once or twice in a week, depending on the day they are absent."

### *District B and C Indications of the Greatest Strengths of a Block Schedule*

The teachers from both block high schools offered comments about the greatest strengths of a block schedule. All comments centered on the increased ability to give more meaningful projects and assessments in the longer period of time. Science teachers liked the time to set up and take down labs in one class, Advanced Placement (AP) teachers liked that they could give full, 60-minute timed writings like those they will face on the AP exams. Music and art teachers appreciated more time to rehearse musical numbers or produce works of art. Those on a 4x4 schedule explicitly cited that they liked having a longer prep period and teachers of the modified block cited that they enjoyed the variety of schedules and ability to have, “the best of both worlds”. The types of activities teachers cited as those that students can better participate in while in a block schedule are the very ones the Common Core demands.

### *District B and C Indications of the Greatest Challenges of a Block Schedule*

The greatest challenges cited by teachers in a block schedule primarily focused on the difficulty of planning lessons for a block period and engaging kids for long stretches, but other concerns were also raised. Teachers of the modified block wrote that the schedule was too confusing for students, especially those who need structure to learn best. Teachers on the 4x4 block expressed frustration at the amount of time that could pass between levels of a course. Because year-long classes are taught in a semester under the 4x4 schedule, a student could, for example, take Spanish I first semester freshmen year and not take Spanish II until first or even second semester of sophomore year, or perhaps even later in their high school career. As one teacher commented, “Retention [is the greatest problem]. Some students will have anywhere from a 7 month to 3 year break

between classes. I have had students who took level I as a freshman and then were not able to take the level II class until their senior year.” Teachers expressed concern that this interruption slows student progression in the subject. Another concern of the 4x4 schedule was the limits it places on student schedules. Because students only have four classes per semester, they are often unable to take elective courses such as art or music for at least half the year.

Still another concern was how hard it is for students to make up work after an absence, especially since students get greater amounts of homework at once with the course condensed from a full-year to a semester. As one teacher wrote “[ There is] less class time overall, difficulty managing student behavior/shifting activities, leaving students with greater tasks for HW, and more difficulty in catching up if absent [are the greatest challenges].”

Overall, there were many more concerns voiced regarding the 4x4 block than over the modified block.

#### *Advice from District B and C Teachers to a School Considering a Block Schedule*

Interestingly, despite a long list of strengths of a block schedule, when asked to give advice to districts considering a block schedule the comments were overwhelmingly cautionary. Of the 52 comments written, 22 used powerful language warning against the switch while 13 were generally in support of such a model. The remainder were either neutral or gave general advice specific to the importance of professionally developing the teaching staff in how to instruct in longer periods of time. Of the 22 negative comments, several stated explicitly, “don’t do it!” Another wrote, “Don't expect major changes in achievement levels. There are benefits and challenges, but it isn't an answer to

low achieving students.” Yet another wrote, “Don't do it. It's a gimmick. If you do, do not do our goofy hybrid model!” Another teacher implied it wasn't effective in improving student outcomes but challenged schools considering to ask the question, “What skills/ outcomes are you hoping to achieve that cannot be attained in a traditional schedule? If it is simply to imitate a college experience, I am not convinced that objective is critical!”

The 13 positive comments were very supportive, encouraging schools to “be open to it” and “be flexible”, indicating that, “you'll love it!” Most of the positive comments, though not all, came from teachers who appreciated the ability to see their students every day or nearly every day, like in a modified block format.

Many comments also stressed the importance of professional development, an essential component to any change plan. Tony Wagner (2006) reminds readers of the importance of professional development in making lasting change, but also asserts that professional development alone is insufficient for reinventing schools. “Competencies are most effectively built when professional development is focused, job-embedded, continuous, constructed, and collaborative” (p. 99). The extent to which teachers in these block schedule schools are sufficiently trained teacher in such a manner is unknown, and is likely a factor in the success or lack thereof of the block schedule.

### Conclusions and Recommendations

The answer to the research question posed in this change plan, “Is a block schedule more effective in teaching 21<sup>st</sup> century students than is a traditional schedule?” remains unclear. Based on performance data alone, there is no compelling evidence that a block schedule improves student achievement, and teacher comments seem to support

that notion. However, the test data used to measure school and student performance for this study are norm-referenced exams that are no longer given and not aligned to the Common Core, the state standards which expect students to demonstrate mastery of skills through meaningful performance-based measures. Without an assessment common across schools that is better aligned to measure such skill sets, it is difficult to answer the question about which schedule best meets the needs of modern schools.

What emerged clearly from this research is that the majority of students and teachers in District A, the traditionally scheduled school, were dissatisfied with the current 8-period schedule, and seek some ways to better use the school day. What also emerged clearly was the general dissatisfaction articulated by teachers currently working under a 4x4 schedule. Concerns about 80-90 minutes being too much class time every day as well as the limitations it places on student schedules raised the ire of teachers. In addition, teachers expressed concern about too much work missed when students are absent.

Teachers of the modified block seemed to like the “compromise” offered by such a schedule. Teachers had multiple days of traditional scheduling with the ability to have longer periods a couple days per week. This meant that teachers saw students nearly every day, and lost on minimal instructional time by having longer periods twice per week. Aside from some teachers indicating that it was confusing for students, and that there was some lost teacher prep time, most comments from the A/B teachers were positive.

Before deciding whether District A should consider switching to a block schedule more research needs to be done, both within the school and community and by visiting and analyzing other area schools who have moved away from a traditional schedule.



## SECTION SIX: A VISION OF SUCCESS (TO BE)

### Introduction

As detailed in the “As Is” and “To Be” (Appendices D and E) charts, District A should consider rethinking the daily school schedule to foster the use of teaching and learning strategies that maximize 21<sup>st</sup> century student learning. The goal is to allow the time necessary for deep student inquiry on authentic tasks and meaningful coaching of students by teachers. The research outlined in this study reveals dissatisfaction by both students and teachers for the current traditional 8-period day. Students feel rushed, overwhelmed and desire more time to work with their teachers and their peers. Teachers indicate a lack of time to grade, plan, collaborate, and incorporate deep inquiry methods in their classes. District A is wise to reevaluate the current daily structure to better accommodate the needs of the teachers and students in the district. When the ideal structure is achieved the context, culture, climate, conditions and competencies of District A will improve.

### Context

District A is currently undergoing a superintendent search to replace the retiring district leader who has been in that role for 10 years. The context of District A includes a new superintendent excited to make meaningful change. In addition, because the current state of mandated assessments is in flux, with the State Board of Education and the state legislature not clearly articulating the future of standardized assessments, the ideal context includes a clear direction from the state which enables schools to use locally developed assessments for the purposes of accountability. There have been indications from state leaders that this is the future of school accountability. In this context, teachers

could use the reimagined school day and weekly late start collaboration time to build and implement meaningful and authentic assessments which serve both as a measure of student growth in 21<sup>st</sup> century skills and as an accountability measure.

### Culture

A new schedule which enables more time for teaching, learning and collaborating improved the culture and climate of both schools in District A and made even healthier an already improving relationship between the building and district administrations. More time to plan and collaborate allows teachers to revise lessons to include Common Core and 21<sup>st</sup> century skills and technology. In addition, teachers have more time to give meaningful feedback on student work and contact parents to build a home-school partnerships. Having fewer classes each day reduced the stress teachers and students experienced under the old schedule, and more time with each group of students supports student-directed learning and allows for the one-to-one meetings both groups expressed a desire for. Furthermore, a more accommodating schedule closed the gap between the two schools. By having the time to foster student inquiry, the more traditional school naturally shifted away from the teacher-centered lessons it once favored.

The above changes improved morale, reduced union complaints and improved union-administration relations, allowing all parties to unite around a common vision for learning that emphasizes deep student inquiry and authentic learning tasks. A staff that is less haggard at the end of each day because they can move at a more reasonable pace encouraged staff involvement and volunteerism after school. The shortage of internal coaches and sponsors the district once faced has been resolved.

## Competencies

With more time in which to teach and learn, teachers became more adept at creating and implementing performance-based assessments and in seamlessly integrating technology into the classroom. In addition, more time to grade meant more willingness to consider and practice a standards-based approach to grading, wherein students are given feedback not with a holistic score, but separate scores which indicate levels of mastery of each and every standard assessed on the assignment. Students are able, in this type of system, to retake portions of an assessment to show improvement against specific standards. In era where skill building and mastery are far more important to a student's grade than memorization and rule-following, standards-based grading is an important component of any modern school's success. But, this method takes time to learn and implement, both on the part of the student and the teacher; a modified block schedule enabled this learning to happen.

Another competency a modified block schedule fostered is the use of data to make instructional decisions. Our assessment warehousing system, Mastery Manager, is a powerful tool that tells teachers how students performed on each and every assessment and learning standard across the whole school year. Teachers can analyze the data in any number of ways to consider age, gender, socio-economic status, to name just a few. This information is essential in a mastery and inquiry-based, 21<sup>st</sup> century curriculum so students can see exactly where they need more practice and teachers can tailor their lesson accordingly. More time each day or week for teachers to learn and understand this system will build their proficiency with this instructional tool.

## Conditions

The conditions maximized under a modified block schedule included a successful implementation of a 1:1 Chromebook initiative. District A is in year two of Chromebook pilot wherein 300 students were issued a Chromebook computer for the whole year and 11 teachers agreed to instruct at least one class period of students who all had one of these Chromebooks. Regular access to resources is an essential tool for a 21<sup>st</sup> century student and District A is now prepared to expand this pilot to a full 1:1 structure so all students will have a Chromebook every day. A modified block schedule encourages student-driven learning by allowing students the time to discover and unearth new understandings and apply it in meaningful ways; computers are an essential component of this approach.

Under a modified block, teachers and students feel less rushed, leaving more time for thoughtful reflection. This increased reflection increased student learning on locally developed assessments and on PARCC, the current state mandated exam that features more application-based and problem solving questions than standardized tests of old. As seen in Section Two of this study, District A had been fairly stagnant in its test scores over the last 5 years. A modified block improved student performance in ways not seen in recent years.

Student and teacher satisfaction also increased because they have more dedicated work time during the day and less at night. Students can focus each night on assignments for fewer classes, reducing anxiety and improving work product, the same would be true for teachers. Improved performance and improved morale also resulted in better student and teacher attendance. With less anxiety, a more positive and relaxed school climate,

and more academic success, the health of all school stakeholders improved and led to fewer absences and “mental health” days off.

A modified block schedule has significantly improved the competencies, culture, and conditions in District A.

## SECTION SEVEN: STRATEGIES AND ACTIONS

### Introduction

In Chapter Eight of *Change Leadership: A Practical Guide to Transforming Schools* (2006), Tony Wagner outlines three phases of whole-system change, the preparing phase, the envisioning phase, and the enacting phase (p.133). Each phase constitutes an important part of the multi-faceted nature of system change. In the preparing phase, leaders develop a shared and informed understanding of the need and urgency for change, and the role each stakeholder plays. During the envisioning phase, understanding and urgency for change expand to the greater school community. The enacting phase includes a focus on how the instruction can and will change as a result of the change (p. 134).

When making a whole-system shift as significant as altering the daily schedule, a plan must be carefully and thoughtfully developed and include all stakeholders in the decision. Good communication is essential, and professional development must be provided to all teachers on the necessary instructional shifts. Outlined below are five strategies (See Appendix F) and corresponding actions steps that will be implemented in District A to facilitate the restructuring of the current school day. Each of the strategies supports one of the three parts of Wagner's framework.

**Figure 32**

**Strategies and Actions for System-Wide Change**

Strategy	Action Steps
1. Develop a sense of urgency among leadership around the need for a schedule change.	<ol style="list-style-type: none"><li>1. Share survey data from District A regarding the current schedule.</li><li>2. Review student performance trends for past 5 years</li><li>3. Seek a consensus to convene a committee to investigate a shift in the daily schedule</li><li>4. Share same data with the Board of Education</li></ol>
2. Research varied models to find one which best meets our needs.	<ol style="list-style-type: none"><li>1. Announcement to all staff a committee will be convened.</li><li>2. Identify committee members</li><li>3. Share data with committee and have them bring a summary to their department meetings for feedback.</li><li>4. Committee will visit other block schedule districts.</li><li>5. Committee will present findings and make a recommendation for a schedule.</li><li>6. Present the recommendation to the District administration.</li></ol>
3. Work with building administrators to identify and troubleshoot logistical challenges required by the recommended schedule.	<ol style="list-style-type: none"><li>1. Members of leadership team will review the recommendation and compile questions and solutions.</li><li>2. Staff will be given a presentation on the recommended schedule and given an opportunity to ask questions and give feedback.</li><li>3. Sender schools and the bus company are consulted about shifts in the day.</li><li>4. Principals discuss the shift with area principals in monthly meetings.</li><li>5. The whole committee will reconvene to develop a Frequently Asked Questions page.</li><li>6. The plan and FAQ will be shared with the Board for feedback.</li></ol>

<p>4. Communicate with all stakeholders the change in the instructional schedule and its implications on the school day.</p>	<ol style="list-style-type: none"> <li>1. An all-staff meeting is held to review the final draft of the plan.</li> <li>2. A letter is mailed home explaining the shift, the reason for it, and other pertinent details. The FAQ is included.</li> <li>3. Parents are invited to attend an informational meeting</li> <li>4. Website and social media will be updated to include the letter and FAQ.</li> </ol>
<p>5. Professionally develop teachers and leaders in the curricular shifts necessary for success under the new format.</p>	<ol style="list-style-type: none"> <li>1. Summer University courses will be developed.</li> <li>2. PD will be held during “lunch and learn” sessions.</li> <li>3. Before and after school sessions will be held for teachers.</li> <li>4. Summer curriculum work will focus on course redevelopment to work in the new schedule</li> <li>5. Support staff will be trained on any shifts in attendance or passing period changes.</li> </ol>

### Preparing for Change

*Strategy One: Develop a sense of urgency among leadership around the need for a schedule change.*

To prepare for such a shift, “leadership [must have] developed an understanding of the gap between the current reality of the schools and the demands of twenty-first century puts on high school graduates” (Wagner, 2006, p. 143). Strategy one, develop a sense of urgency among leadership around the need for a schedule change, allows for this preparation. To develop this urgency, the survey data from this study will be shared to reveal the dissatisfaction by teachers and students with the current schedule. In addition, we will review the stagnant test scores District A has experienced over the last several



years. Together, we will craft a vision of our AS-IS and TO-BE. We will seek a consensus to convene a committee to investigate a shift in the daily schedule and inform members of the board of the same. The same data will be shared with the members of the Board of Education.

### Envisioning Change

#### *Strategy Two: Research varied models to find one which best meets our needs*

To envision this change, Wagner (2006) reminds the reader that other educators and community members need to understand the urgency for change (p. 145). Strategy two, research varied models to find one which best meets our needs, activates this stage of whole-system change. Within this strategy, announcements will be sent to all teachers informing them a committee will be convened to investigate whether or not District A should consider changing the daily schedule. With the help of department chairs and principals, a committee representative of all departments will be formed. Data will be shared with the committee as will the AS-IS and TO-BE developed by the district leaders and teachers will be asked to add to the document. In addition, they will be asked to bring the topic to their next department meetings for discussion. After bringing the feedback, the committee will research other districts and participate in site visits to learn about the strengths and weaknesses of each. By the end of one school year, the committee will make a recommendation for which schedule District A should consider that will best allow us to achieve our TO-BE.

## Enacting Change

*Strategy Three: Work with Building Administrators to identify and troubleshoot logistical challenges*

Strategy three, work with building administrators to identify and troubleshoot logistical changes required by the recommended schedule, begins the enacting phase of change. Members of the leadership team will meet to review the recommendation and begin compiling questions and solutions relative to the new schedule. The staff in each high school will be made aware of the recommendation and invited to give input and raise questions or concerns at their next department meeting. In addition, sender schools and principals in the same athletic conference will be notified of the pending changes and their questions and concerns will be collected. The whole committee will reconvene to discuss reactions by all stakeholders to the recommended schedule and to write a Frequently Asked Questions page. These will be brought to the Board of Education for discussion.

*Strategy Four: Communicate with all stakeholders the change in the instructional schedule and its implications on the school day.*

Strategy four is to communicate with all stake holders the change in the instructional schedule and its implications on the school day. Once the school board is in support of the change, a letter will be mailed home to all families that will include the Frequently Asked Questions page and invite parents to a meeting about the schedule changes. In addition, an all staff meeting will be held to share the new schedule and answer questions. The website and other social media will also carry the information about the schedule change.

*Strategy Five: Professionally develop staff in the curricular and instructional shifts necessary for success*

Strategy five is to professionally develop teachers and leaders in the curricular and instructional shifts necessary for success under the new format. Summer University courses, lunch and learn sessions, and after school meetings will be held to build teacher competency around teaching under a new bell system. In addition, teachers will be paid to participate in summer work to begin developing curriculum better suited to maximize student learning under the new schedule. Furthermore, support staff will be trained on how to answer parent questions and how to manage attendance under the new system. The support staff will be trained during the opening day institute.

Any large scale change requires deliberate and careful planning that allows all stakeholders to prepare for, envision, and enact a needed shift in practice.

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## Appendix A

### Survey of Teachers in District A: Experiences Under a Traditional Schedule

1. In which school do you teach?
2. In which department (s) do you teach, or primarily teach?

**Select the answer which best describes the extent to which you agree or disagree with each of the following statements.**

3. I believe 50 minute periods are sufficient for me to work individually with all students as needed.

Strongly Agree      Agree      Disagree      Strongly Disagree

4. I believe 50 minute periods are sufficient to set-up and take down lesson/labs/projects.

Strongly Agree      Agree      Disagree      Strongly Disagree

5. I believe 50 minute periods are optimal for deep student inquiry into my subject, as opposed to shorter or longer periods.

Strongly Agree      Agree      Disagree      Strongly Disagree

6. I have sufficient time each day to meet with team members and colleagues.

Strongly Agree      Agree      Disagree      Strongly Disagree

7. I have sufficient time each day to plan and assess student work.

Strongly Agree      Agree      Disagree      Strongly Disagree

8. I have sufficient time each day to talk with parents and conference with students.

Strongly Agree      Agree      Disagree      Strongly Disagree

9. I would do more student-led/discovery learning if there were more time in which to implement it.

Strongly Agree      Agree      Disagree      Strongly Disagree

10. Students are often overwhelmed by the combined total of nightly homework assigned across all their classes.
- Strongly Agree      Agree      Disagree      Strongly Disagree
11. I sometimes feel rushed and/or overwhelmed by teaching so many classes in one day.
- Strongly Agree      Agree      Disagree      Strongly Disagree
12. I sometimes use direct instruction not because it is my favorite method, but because it is the most efficient way to cover material in a short period of time.
- Strongly Agree      Agree      Disagree      Strongly Disagree
13. I would appreciate slightly longer periods, even if it meant fewer periods each day.
- Strongly Agree      Agree      Disagree      Strongly Disagree
14. I believe students would learn more deeply if they had more time to apply my content in meaningful ways.
- Strongly Agree      Agree      Disagree      Strongly Disagree
15. Today's students need different skill sets than when I was in high school.
- Strongly Agree      Agree      Disagree      Strongly Disagree
16. The Common Core Standards and other revised content standards have increased rigor and complexity levels in my classroom.
- Strongly Agree      Agree      Disagree      Strongly Disagree
17. I make every effort to create an inquiry-based, technology-driven classroom, but feel restricted by the limited time I have with the students in any given period.
- Strongly Agree      Agree      Disagree      Strongly Disagree
18. Is there any information you would like to share about what you like or dislike about the 8 period, 50-minute class structure under which we currently operate?

## Appendix B

### District A Student Survey: Experiences Under a Traditional Schedule

1. Which school do you attend?
2. What is your current grade in school?
3. Please indicate your gender.
4. What is your ethnicity?

Select the answer which best describes the extent to which you agree or disagree with each of the following statements.

5. Having up to eight classes per day can feel long and overwhelming to me.  
Strongly Agree      Agree      Disagree      Strongly Disagree
6. There have been times that I needed to talk to my teacher during class, but we ran out of time.  
Strongly Agree      Agree      Disagree      Strongly Disagree
7. I would appreciate the chance to have more time during the day to seek help from my teachers or tutors and time to study while in school.  
Strongly Agree      Agree      Disagree      Strongly Disagree
8. The majority of my teachers use a lot of projects and hands-on activities and assessments in my classes.  
Strongly Agree      Agree      Disagree      Strongly Disagree
9. The majority of my teachers primarily lecture to us or have us sit and take notes for much of the period.  
Strongly Agree      Agree      Disagree      Strongly Disagree

**Some high schools have fewer classes offered each day, but they run between 75-90 minutes instead of 50. This would mean you wouldn't necessarily meet with each class every day, but every other day, and have more time during class to do projects/research/homework, etc. This is called a block schedule. Respond to each of the following questions with a block schedule in mind.**

10. I would like to see the school reconsider the current 8-period day.  
Strongly Agree      Agree      Disagree      Strongly Disagree
11. I would like to see my school consider a block schedule, or something like it.  
Strongly Agree      Agree      Disagree      Strongly Disagree

12. I would appreciate the chance to do more work in class with my peers in a longer class period.

Strongly Agree      Agree      Disagree      Strongly Disagree

13. I would support the notion of meeting with fewer classes each day, but for a longer period of time in each one.

Strongly Agree      Agree      Disagree      Strongly Disagree

14. I would like longer periods as long as there were a variety of activities during class.

Strongly Agree      Agree      Disagree      Strongly Disagree

15. I believe that kids in high school today need to learn different skills than when my parents were in high school.

Strongly Agree      Agree      Disagree      Strongly Disagree

16. Please rank the following 1-9 from MOST to LEAST important for your future.

Skill	Rank 1-9
Knowing how to take notes from a teacher lecture	
Reading and understanding complex texts and books	
Collaborating with others	
Problem solving	
Writing coherently and convincingly	
Critical thinking- thinking analytically about a topic so you can understand it from multiple angles	
Effective use of technology	
Applying theory to real-life scenarios	
Remembering facts	

17. Is there anything else you would like to share regarding your thoughts on the current 8-period day?

## Appendix C

### Survey of Teachers Working in a Block Schedule

1. How many years have you been teaching
  - a. Less than five
  - b. 5-10 years
  - c. 10-20 years
  - d. Over 20 years
  
2. Which type of block schedule are you working in
  - a. 4x4 Block
  - b. A/B Block
  - c. Other, please specify
  
3. Which best describes your teaching experience under a block schedule?
  - a. I have only taught under a block format.
  - b. I started teaching under a more traditional schedule, but have taught under a block for years.
  - c. I taught most of my career under a traditional schedule, and am fairly new to a block format.
  - d. Other

Comments:

**Select the answer which best describes the extent to which you agree or disagree with each of the following statements.**

4. Teaching under a block schedule requires shifts in my teaching methodologies.  
Strongly Agree      Agree      Disagree      Strongly Disagree

If you did shift your practice, please describe how:

5. Student academic performance improves under a block schedule.  
Strongly Agree      Agree      Disagree      Strongly Disagree

Comments:

6. Student engagement increases under a block schedule.  
Strongly Agree      Agree      Disagree      Strongly Disagree

Comments:

7. Student attendance improves under a block schedule.  
Strongly Agree      Agree      Disagree      Strongly Disagree

Comments:

8. Student anxiety levels reduce under a block schedule.

Strongly Agree      Agree      Disagree      Strongly Disagree

Comments:

9. Teacher anxiety levels reduce under a block schedule.

Strongly Agree      Agree      Disagree      Strongly Disagree

10. Under a block schedule, we have more time to collaborate with colleagues.

Strongly Agree      Agree      Disagree      Strongly Disagree

Comments:

11. Under a block schedule, I utilize more formative assessments.

Strongly Agree      Agree      Disagree      Strongly Disagree

Comments:

12. Under a block schedule, I have been able to implement more application –based assignments.

Strongly Agree      Agree      Disagree      Strongly Disagree

Comments:

13. Parent respond positively to the block schedule format.

Strongly Agree      Agree      Disagree      Strongly Disagree

Comments:

14. What is the greatest strength of a block schedule?

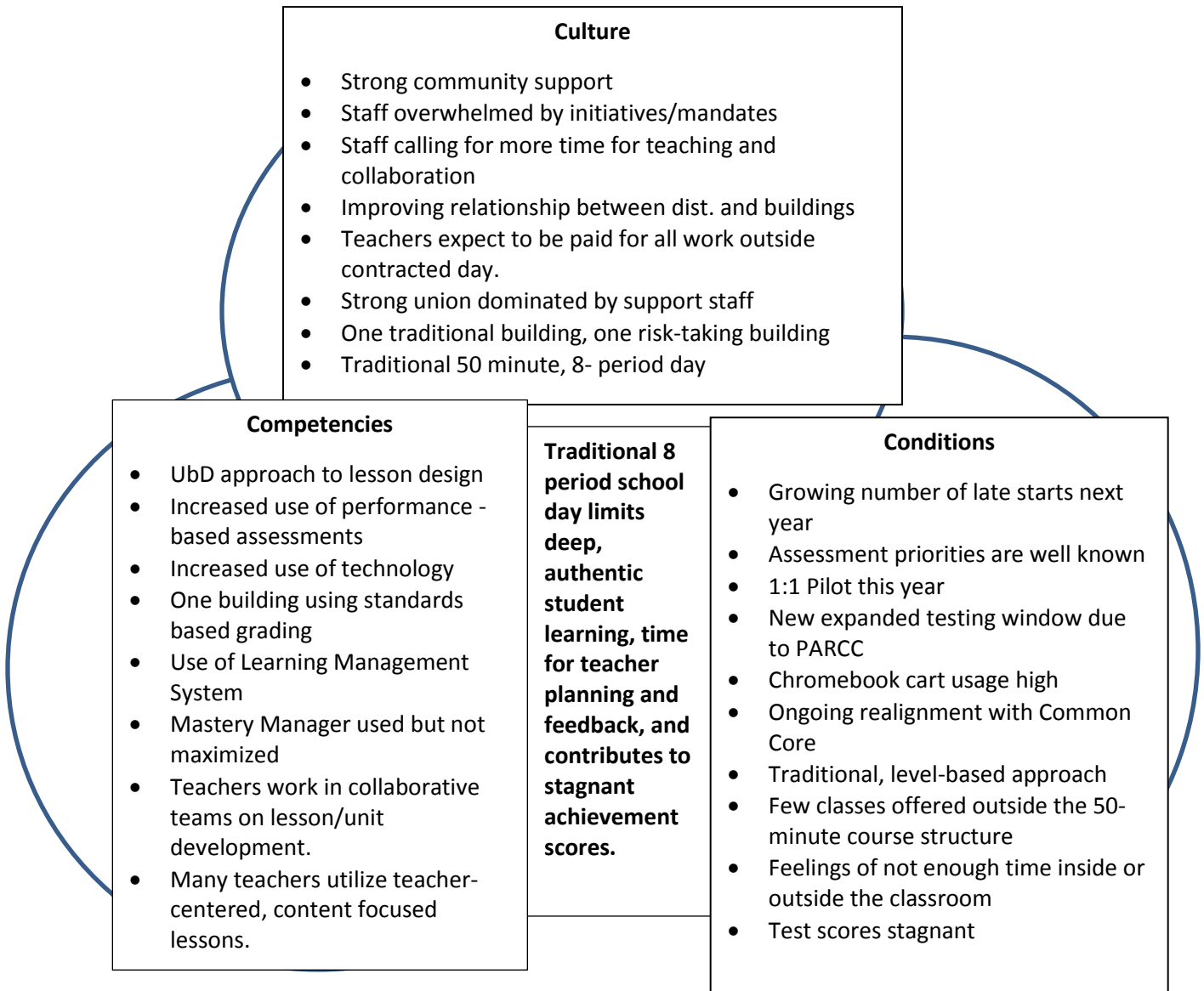
15. What is the greatest challenge of a block schedule?

16. What advice would you give a district transitioning from a traditional to a block schedule?

## Appendix D

### AS-IS CHART

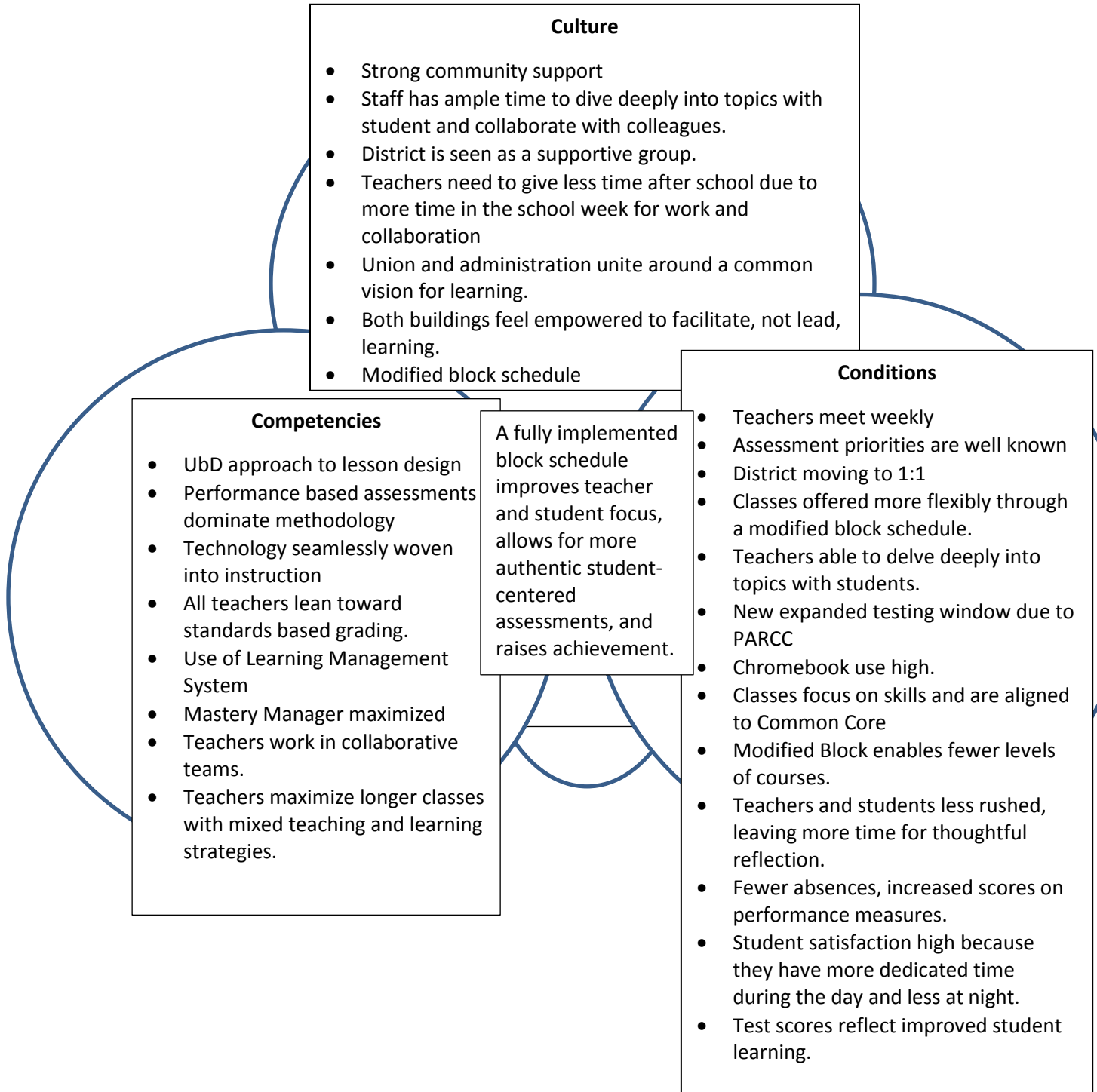
CONTEXT: Superintendent retiring in two years , teachers overwhelmed by many new state mandates like student growth and changes in state assessment, district priorities include the development of Type II assessments and shifting instruction to include an emphasis on student-led discovery and 21<sup>st</sup> century technologies and skills. There is a growing use of the PLC structure to allow for team collaboration. We have a common mission across the district and an award winning Advanced Placement Program.



## Appendix E

## TO-BE CHART

CONTEXT: Superintendent has retired and new super is excited to make change, teachers have adapted to shifts in state assessment and evaluation models, district priorities include the refinement of Type II assessments and instruction adjusts to the needs of 21<sup>st</sup> Century Learners. Teachers collaborate weekly. We have a common mission across the district and an award winning Advanced Placement Program.





## Appendix F

### Implementing a Block Schedule: Strategies and Action Steps

Strategy	Action Steps
<p>5. Develop a sense of urgency among leadership around the need for a schedule change.</p>	<p>5. Share survey data from District A regarding the</p> <p>6. Review student performance trends for past 5 years</p> <p>7. Seek a consensus to convene a committee to investigate a shift in the daily schedule</p> <p>8. Share same data with the Board of Education</p>
<p>6. Research varied models to find one which best meets our needs.</p>	<p>7. Announcement to all staff a committee will be convened.</p> <p>8. Identify committee members</p> <p>9. Share data with committee and have them bring a summary to their department meetings for feedback.</p> <p>10. Committee will visit other block schedule districts.</p> <p>11. Committee will present findings and make a recommendation for a schedule.</p> <p>12. Present the recommendation to the Board of Education.</p>
<p>7. Work with building administrators to identify and troubleshoot logistical challenges required by the recommended schedule.</p>	<p>7. Members of leadership team will review the recommendation and compile questions and solutions.</p> <p>8. Staff will be given a presentation on the recommended schedule and given an opportunity to ask questions and give feedback.</p> <p>9. Sender schools and the bus company are consulted about shifts in the day.</p> <p>10. Principals discuss the shift with area principals in monthly meetings.</p> <p>11. The whole committee will reconvene to develop a Frequently Asked Questions page.</p> <p>12. The plan and FAQ will be shared with the Board for feedback.</p>

<p>8. Communicate with all stakeholders the change in the instructional schedule and its implications on the school day.</p>	<p>6. A letter is mailed home explaining the shift, the reason for it, and other pertinent details. The FAQ is included.</p> <p>7. Parents are invited to attend an informational meeting</p> <p>8. An all staff meeting will be held to review final draft of the plan.</p> <p>9. Website and social media will be updated to include the letter and FAQ.</p>
<p>10. Professionally develop teachers and leaders in the curricular shifts necessary for success under the new format.</p>	<p>6. Summer University courses will be developed.</p> <p>7. PD will be held during “lunch and learn” sessions.</p> <p>8. Before and after school sessions will be held for teachers.</p> <p>9. Summer curriculum work will focus on course redevelopment to work in the new schedule</p> <p>10. Support staff will be trained on any shifts in attendance or passing period changes.</p>