Introduction

Elements of Early Childhood Education 7
Subcommittee: Early Childhood 7
Subcommittee: Early Childhood - Universal Preschool 12
Subcommittee: Early Childhood - Full Day Kindergarten 29
References 50

Elements of College and Career Readiness 59
Subcommittee: College and Career Readiness - Academies 64
Subcommittee: College and Career Readiness - Athletic Facilities 87
Subcommittee: College and Career Readiness - Performing Arts Facilities 108
Subcommittee: College and Career Readiness - Vocational Education 125
References 151

Elements of Students Life 161
Subcommittee: Student Life- Health and Wellness 161
Subcommittee: Student Life - Curriculum Innovations: Enrichment Opportunities 178
Subcommittee: Student Life - Curriculum Innovations: Assessment & Professional Development 196
Subcommittee: Student Life- Curriculum Innovations: Student Exchange Programs 207
References 212

Appendices
- Final Strategic Plan Report Prepared by EIRC - December 2016
- Subcommittee Meeting Presentations
- Minutes from Community Meetings
Strategic Planning: Innovative Ideas Start Here

Introduction

According to Kim and Parashar (2016) philosophers, merchants, generals, politicians, and academics have worked for centuries to create well-crafted approaches to help navigate a complex world in order to achieve success (2016, p. 12). Many organizations world-wide view strategic planning as an essential element in their ability to move forward. Almost all public school districts in the United States, regardless of size, geography, or demographics, have a strategic plan. With rising expectations, mounting student needs, tightening budgets, and increasing regulation, strategic planning is more critical than ever to navigate these challenges amid the competing interests of a wide variety of stakeholders (Kim and Parashar, 2016, p. 13). The authors purport that a district’s strategic plan needs to articulate priorities, initiatives, and actions that will achieve the long-term vision while balancing the reasonable and appropriate allocation of the district’s resources.

During the 2015-2016 school year, the Hillsborough Township Public School District embarked on a Strategic Planning process designed to identify our priorities for the following five years. Five stakeholder meetings were held between September and December 2015, wherein a professional facilitator led members of the community including teachers, administrators, board members, parents, community members, and students through various activities to surface broadly held views concerning the district’s priorities for the near future. Over 50 specific ideas emerged from the various meetings; however the ideas fell, for the most
part, into three distinct categories: College / Career Readiness, Early Childhood Education, and Student Life.

Specific areas of focus were further outlined for each of the three distinct categories. In the area of College / Career Readiness, redesigning the high school, including researching the feasibility of block scheduling, vocational training, and unique academies focusing on specific themes was identified. Additionally, the concept of building a new high school with a focus on supporting vocational / technical and STEM programs, high school redesign concepts, and improving athletic and fine/performing arts facilities was identified as a priority.

Two main broadly held areas of interest in the category of Early Childhood Education includes preschool for all and implementation of a full day kindergarten program. The Student Life category included many areas essential to enhancing the learning experience for students in both academic and non-academic areas. This included mental health resources, internships / partnerships with the community, STEM in younger grades, class size reduction, gifted and talented programs, and overall curriculum innovations.

Providing the Board of Education with information to make well-informed decisions regarding what and how to pursue the ideas identified in the stakeholder meetings provided an opportunity to embark upon a year of deep study and planning. The 2016 - 2017 school year became a “year of study” whereby work groups researched each of the three categories with specific deliverables from each group most assuredly resulting in recommendations to increase the educational investment made by the community supporting the building of a new high school and / or additional classrooms. Expectations of the work groups were clearly identified. A chairperson was identified for each committee and members of the Hillsborough school
community were solicited and recruited via a survey. Approximately 50 subcommittee members included teachers, administrators, and community members. Six meetings were scheduled between November 2016 and May 2017 with agendas and presentations developed for each. Moreover, a strategic planning subcommittee preliminary report was presented to the Board Governance committee in June 2017 and again in October 2017. The responsibilities for each subcommittee included submitting a report to the Board of Education which summarized the research supporting and refuting the value of each area, as well as the recommendations made by the committee including a rationale for the value each would add to the educational program for Hillsborough Township Public Schools.

Upon the Boards’ decision about that which they choose to pursue, the balance of the Strategic Planning work for the 2017 - 2018 school year will focus on developing and verifying the logistics. Inviting the voters to pass a referendum to fund the Strategic Plan will be scheduled for 2018. The completion of the identified projects and the implementation of the Strategic Plan will follow over the course of several years. The tax impact of a building referendum will be decreased by the retiring of significant debt during the 2021-2022 school year thereby increasing the attractiveness of the recommendations outlined in this report.

In planning for the development of the 2017 - 2022 Strategic Planning process, the Hillsborough Township Board of Education identified their vision, mission, and purposes as follows:

**Vision:** Learning empowers life beyond Hillsborough School District;

**Mission:** To provide a superior education for all students so they will lead us successfully and responsibly into the future; and
**Purposes:** Financial Independence - Equal Opportunity - Self- Actualization

The purpose of this report is to summarize the findings of the review of research conducted by each of the subcommittees of the larger Strategic Planning committee and to offer recommendations to the Board of Education in preparation for the development and implementation of the next Hillsborough Township School District Strategic Plan. While the charge of the subcommittee was clearly not one of advocacy but rather to provide high quality research resulting in a well informed Board of Education, the following report seeks to provide a myriad of research and information to support the recommendations outlined from the year-long work of each sub-committee.

A note of heartfelt gratitude goes out to all members of the Hillsborough Township school community who participated in the strategic planning sub-committees. The hours of tireless research, discussion, and debate sparked innovation, creative thinking, and reflection.

The members of the Early Childhood Subcommittee led by Mary Ann Mullady are Robyn Becker, Bethany Bossio, Debra Caldes-Mink, Sheila Cooper, Jessica Hagood, Lisa Heisel, Jodi Howe, Tammy Jenkins, Scott Jensen, Mary Beth Jorden, Keri Krawski, Donna Landon, and Amy MacCrea.

The members of the Strategic Planning College and Career Readiness Subcommittee led by Karen Bingert are Michael Callahan, Christopher Carey, Rose Cavaliere, Nicholas Clipperton, Michael Davis, Michael Fanizzi, Kim Feltre, Steven Jablonski, Tracey Knerr, Julianna LoBiondo, Kim Losch, Eric Rosenthal Michael Simborski, Jessica Smedley, Barbara Szabo, and Joseph Trybulski.
The members of the Student Life Subcommittee led by Lisa Antunes are Cynthia Assini, Lorraine Borek, Michael Callahan, Melissa Callen, Rebecca Cordisco, Susan Eckstein, Kim Feltre, Ashley Griffith, Mary Elizabeth Hughes, Leigh Anne Johnson, Scott Kallens, Steven Kerrigan, Barbara Parker, Nancy Patrick, Enrique Pincay, Debra Porowski, Suzan Radwan, Jessica Smedley, and Alyson Williams.

Administrators who offered overall support in the process include Joel Handler and Michael Volpe.
Elements of Early Childhood Education

Subcommittee: Early Childhood

Subcommittee Members:

Dr. Robyn Becker, Speech Language Specialist, Amsterdam Elementary School

Mrs. Deborah Caldes-Minck, Teacher, Triangle Elementary School

Ms. Jessica Hagood, Teacher, Hillsborough High School

Mrs. Mary Beth Jordan, Teacher, Woods Road Elementary School

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Introduction

The Early Childhood Education Subcommittee focused on the benefits and limitations of universal preschool programs. Throughout their research, they found data relating to school readiness, which includes closing the gap, social implications, and academic benefits, as well as research to support or deny the benefits of high quality programs, financial benefits of preschool enrollment, and societal effects of preschool.

Historical Overview

Early childhood education encompasses the education of children between ages birth and five. Child development experts consider this a critical time for developing the foundations for
thinking. It is during this time, that a child develops linguistic, cognitive, social, emotional and regulatory skills needed to be successful in school (Bakken, Brown and Downing, 2017). In time’s past, these skills were typically developed with the help of adults in the home. Today’s early childhood programs are a result of a gradual transition from home to the first step of the education ladder. The purpose and expectations of early childhood, in its origin, differs greatly from what we are experiencing today. As we trace through history, it is evident that Early Childhood Programs were influenced both by the needs of the children and the needs of society.

The schooling of young children had been the sole responsibility of the home or church from antiquity to around 1700s. The emphasis was on social skills and good behavior, the arts, and practical practices of life. Learning numbers and letters were typically the responsibility of the mother or nanny.

In more modern times, the responsibility of early childhood is moving more and more away from the home. It is now socially acceptable for the child to be educated outside the home at an early age. The work of John Amos Comenius, John Locke and Jean Jacques Rousseau developed the philosophical framework for Early Childhood. Johann Heinrich Pestalozzi, Friedrich Froebel, Maria Montessori, and Rudolf Steiner created the curriculum and methodology that generated programs which were specific to the needs of the young child. The work of Sigmund Freud, Jean Piaget and Erik Erikson solidified the philosophy. All of their work was cemented by one common thread, Early Childhood Education starts with the child and not with the subject matter. They all concurred that Early Childhood Education must be adapted to meet the nurturing needs and interests of the child (Elkind, 2007).

In 1837, Friedrich created the first kindergarten program in Germany. He believed
children acquire skills by using their natural curiosity and desire to learn. To that end, kindergarten programs included music, nature study, stories, dramatic play, crafts, puzzles and manipulatives. The importance of learning in a group was also highlighted with the introduction of circle time. In the United States, Margarethe Schurz opened the first kindergarten in Watertown, Wisconsin, in 1856 for her immigrant German community. Elizabeth Peabody started the first American English-language kindergarten in Boston in 1860.

In the 1900s, we saw a shift in purpose. Immigration and the Industrial Era provided a need for the supervision of children away from the home. Kindergarten programs were used to fight crime and prevent poverty (Milligen, 2012). The goal was not so much to teach reading and writing but to develop cognitive and emotional skills -- to teach the whole child (Elkind, 2007). A secondary purpose was to provide a healthy environment for children while their mothers worked in the factories. It was not until the 1900’s that we saw a real shift in purpose. Kindergarten programs were used to engage students in learning at an early age to prevent poverty (Milligen, 2012).

In 1965, the Head Start Program was launched. This program brought a renewed interest in preschool. The program was seen as a way to combat poverty and low student achievement in economically disadvantaged school districts. According to the National Institute for Early Education Research (NIEER), there is a push down of expectations on our youngest learners and a need to provide support for these new expectations. Under the Bush and Obama administrations the benefits of preschool were revisited to help close the achievement gap for our students at risk. The issue of “quality” came to the forefront, and revamping of programs took place. From 2007 to today, the percentage of Head Start teachers with bachelor's degrees
increased from 38 percent to 74 percent significantly increasing the quality of teaching in Head Start. Because of these improvements, millions of our nation's most at-risk children entered school in the of fall 2017 more ready than in years past. The Obama administration is responsible for the finalized new Head Start Performance Standards which included a process for a data-informed checks and balances and encouraging the use of certified teachers in all Head Start Programs (Mead, 2017).

According to National Institute for Early Education Research (NIEER) report, “Preschool, A State by State Update” (2017), 43 states, plus the District of Columbia and Guam, provide publicly funded preschool. Approximately 1.5 million 3 and 4 year old children across the country are attending publicly funded preschools. Florida, Oklahoma, Wisconsin, and the District of Columbia each serve more than 70 percent of their 4 year-olds. Another 18 states serve more than a third of these children. According to NIEER, seven states don’t fund preschool at all.

New Jersey offers free universal preschool in 35 low-income cities and towns and currently has more than 47,000 3 and 4 year olds enrolled. A preschool expansion for low-income 4-year-olds in 17 additional districts began this fall, and a push is underway to expand universal preschool to another 90 districts. Our public preschools are often considered a model for the rest of the country. The research supports that New Jersey preschools have significant and sustained effects on student achievement. (Rinde, 2015)

In 2017, kindergarten programs vary greatly across the country. Inequity in the types of opportunities offered to kindergarten students are apparent countrywide. According to the Education Commission of the States (2013), children are not receiving fair and equitable early
childhood experiences. Fifteen states plus DC mandate kindergarten attendance. Most states require districts to offer at least a voluntary half-day program. Alaska, Idaho, New Jersey, New York, and Pennsylvania are the exceptions. According to Melissa Stager, Somerset County Education Specialist, only three districts do not presently offer full day kindergarten in Somerset County: Bridgewater (who is planning to implement one in the near future), Hillsborough Township, and Montgomery. In New Jersey, universal preschool and full day kindergarten are mandated in School Authority Development (SAD) Districts.
Subcommittee: Early Childhood - Universal Preschool

Introduction

Preschools are programs designed for children before they enter kindergarten. Presently, there is not a uniform design for these programs, nor expected outcomes. The quality of early childhood programs varies greatly even within the same community. Preschools are sometimes created to meet the needs of a targeted population as a means of social engagement, intervention, child care, play support, and/or enrichment. As a contrast, universal preschool is the call to use public funding to ensure that high quality preschool is available for all families. Some of the qualities of a high quality preschool program include, but are not limited to: certified teacher, language/play based program, center-based instruction, accountability, and family involvement. New Jersey has set an example for high quality universal preschools. It sets high standards that every classroom must meet and provides extensive support and guidance.

The early childhood education subcommittee focused on the benefits and limitations of universal preschool programs. Throughout their research, they found data relating to school readiness, which includes closing the gap, social implications, and academic benefits, as well as research to support or deny the benefits of high quality programs, financial benefits of preschool enrollment, and societal effects of preschool.

Review of the Literature/Research Not Supporting the Implementation of Universal Preschool

Preschool Academic Gains Fade by Grade Three

Much of the preschool research indicates that academic gains were made as a result of a
child attending a preschool program during the preschool years. However, there is research to support that these gains fade by grade three.

A federal study on Head Start published in 2011, found for most in the program, academic benefits faded by third grade. There was one exception: Children from at-risk families who enrolled at age 3 showed sustained academic gains through third grade children.

In 2009, Vanderbilt University’s Peabody Research Institute, in coordination with the Tennessee Department of Education’s Division of Curriculum and Instruction, launched a rigorous, independent evaluation of the state’s Voluntary Prekindergarten program (TN VPK). Three thousand children were randomly assigned to TN VPK classrooms and tracked through the state database.

What the study found was that upon entering kindergarten, the children attending the pre-K programs scored higher on math and literacy assessments and were rated by their kindergarten teachers as more socially and behaviorally ready for school than were children who had not attended the public pre-k program. Specifically, children who were dual language learners seemed to benefit more from the pre-k program. However, by the end of the kindergarten year, these differences had vanished. The children who had been in the pre-k programs were on par with those who did not attend a pre-k. This continued to be the case at the end of first grade. By second grade, children who had not been in the pre-k program were scoring higher than program children on the academic assessments and were rated more positively by their teachers.

David Armor (2014) published a report summarizing the evaluations of preschool programs. Head Start, Early Head Start, and Tennessee Preschool programs were included in
this report. He reports that the academic benefits of preschool programs are modest and these gains fade after children enter elementary schools.

“...although preschool programs evaluated by the most rigorous research designs show modest but statistically significant improvements during the preschool years, these gains fade as children move into the kindergarten and first grades. The fadeout might be more accurately described as “catch up,” because the cognitive growth that occurs for all children in the early elementary grades is far greater than the gains during the preschool years, so it may be that children who did not have preschool simply caught up with those who did” (Armor, 2014).

Lack of Funding

A major concern for implementing universal preschool is the cost and lack of funding. Expanding public schooling to cover all three and four year olds would require a significant increase in local spending (Armor, 2014). It is estimated that the cost would exceed $12,000 per student. That does not include the facilities cost. Even out-of-the-box thinking leaves us with a huge price tag. “Forbes says that the costs to start a childcare center if you're taking over an existing facility can run at least $30,000 (Huntington, n.d.).”

Review of Literature/Research Supporting the Implementation of Universal Preschool

Enrollment in Preschool Increases School Readiness.

The views on the benefits of preschool have shifted in the more recent years. President Obama called for universal preschool in his 2013 State of the Union Address which underlined
the national shift in thinking about early childhood education. This was driven by advances in neuroscience and a growing urgency about the need to close the achievement gap between poor and privileged children. A closer look at preschools found the ones with a language-based program, consistent expectations with a measure of accountability, small student-teacher ratio, and high quality teachers yielded the strongest benefits. The more current research validates the important role a quality preschool plays in child development. The data demonstrates a strong correlation between preschool education and school success. The work of present day scholars indicates that a quality preschool experience frames the child’s learning with strong foundational skills in all areas and is instrumental in closing the achievement gaps. As such, preschool sets the stage for academic and life success.

“For all students, a high-quality early education is critical to ensuring their long-term academic success. Early learners need to understand why people read and write in order to be motivated to excel in their own literacy development… Effective early literacy instruction provides preschool children with developmentally appropriate settings, materials, experiences, and social support that encourage early forms of reading and writing to flourish and develop into conventional literacy” (Brown, 2014 p.35).

The growing expectations for a child entering kindergarten has increased dramatically in recent years. Kindergarten readiness is a broad term and can be defined under separate lenses or a combination of three elements: intellectual, social and emotional readiness. As children enter kindergarten, there is a distinct inequity in regards to the level of kindergarten preparedness. The expectations vary within the education community but do have some common themes.
Generally speaking, intellectually, children are expected to enter kindergarten with some familiarity with print, some letter and sound recognition, number sense, and beginning writing skills. Emotionally and socially students should enter kindergarten having an enthusiasm for learning, solid oral language skills, ability to listen, desire to be independent, ability to play with others, and strong fine motor skills.

A prerequisite for literacy development is the acquisition of language. According to the National Center of Statistics, lack of social skills (79%), delayed speech (78%), and deficient self-help skills/resilience (69%) are believed to be the most common reasons for children not being at the expected school readiness level when they enter school. Alarmingly, the same report suggests that 34% of students entering kindergarten do not possess the oral language skills necessary to translate into reading skills.

Dr. Neuman (2014) and her colleagues examined 55 preschool classrooms examining instruction which creates opportunities for students to engage in stimulating literacy content and cognitively engaging talk. Based on her findings, Dr. Neuman concluded that preschools which have a strong language-based component, rich content, free exploration and manipulation of objects, make-believe play, and creative games make important contributions to preschoolers' literacy development and contribute greatly to school readiness.

“(Preschool) classrooms like this help children build knowledge networks that enhance their foundational knowledge in core subject areas—knowledge that acts as a catalyst for kids to acquire more knowledge. In content-rich settings, early literacy skills support children's developing thirst for learning. Such classrooms have the potential to close the knowledge gap” (Neuman, 2014).
The University of Portland conducted a study which examined the benefits of preschool education through a literature review and a data analysis of the Portland Public School’s preschool program (Effects of preschool programs, 2015). The data included participation results, kindergarten DIBELS Letter Naming fluency assessment, and third grade OAKS scores. The results of the study indicated that the majority of the students who attended Portland Public School pre-K programs were “kindergarten ready” and received passing scores on the OAKS reading and math.

“The analysis found that children who attended one year of preschool gained about a third of a year in language, reading, and math skills above and beyond the learning that occurred for those without access to preschool. Students who attended preschool for two years had further gains, most notably in disadvantaged students” (Effects of preschool programs, 2015).

Students who participate in early intervention as part of a preschool program were found to have academic and social benefits which made them more ready for the kindergarten experience. DeLucca, Bailet, Zettler-Greeley, and Murphy (2015) conducted a multi-year research project where preschoolers considered at risk received targeted, supplementary literacy instruction. In the study, 2,777 children were screened for literacy readiness in the fall of their prekindergarten year. Of these, 429 students scored in the at-risk range on the Get Ready to Read Early Literacy Screener. Participating students were chosen from all zip codes within the school district. These students receive targeted instruction in literacy readiness skills.

“Results report children who received prekindergarten Tier 2 early literacy intervention were performing in the developmentally appropriate range in
kindergarten...The findings also indicate that children who received prekindergarten early literacy intervention were performing in the developmentally appropriate range in kindergarten with scores indicative of low-risk for future reading delays” (DeLucca, Bailet, Zettler-Greeley, & Murphy, 2015).

Recent studies indicate that the benefits of preschool are varied and sustainable.

“Early childhood intervention programs have been shown to yield benefits in academic achievement, behavior, educational progression and attainment, delinquency and crime, and labor market success, among other domains” (Karoly, Kilburn, & Cannon, 2005).

A study done by the researchers at the Duke Center for Child and Family Policy analyzed data concentrated on one million children who were enrolled in the North Carolina’s preschool program during the years of 1988 and 2000. The study included children from the state’s Smart Start Child Care Program and More at Four (NC Pre-K). Students in the state programs had higher test scores, less grade retention, and fewer special education placements through fifth grade. The academic gains were equivalent to a gain of more than six months of reading instruction and more than three months of math. The children’s mean scores in grades three, four and five were significantly higher than the students who did not attend an early childhood program (Stancill, 2016).

The Preschool Subcommittee conducted a small pilot study to study the impact of a preschool education on our students’ literacy development. They collected the data from April grade 2 Developmental Reading Assessment-2 [DRA-2] (Pearson, 2012) scores for literacy. The
scores from ten students were randomly chosen from each of our 6 elementary schools and the results are as follows:

<table>
<thead>
<tr>
<th>Preschool Attendance</th>
<th>Number of Students</th>
<th>Mean DRA-2 Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>41</td>
<td>5.02</td>
</tr>
<tr>
<td>NO</td>
<td>17</td>
<td>3.35</td>
</tr>
</tbody>
</table>

While further investigation is warranted, initial findings suggest that students in Hillsborough who attend preschool outperform students who did not attend preschool with respect to literacy outcomes. These results were still apparent at grade 2. The results are consistent with the current research findings.

**Financial Benefits**

According to the study done by the researchers at Duke Center for Child and Family Policy study, both of North Carolina Early Childhood’s state programs proved to have financial benefits. The analyzed data showed that enrollment in these programs reduced the odds of children entering special education. The More at Four Program cut the chances of its participants entering special education by 48 percent. The chance of being retained in elementary school was lowered by 29 percent. An investment of $1,110 per child reduced the likelihood by 32 percent that those students enrolled in the More at Four Program would be placed in special education by the end of 3rd grade. An investment of the same monies in the Smart Start Early Childhood initiative reduced the likelihood by 10 percent (Stancill, 2016).

Rand researchers synthesized what is known from the scientifically sound literature and
discerned that there are economic gains associated with investing resources in early childhood education. These gains impact school and society savings (Karoly, Kilburn, & Cannon, 2005). Researchers Timothy Bartik, William Gormley Jr., Jonathan Belford, & Sara Anderson find in A Benefit-Cost Analysis of the Tulsa Universal Pre-K Program (2016) that preschool participants had a decrease in grade retentions which demonstrated its benefits modestly in future student earnings. Grade retention is associated with lower earnings and higher rates of crime in adulthood.

“The benefits of preschool ($195,621) outweigh the costs ($15,166) through education savings, tax on earning, welfare savings and crime savings” (Karoly, Kilburn, & Cannon, 2005).

“Well-designed early childhood interventions have been found to generate a return to society ranging from $1.80 to $17.07 for each dollar spent on the program” (Karoly, Kilburn, & Cannon, 2005).

“The most recent studies from Tulsa, Oklahoma, looking at three and four year olds, show a return on investment for low- and moderate-income students between $2 to $4” (Karoly & Auger, 2016).

“The savings come from decreased rates of special education and grade retention (“being held back”), as well as increased graduation rates” (Success Starts Early, An Indiana Road Map, p. 9).
“Children who attended high quality preschool were more likely to graduate from elementary and high school, live healthier lives, have fewer social problems, earn more money than those who had not attended preschool, and have children who are likely to succeed” (Morrow, 2005).

Least Restrictive Environment

In 2014, Hillsborough Township Public School District was one of 75+ school districts across the state to be named as part of a Settlement Agreement for non-compliance for meeting the educational needs of students with disabilities, aged 3-5, in the least restrictive environment. According to the Settlement Agreement, “This matter involves claims by Plaintiffs that children with disabilities in New Jersey schools are not being educated in the least restrictive environment (LRE), in violation of the Individuals with Disabilities Education Act (IDEA), and its implementing regulations, New Jersey Special Education Statute, and Section 504 of the Rehabilitation Act” (Disability Rights New Jersey, et al. v. New Jersey Department of Education, et al., 2014). Providing high quality universal preschool would assure that our children with special needs will be in the least restrictive environment.

Benefits for Special Groups - Reducing Achievement Gap

Children come to school with varying backgrounds, home lives, and abilities. Minority children and children from low-income families sometimes enter kindergarten underprepared to succeed in school. The skills they lack are often the same skills that are used to predict school success. Experts believe this lack of preparedness contributes greatly to the achievement gap.
When the achievement gap is prevalent at the start of school it only widens and becomes harder to close.

The NIEER-Achievement Gaps Report (2016) includes meta-analyses of Early Childhood Programs and looked at the relationship between high quality early children programs and the achievement gap. Included in this study was data from the High/Scope Perry Preschool Project, the Abecedarian Project, and the Chicago Child-Parent Centers, and evaluations of larger scale publicly funded programs including Head Start (a federal program for at-risk children) and universally available preschool programs in Boston, New Jersey’s Abbott school districts, and Oklahoma.

While the evidence from this report supports that children from all socioeconomic groups backgrounds benefit from a high quality preschool program, the biggest benefit is reaped by the economically disadvantaged and/or minority child.

“The impact of pre-k and half-day kindergarten was the greatest for Hispanic children, black children, English Language Learners (ELL) and children from low-income families” (Hull, 2012).

“High-quality UPK could dramatically reduce or even eliminate gaps in reading and math achievement. Kindergarten entry between children of color - specifically African American and Hispanic children and their white peers, as well as gaps between low-income children and their higher-income peers” (Friedman-Krauss, Barnett, & Nores, 2016).
“Longitudinal study from preschool to age forty found that preschool results in higher rates of high school graduation, basic achievement, earning potential and lower rates of arrest” (Schweinhart, Montie, Xiang, Barnett, Belfield, & Nores, 2005).

Of significant note is that, while “dual language learners” is a group that benefits greatly from a preschool experience, their enrollment is less than non dual language students. According to the report, “Dual Language Learners: A Demographic and Policy Profile for California,” dual language learners make up 60 percent of California children ages 8 and younger. Only 43 percent of those children were enrolled in pre-K programs. In addition, the report found that 57 percent of dual language learners come from low income families as compared to 35 percent of non dual language learners. This discrepancy in pre-K is evident statewide (Hopkinson, 2017). Based on these findings, it can be argued that universal preschool could be instrumental in helping to close the achievement gap.

One of the most closely watched states in regards to high quality, universal preschool is Oklahoma. In 1998, it offered universal preschools in its public schools. The teachers are required to have a BA and are early childhood certified. The program has a strong family support component, It also incorporates academic, social and emotional components into its curriculum. Today the vast majority of Tulsa’s preschool programs are in public schools. The rest are in child care centers or head start programs (Sanchez, 2016).

Deborah Phillips, a professor of psychology at Georgetown University, spent a decade tracking students enrolled in Tulsa’s biggest Head Start Program and found clear benefits, years later, for these students. According to Ms. Phillips:
“Children who attended Head Start had higher test scores on state math tests [by eighth grade]. They were less likely to be retained and less likely to display chronic absenteeism. These are highly consequential outcomes that we know are predictive of high school graduation, college enrollment, even earnings.”

“Low-income children who come out of [Tulsa's CAP Head Start program] defy teachers' and principals' expectations of them based on their background” (Sanchez, 2016, p. 1).

**Possible Budget Considerations**

The budget should include provisions for:

**Personnel**

- In general education classrooms, a class maximum of twenty children, with one lead teacher and one assistant teacher.
- In an inclusion classroom, a class maximum of fifteen, with one lead teacher and two assistants OR one general education teacher, one special education teacher, and one assistant.
- Fifteen to twenty classrooms and certified staff to support those facilities (could be divided amongst the schools in the district)
- Preschool Director or Supervisor - District
- Site Supervision - Principal
- Age-appropriate busing and aides to accompany children on the bus
Additional support services to accommodate for preschool needs: nurses, speech therapists, occupational therapists, physical therapists

Related arts staff to accommodate for extra children

**Facilities and Furniture**

- An early childhood center OR preschool on elementary school campuses OR use of high school facility if new high school is built OR community childcare spaces
- Expansion of early childhood career readiness for high schoolers -- more opportunities to allow high school students to assist in classrooms. In the short term, changing schedule and increasing instructional time for current Preschool Child program
- Ensure that preschool classrooms contain size-appropriate bathrooms and sinks or that they are added to classrooms that do not currently have them
- Preschool-appropriate furniture and materials for each classroom
- Outdoor play equipment and separate playground for preschool and/or indoor movement/exploration room
- Preschool storage closet to rotate toys/store toys not in use

**Curriculum and Professional Development**

- Expansion of early childhood career readiness for high schoolers -- more opportunities to allow high school students to assist in classrooms. In the short term, changing schedule and increasing instructional time for current Preschool Child program
- Consistent curriculum across the district (Creative Curriculum is currently used)
● Training for Creative Curriculum and Developmentally Appropriate Practice (DAP) with National Association for the Education of Young Children

**Recommendations with Rationale**

Children determine the future of our society through many aspects. To be able to make a positive impact on our youngest learners would allow for ripple effects across the child’s grade-school experience. Studies have shown that preschool attendance affects a child’s academics as well as aspects of their social and emotional development across their lifespan. Children enrolled in preschool are more prepared for future grade levels in academic areas, such as math and literacy, are less likely to be retained in a grade level later on, and if given the opportunity for early intervention, will be less likely to need special services or need it for a shorter amount of time. In addition, preschool is good for society, as those enrolled are less likely to drop out of school (leading to more education), have less delinquency, and have fewer teen pregnancies. Some of this may be attributed to their experiences in preschool and ability to develop the necessary social and emotional skills needed to be successful contributors to society. According to Tayler (2015), children who are able to regulate their behavior and emotions are more prone to relate well to others. They are more inclined to benefit from group settings such as school. Children need to moderate and manage their behavior in different social settings. Encouraging young children to develop self-regulation skills so that they can participate in group settings helps to build a child’s executive functions, mental flexibility, and working memory. These skills contribute to a child’s school readiness skills and overall academic success.

Therefore, if given the opportunity to provide universal preschool in Hillsborough Township, our district could be a catalyst in strengthening the future of our young children.
Children who have received quality preschool in our district, regardless of income or ability, could contribute back to our society in ways that we have yet to imagine.

Based on these findings, it is the recommendation of the Early Childhood Subcommittee that Hillsborough Township Public Board of Education take the next steps in adopting a Universal Preschools for our three and four year old children.

**Possible Options for Implementation:**

1. Universal, non-tuition, full day 4 year old preschool program, half day 3 year old program (morning preferred)
2. Universal, non-tuition, full day three and four year old preschool programs.
3. Universal, non-tuition, half day three and four year old program.
4. Tuition based program for three and four year old children (scholarship for at risk students).

**Closing**

It is the goal of Hillsborough Township Public Schools for all of our students to have long-term academic success coupled with strong social, and communication skills which will prepare them to become contributing members of our future society. This preparation should start with their early years in preschool. Regardless of the barriers and limitations, the research provided in this report provides a platform which demonstrates sound reasoning for adopting a universal preschool program -- the first in Somerset County. With all of the current resources, the top-notch instructional staff that Hillsborough Township Public Schools employs and careful planning, our township has the ability to provide high-quality programs to the youngest learners
through universal preschool. By doing so, children will be more ready for the kindergarten experience, the achievement gap will be addressed and financial gains will be experienced both now and in the future. In addition, we will be providing the least restrictive environment for our students with special needs.

President Barack Obama has been a long time champion for the Universal Preschool Movement. His words summarize the findings of this committee.

“In states that make it a priority to educate our youngest children, like Georgia or Oklahoma, studies show students grow up more likely to read and do math at grade level, graduate high school, hold a job and form more stable families of their own, We know this works. So let’s do what works and make sure none of our children start the race of life already behind. Let’s give our kids that chance.”

The Early Childhood Subcommittee highly recommends that we make the preschool child a priority. It is time to give ALL of our young learners a strong foundation to create their own blueprint for success! Universal Preschool, it is not a program, it is an opportunity! Let’s give our students this opportunity!
Subcommittee: Early Childhood - Full Day Kindergarten

**Subcommittee Members:**

Ms. Bethany Bossio, Grade 1 Teacher, Amsterdam Elementary School

Ms. Sheila Cooper, District Literacy Supervisor K-12

Ms. Lisa Heisel, Principal, Triangle Elementary School

Ms. Jodi Howe, Principal, Woods Road Elementary School

Dr. Tammy Jenkins, Principal, Sunnymead Elementary School

Mr. Scott Jensen, Vice Principal, Auten Road Intermediate School

Ms. Amy MacCrea, Grade 2 Teacher, Triangle Elementary School

Dr. Mary Ann Mullady, Principal, Amsterdam Elementary School

**Introduction**

According to a report done by Hanover Research (2010), there is no clear consensus regarding the long term effects of a full day kindergarten program among today’s educators. Much of the research in regards to the long term academic achievement on this topic has come under scrutiny for insufficient controls and unreliable methodology. The longitudinal studies often end in the early stages of education and have no controls over the environmental variables.

Another factor influencing the research on effects of a full day kindergarten program is the fact that very often full day kindergarten is implemented to give students at risk an opportunity to enhance their learning. As a result, studies involving full-day kindergarten programs are typically housed by disadvantaged students. This clouds the research because the
studies are only looking at a specific targeted population, the samples are limited, and there are many environmental attributes that may be affecting the outcomes of the studies.

“For example, a 2008 analysis of the Early Childhood Longitudinal Study, the best national snapshot of the kindergarten experiences of students in the United States,** found important differences between the students who attended full-day kindergarten and those in half-day classes. Full-day students were statistically more likely to live below the poverty line and be of low birth weight. Their parents were more likely to be unmarried and have ended their education with only a high school degree. If any of these characteristics of the full-day group make students less likely to succeed later on -- and everything we know about student backgrounds and outcomes tells us they do -- then they would make it appear as though full-day kindergarten isn’t as effective as it actually is” (Libassi, 2014, p.1).

“Prior research on full-day kindergarten often has focused on comparing the academic outcomes of full-day versus part-day kindergarteners. Such a technique, in essence, aggregates all full-day kindergarten programs into a single category as if the programs are identical in nature, even though research demonstrates that kindergarten classrooms vary in the way reading instruction is organized and delivered. For example, kindergarten programs can differ in terms of time devoted to reading instruction, grouping arrangements, instructional activities, curricular emphasis, and other instructional aspects (Connor, Morrison, & Katch, 2004; Meyer, Waldrop, Hastings, and Linn, 1993; Nielson, 1996; Pianta, LaParo, Payne,
Cox, & Bradley, 2002). As a result, studies that compare full-day and part day kindergarten programs without considering the classroom instructional environment may be concealing or distorting differences in how such programs influence child outcomes” (Rathbun, 2010, p. 2).

Educators opposed to a full day kindergarten program cite cost of implementation and unsustainable academic benefits as the contributing factors for opposition. Those supporting full day kindergarten cite both academic and non academic gains, closing the achievement gap for students at risk, and inequity.

For the purposes of this study, we are assuming full day kindergarten program follows the typical elementary school bell schedule. Included in the child’s day is a focus on social skill development and play-based activities. Research has shown that programs which focus on developing a child’s cognitive, physical, and social understanding display the necessary components of a quality full day kindergarten program.

The full day kindergarten subcommittee focused on the benefits and limitations of implementing a full day kindergarten program versus a half day program in Hillsborough Township Public Schools. Throughout their research, they found data relating to academic achievement, social and emotional implications, special education, and remediation, closing of the achievement gap, and cost effectiveness.

**Review of the Literature/Research which Does Not Support a Full Day Kindergarten Program**

**Full Day Kindergarten Provides Few, If Any, Long Term Academic Advantages**
While few would argue that a full day kindergarten program enriches student learning in some manner during the kindergarten year, there are many who argue that this learning is not sustainable and fades as early as first grade.

“Perhaps the most troubling finding of the present study is that the academic benefits of full-day kindergarten subside soon after children leave kindergarten. This is congruent with past research that has found that the academic benefits of full-day kindergarten are relatively short lived (Karweit, 1987; Ohio State Legislative Office of Education, 1997; Weiss & Offenberg, 2002). (LiGining, Maldonendado, Votruba, 2008: p. 974).

Brownell et al. (2015) conducted a longitudinal population-based study in Manitoba, Canada. The area has a moderately strong economy. The study followed 15 kindergarten cohorts using multiple sources to measure academic growth in grades 3, 7, 8 and 9. Data was collected on both social and academic growth patterns: math, literacy and student engagement. Out of the six indicators, only three statistically significant positive findings were found. They were limited to math in the low socioeconomic schools.

Milligen (2012) investigated full-day kindergarten to determine if there was a relationship between attendance in a full day kindergarten program and later academic success. A total of 208 students from a school district in southern California participated in the study. The study included 165 students who had attended the traditional half-day kindergarten program with 43 attending a hybrid all-day kindergarten program. He found that attending a full day kindergarten program did not have an impact on increased academic performance in older grades.
Another longitudinal study done on the impact of a full day kindergarten program on student achievement in later grades in 2014 by Cirigliano et al. Information was gathered on a total of 597 students who participated in either full or half day kindergarten. These students were from five cohorts who attended kindergarten in a large suburban school district in Illinois. The findings mirrored the findings of Cooper et al. (2010) and indicated that any academic gains gleaned from a full day kindergarten program faded after the third grade.

A study with the ECLS-K data found that the reading and mathematics achievement gains from kindergarten through third grade (for children attending both public and private schools) was not higher for those who had attended a full-day compared to a half-day kindergarten program, suggesting that any advantage associated with a full-day program at the end of kindergarten may not persist three years later (Rathbun and West 2004).

**Full Day Kindergarten is not Cost Effective**

Full day kindergarten is a costly investment for any school community. Implementation includes an increase in supplies, personnel, and facility costs. Some researchers have found that the cost outweighs any perceived benefits.

Economist Philip DeCicca of McMaster University (2007) analyzed kindergarten and first grade reading and math test scores for children in southern California from 714 schools who attended half-day or full day kindergarten programs. He found that children who attended full-day kindergarten scored higher than students in part time kindergarten programs in reading and math. However, by the end of first grade, the gains faded. He found the results to be the same for both genders and for black and Hispanic students.
Full time Hispanic children actually scored lower than their part time counterparts at the end of first grade. Professor DeCicca concluded that due to the short term sustainability of academic gains resulting from participation in a full day kindergarten program, the investment is not cost effective. The same conclusion was drawn from research conducted by Cirigilano et al. (2014).

The extra funds required to operate full-day kindergartens pertain mostly to the costs of additional personnel and facilities. There is a modest cost saving from reduced transportation demands. However, kindergarten teachers in schools with half-day programs can instruct two classes per day, full-day programs generally double the number of kindergarten teachers required. Given the large price tag associated with increased personnel, this is a considerable investment for the school district (Lee et al., 2006).

**The benefits of Full Day Kindergarten are not universal.**

It is the opinion of many educators, that a child’s experiences during the preschool years greatly impact their readiness for school. This being the case, many school districts with students at risk used the implementation of full day kindergarten as an intervention. The role of the program for these early childhood experiences is to help close the achievement gap. Several studies indicate that there are benefits specific for targeted populations only.

Brownell et al. (2015) conducted a longitudinal population study to study the academic impact of a full day versus a part day kindergarten program. The findings of this study indicate that there are few, if any, benefits of universal full time kindergarten as opposed to part day kindergarten but there may be some benefits for targeted groups. Full day kindergarten
programs targeted at low-income areas showed long-term improvements in numeracy for low-income girls.

**Full Day Kindergarten Does not Reduce the Number of Special Education Referrals.**

Many educators call for full day kindergarten to create opportunities for early intervention and early remediation. There are several studies which report that while remediation may be effective for future academic achievement, the impact of the number of special education referrals was not influenced.

Cryan, Sheehan, and colleagues (Cryan et al., 1992; Sheehan, et al., 1991) conducted a longitudinal study of half-day, full-day, and alternate-day kindergarten experience as related to later achievement, grade retention, remedial services, and special education services. They found that at the end of first grade, full-day kindergarten students did show a reduction in remedial services but there was no reduction in special education services. Gullo (2000) and Evans and Marken (1983) found similar results when kindergarten students were followed through second grade. Special education services were not impacted.

**Potential Negative Impacts of Full Day Kindergarten for the Students.**

There are educators who are concerned that moving to universal full day kindergarten may result in the creation of programs which are not academically or socially healthy for a five year old child. Given additional time in kindergarten, higher developmentally inappropriate expectations may be made. The unintended consequences may result in pushing first-grade material down to kindergarten, increased child fatigue, separation anxiety, less time for informal
learning, still unmet childcare needs, diminished parent responsibilities, increased costs, and its implementation may take resources away from more effective interventions (Cooper et al., 2010).

**Review of the Literature/Research Which Supports a Full Day Kindergarten Program**

**Full Day Kindergarten Provides More Time for Teachers to Get to Know their Students.**

The process of teachers knowing children as learners is a challenging one, especially with classes of 22 students. In a full day setting, teachers would have more time to get to know their students, identify and address their learning challenges early. According to the Center of Evaluation and Education Policy (2004), doing so would save money and resources over the long term and increases the odds that children will be successful later in school.

Brewster and Railsback, 2002, echoed this understanding. They claim that full-day kindergarten improves school attendance and provides more time for more individualized instruction that can lead to earlier identification and remediation of learning problems.

**Students who Attend Full-Day Kindergarten are Better-Prepared for First Grade.**

When children reach first grade, the expectation is that they hit the ground running. There is a social, emotional and academic profile for first grade readiness. Students need to be able to sit and attend, take turns, work together, work alone, and be ready to read, write and understand the concept of numbers on Day 1.

It is suggested that children in full-day K programs have more time to participate in meaningful learning activities than children in half-day programs do. Children who experienced
longer programs are better prepared for the transition to first grade, show significant gains in school socialization, and have enhanced social, emotional and behavior development than students in half-day programs (Children's Defense Fund, 2012).

Advocates argue that half-day programs do not allow enough time to both prepare children for first grade and attain goals for kindergarten. Additional time in a full-day program can be used to develop, both achievement and academic/nonacademic readiness skills. The full-day programs allow for more instructional time for prime content areas (Sege, 2012).

**Full Day Kindergarten Benefits Students Socially and Emotionally.**

The time constraints and academic demands of a half day kindergarten program limit the amount of time which is spent on socialization, learning centers, oral language skills, and learning through play. The development of these skills contributes to a student’s confidence, self esteem, and independence (Center of Evaluation and Education Policy, 2004).

According to Leong and Bedrova (2005), full day kindergarten allows children time to participate in more make-believe play and have opportunities to learn how to get along. This greatly contributes to students’ understanding of emotions and social relations.

New Jersey Department of Education Division of Early Childhood Education (2011) published a guideline to be used for kindergarten implementation. The guide recommends that play be a critical component of any kindergarten program. The authors argue that through play, children acquire higher-order thinking skills, stronger language, and social skills. In addition, imaginations are enhanced which helps to develop critical problem solving skills in our young learners.
Furthermore, it is recommended that learning centers should be available for open exploration and for specific content exploration (math, science, and literacy). These activities are considered a luxury for a part time kindergarten program but a necessity in educating the whole child. Research has shown that both self-selected and child-initiated activities have long-term benefits on children’s learning by promoting cognitive and social-emotional development.

The Children’s Defense Fund (2012) argue that full day kindergarten programs have more meaningful learning activities which prepare children better for the transition of first grade, have stronger school socialization skills, and have enhanced social and emotional behaviors. Interactive centers and opportunities for child-directed play helps children develop vocabulary skills, increase cooperation with peers, practice problem solving, and develop positive and confident attitudes towards learning (Children’s Defense Fund, 2012).

**Students who Attend a Full-Day Kindergarten Program Demonstrate Higher Long-Term Achievement than those who Attend a Half-Day Program.**

Studies have been published which refute the findings that attendance in full day kindergarten does not lead to enriched and sustained academics in the future.

The Evansville-Vanburgh (Indiana) School Corporation (1988) conducted a longitudinal study of students from kindergarten through Grade 8. The results indicated that students enrolled in full-day kindergarten performed better than the half-day kindergarten peers in reading, mathematics, hand-writing, spelling, and English through Grade 3. Students who were enrolled in full-day kindergarten performed better on every category of the Comprehensive Test of Basic
Skills in Grades 3, 5, and 7. Full-day kindergarten students earned higher GPAs than their half-day kindergarten peers in Grades 6 - 8.

Another longitudinal study, which tracked students from kindergarten into fourth grade in the Philadelphia School District, also demonstrated that students enrolled in full day kindergarten classrooms received higher report card grades and better reading, math, and science scores on standardized tests during their time in third grade than students in half-day kindergarten classrooms. These students continued to earn higher standardized science scores through the fourth grade (Del Gaudio & Offenberg, 2002, n.d.).

Anchorage (Alaska) School District conducted a longitudinal study on students enrolled in kindergarten through Grade 11. Results of this study indicated that full-day kindergarten students showed greater improvement in GPA between Grades 7 and 8 than students who were on the half-day kindergarten schedule (Stofflet, 1998).

A landmark longitudinal study of full-day versus half-day kindergarten was completed by researchers Jill Walston & Jerry West (2004). They found that students in full day classes learned more in both reading and mathematics than those in half-day classes. Considerations and adjustments were made for differences in race, poverty status, and fall achievement levels, among other things. The findings indicated that all students experienced achievement gains. Their conclusion was by giving students and teachers more quality time to engage in constructive learning activities, full-day kindergarten provides benefits for all students.

The Impact on Special Education, Grade Retention and Remediation

Nieman and Gastright (1980) conducted a longitudinal study examining the impact of
preschool, half day kindergarten, and full day kindergarten. All children were from Title 1 districts in Cincinnati, Ohio. It was found that full-day kindergarten students were less likely than their peers who attended half-day kindergarten to be identified as eligible for special education services through grade 4. Additionally, the aforementioned study in Indiana, Evansville-Vanderburgh School Corporation (1988), found similar findings. Cryan et al. (1992) found as a result of full day kindergarten there were between 17%- 55% fewer grade retentions, but found no relationship full versus half day programs and special education provisions. In a study involving Anchorage School District full day kindergarten study, Stofflet (1998) found that first grade retention was less likely for students who had attended full day kindergarten.

**Full-day Kindergarten Programs Decrease Future Costs for the School District.**

Investment in a full day kindergarten potentially yields cost savings for the district. The research supports that a full day kindergarten program reduces the number of retentions, decreases remediation in upper grades and encourages students to attend school more regularity. All would be cost savings for the district.

**Full-day Kindergarten Programs Help Decrease the Achievement Gap.**

As stated earlier, one of the more popular purposes of converting to a full day kindergarten program was to help decrease the achievement gap. As cited in Van Roekel (2008), a study was done in one Indiana district. Students in full-day kindergarten scored significantly higher on basic skills tests in the third, fifth, and seventh grades than those who attended only half-day or did not attend kindergarten at all. The researchers concluded that the gains from a
full day kindergarten program appeared to be greatest for students from disadvantaged backgrounds and that full day kindergarten helped to narrow achievement gaps between different groups of students.

The Progress of Education Reform (2004) reported the findings of a study following Maryland’s Rockville School District. In an effort to reduce the achievement gap, full day kindergarten was offered to the children in its poorest schools with reduced class sizes.

Perhaps the most important finding in the report is that full-day kindergarten can significantly help to close academic achievement gaps for both low-income and minority children. In some cases, such as reading, low-income students in full day kindergarten were seven shown to outperform students in half day kindergarten from more affluent communities.

Other key findings include:

- African American students in full day kindergarten significantly outperformed their peers in half day programs.
- By 2003 60% of Hispanic students in full day classes met an established reading skill benchmark, compared to only 48% of Hispanic students in half day classes.
- By 2003, 56% of English language learners in full day programs met the established reading skill benchmark compared to only 29% in 2001 (The Progress of Education Reform, 2004, p. 4).
**Full Day Kindergarten Provides Time Needed for Students to Learn all of the Common Core Standards**

In the 2014-2015 academic year, the State of New Jersey, along with 44 other states, fully implemented the Common Core State Standards. The standards are written and designed for full-day kindergarten programs. These same standards apply for all kindergartners whether or not there is access to full-day or half-day kindergarten. Currently, Hillsborough Township students will be accountable for acquiring their foundation for lifetime learning in half the time. Students in competitive districts will be afforded minimally double the instructional time than Hillsborough students.

<table>
<thead>
<tr>
<th>Hillsborough’s Current Half-Day Program</th>
<th>Typical New Jersey Full-Day Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math: 100 minutes/week (daily)</td>
<td>Math: 300 minutes/week (daily)</td>
</tr>
<tr>
<td>Reading: 75 minutes/week (daily)</td>
<td>Reading: 175 minutes/week (daily)</td>
</tr>
<tr>
<td>Writing: 75 minutes/week: (daily)</td>
<td>Writing: 150 minutes/week (daily)</td>
</tr>
<tr>
<td>Phonics: 45 minutes/week (3 times/week)</td>
<td>Phonics: 75 minutes (daily)</td>
</tr>
<tr>
<td>Science/Soc. Studies: 70 minutes (2 times/ week)</td>
<td>Science/Soc. Studies: 135 minutes (daily)</td>
</tr>
<tr>
<td>Center/Choice Time: 0 minutes</td>
<td>Center/Choice Time: 150 minutes/week (daily)</td>
</tr>
<tr>
<td><strong>Total Yearly Time: 13,140 minutes</strong></td>
<td><strong>Total Yearly Time: 35,460 minutes</strong></td>
</tr>
</tbody>
</table>

“Research finds [many benefits of full-day kindergarten](#), including 30% more time on reading and literacy instruction and 46% more time in mathematics instruction than in half-day programs. Kindergartners in full-day programs also exhibit more independent thinking, classroom involvement, productive work with peers, and reflectiveness” (Children’s Defense Fund, 2012).
Gamoran and Milesi (2003) found that children who are enrolled in full-day programs get an average of twice as much instructional time as do half-day programs. These researchers also contend that a full day kindergarten setting lends itself to a better quality program. Martinez and Snider (2001) indicated that teachers in a full-day kindergarten program felt that the schedule afforded them the opportunity to get to know students and parents better, engage in more individualized instruction, and expand the curriculum.

Providing a Non-Tuition Based Full-Day Kindergarten Program Allows all Students to Receive Equal Access to a Quality Education Program

As cited in Waters (2016), 77 percent of children across the country went to full-day kindergarten in 2012, according to a report from Child Trends Databank. New Jersey followed suit. By 2015, more than 80 percent of the state’s kindergartners were in full-day programs, according to the NJ Department of Education (see below).
Hillsborough is one of only three districts (Hillsborough, Montgomery, Bridgewater) in Somerset county that does not have a tuition-free full-day kindergarten program. Bridgewater will be implementing a full-day kindergarten program in the near future.

During the 2016-2017 school year in Hillsborough Schools, half-day kindergarten is available to all students. The district offers a half-day, tuition-based, enrichment kindergarten program (CAP) ($635/month). About 13% of current Hillsborough kindergarteners attend this program. Additionally, the district offers Title 1 extended day program in Title 1 schools only.
(four of the six elementary schools). About 5% of current kindergarteners attend this program.

**More than 80% of Hillsborough Kindergarteners do not have the Opportunity to Access the Benefits of a Full-Day Program.**

Given the new standards and current expectations for a kindergarten child, the appearances are that HTPS is not affording our five year olds the same opportunities as the majority of five year olds in the state. “Given the new standards and the instability of funding for full-day kindergarten across the country, children are not guaranteed an equal opportunity for learning and could be severely hampered in achieving school success” (Children’s Defense, 2014).

Lee et al. (2006) suggested that “favorable findings for kindergarten are not confined to disadvantaged children or to low-income or urban schools – all children benefit, in terms of learning more, when they attend kindergarten as a full-day program” (p. 197). Full day kindergarten provides the needed time for our youngest students to develop into learners and thinkers. It allows time for exploration, conversation, and play. Learning is enhanced through centers and problem solving opportunities. There is also more time for students to have more exposure to the other content areas like science, technology, and social studies. Full day kindergarten lends itself to enhance student learning by firmly setting the stage for learning and building confidence in our young learners. Full day kindergarten is an opportunity to enhance learning and benefit all of our students.
Possible Budget Considerations

Personnel

- 14.5 additional full time certified teachers
- Site Supervision - Principal (Early Childhood Center, Preschool, Kindergarten and Grade 1)
- Related arts staff to accommodate for extra children
- Lunch services expansion (lunch aides)

Facilities and Furniture

- An early childhood center OR renovation of existing space OR use of high school facility if new high school is built OR community childcare spaces
- Approximately 15 more additional classrooms

Curriculum and Professional Development

- Development of curriculum to accommodate full day program
- Professional training for new curriculum

Possible Options for Implementation

Below please find possible options for implementing a full day kindergarten program in Hillsborough Township Public Schools.

1. Universal, non-tuition, full day kindergarten program
2. Three Day Full Day, non-tuition full day kindergarten program with a two day play tuition based option to offset costs
3. Extending Kindergarten Day to 3 hours and 55 minutes and partnering it with a 2 hour tuition based Enrichment Kindergarten program (K 7:50 - 11:45, 11:45 - 12:25, Lunch,
12:25 - 2:25 Enriched K)

4. Extending Kindergarten Day to 3 hours and 55 minutes and partnering it with a 2 hour
tuition based 3 year old preschool program (Possible schedule: K 7:50 - 11:45 ; Pre

5. Implementation through the High School Career Readiness Program

**Recommendations with Rationale**

It is the recommendation of the Early Childhood Full Day Kindergarten Subcommittee
that the Hillsborough Board of Education take the next steps in assuring the future of our young
students by implementing a full day kindergarten program.

The review of the current literature revealed that New Jersey is one of nine states
including New York and Pennsylvania that do not require districts to offer kindergarten. The
percentage of children in full-day kindergarten has increased steadily in the past decade as
reported by the Center for Government Services 2002. In Somerset County, only 3 districts out
of 19 districts do NOT offer full-day kindergarten. They are Hillsborough, Montgomery, and
Bridgewater (Bridgewater is scheduled to offer full day kindergarten in the future.).

The spreading of full-day Kindergarten programs across the nation has also been driven
by expectations and research that they promote greater academic readiness and contribute to
closing the minority achievement gap between children at risk and their more advantaged peers
(Strickland & Woo, 1999). Numerous research studies have shown that children who participate
in full-day Kindergarten programs have stronger academic skills in literacy and math in first
grade (Hough, D. & Bryde, S., 1996; Morrow, Strickland and Woo 1998), as well as greater
social interaction, cooperation and participation in activities across the curriculum in both Kindergarten and first grade (Cryan, Sheehan, Weichel & Bandy-Hedden, 1992), and greater self-confidence.

The implementation of a full day kindergarten program will assure that our students are beginning their academic career with a strong foundation in social, emotional and academic skills. It will also give our students the same opportunities as the majority of five year old students in the state. At the present time, our kindergarten students are at a disadvantage. They are expected to learn the Core Standards designed for a full day program in half the time. They are missing out on opportunities for social interactions and the development of higher level thinking skills.

**Closing**

Kindergarten is a pivotal time for a child in education. This is when the child starts to build his foundation for future school success. Expectations for the five year old child have shifted with the times. Hillsborough Township Public Schools has a high-quality Kindergarten half day program with time limitations. In addition to not spending the appropriate time on addressing the standards, the time frame does not allow adequate time structured socialization and free play. Opportunities for the use of oral language in a natural play setting are restrictive. These limitations can affect the development of executive functioning, oral language and self-regulating skills. A half-day program does not allow time for these essential learning opportunities for our students.

It is the goal of Hillsborough Township Public Schools to provide an educational
experience which is of high quality, supportive, and competitive. In order to accomplish this we need to provide equitable, educational opportunities as the majority of kindergarten students in the country. Providing a high quality, full day kindergarten will help our children meet and exceed the rigorous expectations defined by the new standards.

“Full-day kindergarten provides our youngest students more time to explore, learn, and grow in an engaging and supportive environment... this is an important start to a lifetime of learning and academic achievement.”

~Dennis Van Roekel

To summarize these poignant and powerful words, full day kindergarten is essential, igniting the minds and imaginations of children who are all too eager to learn in a community where we are all too eager to teach. Let’s put in motion the wheels of success today for a brighter tomorrow.
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Elements of College and Career Readiness

When the Hillsborough Township Board of Education defined its vision as “Learning empowers life beyond the Hillsborough School District” and its purpose as “Financial Independence -- Equal Opportunity -- Self-Actualization,” it provided the foundation upon which to build innovative programs and facilities that are forward-thinking and premised upon the limitless possibilities of the future, not the strictures of the past. The Final Report of the New Jersey Department of Education College and Career Readiness Task Force echoes these messages, stating, “Providing all New Jersey students with an education that will lead to meaningful higher education and career opportunities is one of the primary goals of our educational system, and establishing rigorous standards and competent measures is crucial to the faithful attainment of that goal” (2012, p. 4). It is clear from both local and statewide sources that preparing students for the future is of critical importance to our citizens, state, and country. However, having such goals does not necessarily translate to full actualization for reasons both within and outside the control of students, educators, parents, and policymakers.

New Jersey has historically been among the highest performing states in the nation, and Hillsborough Township School District among the highest performing districts within the state. While “New Jersey continues to exemplify leadership in education throughout the United States.... there is a disconnect in policy and performance that leads to inefficiency, poor information, underperformance for investment, and unfulfilled promises for outcomes for school completion, college, and workforce entry. This is extremely costly in terms of loss of human capital and high expense of remediation” (Final Report, 2012, p. 7). This is true in terms of
equity issues and the achievement gap between Asians/Whites and Blacks/Hispanics, loosely grouped based upon HTPS data patterns. This is also true in terms of college readiness, where students graduate from high school successfully but are underprepared for the rigors of college-level work and often need remediation prior to enrolling in credit-earning coursework in institutions of higher learning. The New Jersey Department of Education indicates that only 40% of graduates from New Jersey public schools are college and career ready (One Vision, p. 2) and that 7 of 10 require remedial work (p. 3).

In terms of career readiness, feedback has been gathered from employers about the preparedness of New Jersey graduates for the workplace, and “anecdotal data collected in periodic employer surveys and interviews by the New Jersey Chamber of Commerce suggest that only half of recent high school graduates could pass eighth grade mathematics aptitude tests, which are the gateway to entry level jobs” (Final Report, 2012, p. 9). While there is no way to know the percent of Hillsborough’s students who would find themselves represented in this anecdotal feedback, such a perception does have a bearing on considerations from the Hillsborough Township School District to reduce or eliminate the likelihood of having our students be ill-prepared for the workplace.

The strategic planning process in Hillsborough raised “College and Career Readiness” as one of three main focal points for the coming five years. This very broad heading includes several subheadings that were specific outcomes of the process: academies, vocational opportunities, and facilities improvements for athletics and fine/performing arts. With feedback from the community, educators, Board members, administrators, and students, several thematic ideas were raised, as were many detailed ones. In the October 21, 2015, community meeting,
highlights included state-of-the-art facilities, master schedule options, ample space for every learner, project-based learning, sustainability, performing arts center, STEM programming, learning without boundaries (inclusive of options within school, across subject lines, and connections to outside employers and institutions of higher education), facilities issues such as heating/air conditioning, real life skills, flexibility in how facilities can be used, coding, and global connections, as well as a vocational program making students employable after graduation (Special Meeting, 2015). In a high school faculty meeting held on November 13, 2015, the importance of a “unit” lunch, where all students and staff eat at the same time, was raised and discussed at length. The current inability to do this at the high school was identified as the biggest impediment to sweeping, beneficial changes for our students and program, but the limitations of the facility are insurmountable on this topic. What also came from this faculty meeting was a profoundly strong sense of pride in Hillsborough High School and the district, with emphasis on the connectivity and dedication of a community focused on the success and well-being of students; the district’s focus on emerging technologies and access to tools that support learning; our full-spectrum, quality educational program and services; our commitment to world languages and liberal arts; and our ability to attract and retain high quality staff. What also surfaced was the challenge faced in trying to further develop programming and learning opportunities when the facilities are not conducive to making such beneficial changes.

Hillsborough High School first opened its doors in 1969, with only a small portion of the building’s current footprint in existence. As the township became more populous, HHS added its first addition in 1987, which closed off the 100 and 200 wing, adding thirty-eight (38) additional classrooms. In 1999, it opened the 500/600 wing, with redesigned library, office, auditorium,
and cafeteria space, adding another thirty-six (36) classrooms, including state-of-the-art science labs. Still not large enough for the booming enrollments in the township, another wing, the 700/800s, was added in 2001 with twenty (20) additional classrooms, some of which were science labs. At this point, the high school was “built out,” with no other options for additions to further expand the facility outwards and without the structural support to build upwards. The Commons (cafeteria) has a seating capacity of 800 students, although the room is incredibly tight when 700 seated students occupy it. There are no other large spaces available to set up for a unit lunch, which locks the high school schedule into offering a minimum of four lunch periods. Currently, five lunch periods allows students to have lunch and still take two classes during the middle of the day, while reducing the periods to four would only allow students to take one class, a lunch, and force a study hall. While that may seem enticing on the surface and would allow students time to complete work, Hillsborough High School’s current bell schedule includes only seven instructional periods, and offering four lunch periods would reduce that to six instructional periods. The reality is that the high school schedule would work best with eight instructional periods to meet students’ academic needs, as well as to afford them the time to take electives of interest to them. Without a unit lunch, Hillsborough High School cannot run an eight-period day, even in a block or rotating drop format. In essence, the facility is holding Hillsborough High School back from almost every possible advancement short of adding an occasional new course to the Program of Studies. “Changing the master schedule, while difficult, is a major signal to everyone connected to the school that pedagogy is shifting” (Schwartz, 2016), and Hillsborough Township School District is a leader in innovative, student-centered teaching and learning that embraces pedagogical development. However, the constraints created by the high
school facility limit the growth and innovation possible in the township’s only high school, the flagship of the community.

This begs the question… what can be done to keep Hillsborough High School on a forward trajectory and create opportunities instead of roadblocks to college and career readiness for HHS students? The Strategic Planning Committee has several very good ideas.
Subcommittee: College and Career Readiness - Academies

Subcommittee Members:

Mr. Christopher Carey, Principal, Auten Road Intermediate School  
Ms. Rose Cavaliere, Teacher, Auten Road Intermediate School  
Dr. Kim Feltre, District Supervisor of Science and STEM  
Ms. Tracey Knerr, District Supervisor of Mathematics  
Dr. Eloise Stewart, Former Supervisor of Special Education  
Dr. Joseph Trybulski, Principal, Hillsborough Middle School

Introduction

In 2012, the New Jersey Department of Education College and Career Readiness Task Force referenced the importance of college and career exploration among their specific recommendations for content knowledge and skills that all high school graduates should possess in English and mathematics – reading, writing, communications, teamwork, critical thinking, and problem solving – to be successful in any and all future endeavors. More specifically, to be college ready “means being prepared to enter and succeed in any postsecondary education or training experience, including study at two- and four-year institutions leading to a postsecondary credential (i.e., a certificate, license, associate’s or bachelor’s degree) without the need for remedial coursework,” and being career ready means that a high school graduate possesses not only the academic skills that employees need to be successful, but also the technical skills (those that are necessary for a specific job function) and 21st Century
employability skills (interpersonal skills, creativity and innovation, work ethics and personal responsibility, global and social awareness, etc.) (Final Report, 2012).

To meet these recommendations, several progressive school districts in New Jersey along with many others across the country have been structuring programs of study around an “academy” model which seeks to integrate student knowledge of college and career pathways with personal skills, interests, goals, and aspirations in addition to rigorous academic content that is centered around career-based technical skills that enable students to apply knowledge in cross-disciplinary contexts. In broad terms, “a career academy is a small learning community within a high school, which selects a subset of students and teachers for a two-, three-, or four-year period” (Dayton, 2014). Research shows that there are two models for academies, those which select students through a qualifying process and those that work with all students in a school.

One school district that has successfully structured learning around the academy model is the Rockford School District in Illinois. They have defined academies as “small learning communities that provide real-world experiences with local businesses and professionals, linking schoolwork and the workplace. Regular coursework, including Core Curriculum, Global Electives, and College and Career Pathways, is presented within the context of the academy's focus. Academies were created to provide small learning communities within [the] high school to help ensure that graduating students are better prepared for college and the workforce” (Rockford Public Schools, 2016). Closer to home, Somerville, Lawrence, Englewood, and Morris Hills have academy structures of varying kinds that incorporate similar concepts.
Review of Literature / Research Supporting the Need to Implement the Areas of Focus

Academy programs are unlimited in concept and breadth, and they can be very closely aligned with needs of the district and local area. Few models in existence are likely to be exact duplicates since each school has its own personality, philosophy, vision, and mission. What the models do appear to have in common is a clear intent to maximize opportunities, make community connections, and integrate learning of specific content into a broader theme that has meaning for students.

Pivot Charter School, Tampa in Riverview, Florida, (Hillsborough County, ironically) is a high school that offers a blended learning experience where students complete online courses with the support and direct instruction of state-certified teachers. In this model, the school has “a five-hour school day, which is split into 90-minute blocks. During each 90-minute class, teachers incorporate online courses and other technology into instruction” (Bretz, 2017, p. 10). Pivot offers four academy themes: health sciences, technology, criminal justice, and fine arts (p. 11). A combination of “core courses, as well as academy-specific electives” expose the students to programming designed to “prepare them to enter an associated college or career” (p. 10). When developing the academies, Pivot personalized their selections based upon careers that were “popular with college graduates and important to [their] local economy” (p. 11). Since implementing the academies, Bretz reports that, “after the 2013-2014 school year, our graduation rates rose by almost 20 percent, to 73.4 percent, which is the graduation rate for our sponsor district” (p. 12). She indicates that “students are much more engaged in their courses when they are interested in the content and have a clear goal” (p. 11). Hillsborough High School’s graduation rate in 2015-16 was 96.7%, which makes it difficult to draw parallels on the type of
improvement that could be expected should a similar blended model be applied here, but the important connection, and what is a theme throughout the research, is that students find more value to their learning when their work aligns with an interest or a future goal.

Several New Jersey schools have academies, also of varying formats and themes:

- Somerville High School offers the Academy for Liberal Arts, which is defined as a “unique partnership with Somerville High School (SHS) and Raritan Valley Community College (RVCC)” (Program of Studies). The academy runs in conjunction with the rest of the high school as a related but stand-alone program. There is an admissions process in order to gain access to either of the two focus areas, Medical Sciences and Performing Arts. Students who successfully complete the courses in the academy graduate with a high school diploma and an associate’s degree from Raritan Valley Community College.

- Lawrence High School offers three academies: Arts & Humanities, Business & International Studies, and Science & Tech. The school defines its academy program as an “academically rigorous college prep program with a career theme” (Lawrence).


- Morris Hills High School offers the Math and Science Magnet Program, as well as the county vocational offering of The Academy for Mathematics, Science, and Engineering. Both are four-year honors programs. “The foundation of the [magnet] program is centered around a series of three research based analysis (RBA) courses where students will receive special training in research methods, scientific
investigation, advanced data analysis, and technical writing, leading to independent research” (Morris Magnet). The academy offers a “rigorous, highly focused four year program for Morris County students with career interests in mathematics, science, or engineering. Students complete a challenging curriculum and participate in technical internships with partners from business and industry” (Morris Academy).

- Rockford, Illinois, schools offer academies starting in tenth grade, while all freshman are grouped with their grade level to “support students as they transition from middle school to high school so they can make an informed decision about their academy for the remainder of their high school career” (Rockford Public). The themes for the upperclassmen are more specific than the preceding examples: Business Arts, Modern World Languages, and Informational Technology (BAMIT); Engineering, Manufacturing, Industrial and Trades Technology (EMIT); Health Sciences (HS); Human and Public Services (HPS); Creative and Performing Arts (CAPA); and a Gifted Academy (Rockford Public).

Career academies strive to blend the immediacy of high school academic content with the broader scope of skills needed to be successful in post-secondary pursuits, including college and career pathways. Conceptually, a student selects a specific academy area and takes a series of general education courses and specialized courses within the academy theme that provide an interconnectedness of learning and content throughout the student’s day and high school career. Kemple & Snipes stated in 2000 that “Career Academies have existed for more than 30 years, and they now can be found in an estimated 1,500 high schools nationwide” (p. vii), although numbers are now closer to 7000 (Champeau, 2017, p. 2) in the seventeen years since their report
was published. They further claim that “large comprehensive high schools… have been criticized for being impersonal and for preventing students and teachers from working as teams to create a sense of community and common values” (p. ES21). For students who feel a disconnect with high school’s more traditional methods of study (a schedule of independent classes with no interplay between them) or students who do not readily see real-life application of the content taught in high school, academies can help to draw connections that previously did not exist. “Career academies attempt to create more supportive and personalized learning environments through a school-within-a-school structure. Their curricula combine academic and occupation-related course requirements that aim both to promote applied learning and to satisfy college entrance requirements. Academies establish partnerships with local employers to build sequences of career awareness and work-based learning opportunities for their students” (p. ES1).

Another aspect of a career academy is the interconnectedness that can occur with the community and local businesses. Currently, Hillsborough High School students only have access to internships or apprenticeships with community businesses through the REACH Senior Internship or through independent studies. Kemple and Snipes emphasize the importance of such connections and the role they play, defining them as “ongoing coordinated efforts to engage local employees in supporting the Academy’s programs and sponsoring a range of work- and career-related activities for students” (2000, p. 10).

Kemple and Snipes found that career academies “increased both the level of interpersonal support students experienced during high school and their participation in career awareness and work-based learning activities.” They also found improvements in the rate of students
graduating on time and “substantial… improvements” for students who were deemed to be high-risk for dropping out of high school (p. ES2).

Another program cited by Kemple and Snipes is the High Schools That Work (HSTW) model, a “whole-school, research-based reform designed to raise the academic achievement of career-bound [italics added] high school students by combining the traditional college preparatory curriculum with vocational classes” (2000, p. 6). Often, academies are designed with the college-bound student in mind, not those planning to go directly into the workforce. One of the most beneficial outcomes of the HSTW program is the dialogue that occurred between teachers who held to their promise to meet more regularly to discuss ways to support students. These professional dialogues, whether or not they are structured like Hillsborough’s own Professional Learning Communities (PLCs), engage staff in problem-solving, goal-setting, and communication about students and curriculum. HSTW utilized a hybrid application/lottery method for admittance. Students first applied to the program and, if they met the requirements, were then placed in the lottery for selection (p. 25). Students in HSTW reported increased connection to the school, but the researchers indicated that anecdotal surveys on the topic may be skewed by students’ individualized good or bad memories of high school, not of their actual educational experiences (p. 7).

Programs designed around the current emphasis on science, technology, engineering, and mathematics (STEM) have increased in popularity in recent years, with many districts nationwide implementing STEM classes, extracurricular activities, and larger scale programs, and Hillsborough is among them. “In recent years, policymakers, school district officials, teachers, parents, and students have embraced the idea of STEM-focused schools as a way to
raise math and science achievement, improve economic competitiveness, increase job prospects for next-generation workers, and support great opportunities for low-income and minority students” (Eisenhart, Weis, Allen, Cipollone, Stich, and Dominguez, 2015, 763-4). The idea of integrating the four areas is a palatable one, especially when combined with the Next Generation Science Standards which emphasize inquiry and discovery, parallelising the actual processes utilized in most of the STEM careers.

Texas has implemented Project Lead the Way (PLTW) in schools across the state. In the American Journal of Engineering Education, Overschelde reported on a six-year study of this program, which is described as “hands on, project-based” learning (2013, p. 1). Currently, 500,000 Texas students participate in PLTW. The program was developed keeping in mind the boom in STEM careers since “growth in STEM-related jobs between 2008 and 2018 is expected to approach 20%, a rate that is almost twice the growth rate of non-STEM-related jobs and twice the growth rate seen during the first decade of this century” (Langdon et al, 2011, cited in Overschelde, 2013, p. 1). PLTW has been implemented more widely the longer it has been in existence. Initially, student outcomes were very strong with students scoring higher than non-PLTW students on multiple math assessments. However, those reports must be viewed critically since the initial pools of students were from special schools (with screened applicants) so results may not generalize to a more traditional and diverse high school population. However, once the study was expanded and lengthened to a period of five years, among the most notable outcomes was an enrollment increase of over 400% overall, and, by subgroup, over 500% for Hispanics, almost 600% for females, and 650% for low-income students (p. 5). Perhaps the most noteworthy outcome, however, was an increase in the median wages by 13.6% for non-college
students (p. 10).

Another school with a wide offering of academies is New Dorp High School in Staten Island, New York. They currently offer academies in Communication and Media Arts, Fine and Dramatic Arts, Corporate Center for Business and Technology, Future Teachers, Forensic Science and Criminology, Health Sciences, Law Institute and AFJROTC, and the Math and Science Institute (New Dorp). Within the Future Teachers Academy, for example, students “take a sequence of electives on topics like classroom management, building a lesson plan and early childhood development” (Veiga, 2017, p. 2).

Perhaps the strongest argument in favor of academies is that they “have been shown to improve motivation and the indicators that reflect that, such as attendance, retention, grades, and graduation rates” (Dayton, 2014). In essence, if academies can become the catalyst that engages a student actively in school, cuts down on absenteeism, reduces the number of students who do not move to the next grade on schedule, increases academic grades, and improves graduation rates, then there is value added to the student’s experience.

The California Partnership Academies have tracked data on student performance across 500 high school academies for more than 15 years throughout the 1990’s and early 2000’s. The partnership’s findings confirm the following 12 components are common to effective academies (Mittelsteadt & Reeves, 2003):

1. A school-within-a-school or small learning community atmosphere that provides a certain degree of autonomy and flexibility.
2. An enrollment policy that includes all students--both at-risk and high achievers.
3. A voluntary enrollment policy where participating students and staff are self-selected.
4. Scheduling systems that allow for consistent groups of academy students to move together in sequence.

5. A dedicated team of teachers with decision-making power and common teacher-planning time.

6. A designated academy director or lead teacher with counselor support.

7. A broad-based career theme, such as health or information technology, that is supported by community resources.

8. A block-scheduled format that integrates academic and career/technical education.

9. Rigorous, applied and contextual college prep curricula.

10. Business and community support that provide work-based learning experience, such as a job shadowing, internships, mentoring, apprenticeships, etc.

11. Articulation with postsecondary education.

12. Parental involvement and support.

With these components in place, the beneficial aspects of an academy structure in Hillsborough Township School District are many, especially for the students who currently are at risk of dropping out or who would be better served by a more connected program that combines the practical with the theoretical. In addition, the academy structure provides a very clear, tangible connection to the student’s future, which increases motivation and engagement. It also expands horizons, exposing students to specific information, fields, and careers with which they may have been previously unaware and giving them a strong enough foundation to help them aim higher than they may have planned otherwise.
Review of Literature / Research Against the Need to Implement the Areas of Focus

Identifying research that correlates well to Hillsborough is difficult. Although several studies have occurred related to academies or STEM programs, the demographics do not align closely with Hillsborough, New Jersey. All of the programs and studies mentioned herein are based upon student populations consisting predominantly of those who are economically disadvantaged, have high rates of absenteeism, are minorities, or have extensive disciplinary histories. Conversely, the overwhelming majority of Hillsborough students are financially stable, attend school regularly, are white or Asian, and have little to no ongoing disciplinary issues. In addition, the Hillsborough students who do fit the subgroups referenced in the studies perform at the average level for all students in New Jersey, although there is an achievement gap within the district since white and Asian students often perform above the state average. However, there is commonality to some of the outcomes of these studies that warrants further discussion.

A comprehensive study conducted by Eisenhart, Weis, Allen, Cipollone, Stich, and Dominguez entitled “High School Opportunities for STEM: Comparing Inclusive STEM-Focused and Comprehensive High Schools in Two US Cities” (2015) sought to examine the outcomes of similar programs in different cities. Four schools were chosen in Denver, Colorado, and four in Buffalo, New York. In both cases there were no admission requirements. All eight schools were located in low income areas, and the student population consisted predominantly of minorities. In both cities, two of the four schools were reorganized into STEM
schools, while two remained comprehensive high schools. “In both cities, STEM-focused schools achieved some modest success initially but were unable to maintain their gains” (p. 763). The researchers further discussed the issues facing the STEM schools in the study, stating that “claims and expectations for them must be examined in the context of their implementation, and STEM schools for low-income and minority students are unlikely to be successful without more attention to systemic issues in urban education” (p. 763).

The Kemple and Snipes study spanned a six-year period and included nine high schools with 959 academy students and 805 non-academy students (2000, p. ES3). They found that an academy structure “did not improve standardized measures of reading math achievement either on average or for any subgroup of students” (p. ES15). Although they cite benefits from academies that include motivating factors that keep students interested and engaged in school, this does not translate to more universal measurements often used to compare programs, districts, and states and their students’ academic performance. Dayton (2014) also found that there is little evidence that academies improve test scores. Even STEM programs, touted as the next big thing, are not supported by measurable outcomes. In fact, “the NRC (National Research Council) recently reported that although STEM-focused schools ‘are often viewed as the best route to achieve desired outcomes’ (National Research Council, 2011, p. 7, [emphasis Eisenhart’s et al.]), there is little evidence to this effect, and no one model has so far proven to be more effective than others” (Eisenhart et al., 2015, p. 765).

In the more global sense of the beneficial impact of academies on students, two studies make a similar argument about the external factors beyond anyone’s control that can have an enormous effect on the outcome of any education, traditional or academy/STEM, and that is the
societal structure in which the students reside. Kemple and Snipes (2000) state that “previous research and prior experiences highlight the fact that many students succeed or fail in high school for reasons not related to special interventions like a Career Academy” (p. 44). Eisenhart, et al. (2015), seem to agree, stating that “most researchers view student decisions to go into STEM fields and their associated success as a reflection of relatively stable individual characteristics: ability, interests, personality traits, political views, gender, race, and family background” (p. 766).

Dayton (2014) cites another reason, wholly logistical, that indicates that academies may not be the best path to pursue -- the challenges faced in building a master schedule that manages to do it all well. In a magnet program or stand-alone academy, this may not be that difficult, but in a comprehensive high school the size of Hillsborough this is quite daunting, especially if students in different academies are going to share any courses or teachers, which narrows the available times when specific courses can be offered and increases the likelihood of conflicts in the schedule, some of which may be irresolvable for individual students.

**Budget**

Actual costs are impossible to factor at this point since the exact composition of the academy program would be a driving factor, as would a decision about building a new high school. In addition to facilities and equipment, personnel would need to be considered. Implementing academies likely would require additional staffing to help the general education courses work within the structure of each academy, and specific positions would need to be filled with knowledgeable staff in each academy area. Creating academies at Hillsborough High
School would also require extensive curriculum work, both to revise existing curricula to integrate with each academy’s theme and to develop new courses that match the actual academy program. Upon completion of the curriculum work, extensive professional development and training would be needed so that the academies could be implemented with efficacy. Instructional resources would also be required in each of the academy areas, some of which may already be in use in the high school but much of which would be new.

**Recommendations with Rationale**

If standardized test scores do not see a lasting increase, even in schools where the most gains are to be made, why would Hillsborough Township Public Schools consider pursuing academies? The answer is both simple and complex.

Ours is a large school with a current enrollment of 2327 and moving upward in the coming years. In 1999, the enrollment was approximately 1600, and, in 2007, it was at its highest with approximately 2465 students. Clearly, the township has changed immensely in the past eighteen years, as have the demographics. The student body was by far predominantly white all those years ago, but recent years has seen that percentage lower as the Asian/Indian population has grown, as has the Hispanic and Black populations. The rolling hills of farmland have given way to housing developments and townhouses, some of which are currently under construction and are likely to have a substantial impact on student enrollments across all grade levels. Within this large school, efforts have been made to create the feel of a smaller school by scheduling students’ core classes (English, math, social studies, and Spanish (the most heavily subscribed world language)) within one section of the building for each third of the student body.
(divided alphabetically by last name). Each group also works with one vice principal and one small group of guidance counselors, again trying to forge relationships with a smaller circle of adults and students in the building to help develop connections in what could be a school where students get lost in the shuffle. Largely speaking, these efforts have worked very well for the vast majority of the student body, based upon several years of student climate surveys that indicate that students overwhelmingly feel a connection to the school itself and to the adults within it. However, the school cannot rest on these laurels because there are still students who do not feel that connection with the high school or the staff, there are still students who drop out, and there are still students who go through the school without finding a purpose in the work being done other than that it meets the graduation requirements. Hillsborough High School can and should do better to meet the needs of those who feel this disconnect.

During the strategic planning process, several common ideas continued to surface. There was a desire for small learning communities within the larger school setting. There was interest in a mixture of career and academic classes, as well as in opportunities for concurrent enrollment with institutions of higher learning. Connections with outside agencies and employers aligned with the wish for internships and community partnerships. Some of these already occur, but on a much smaller scale than could be possible should some of the constraints be lifted. One of the most exciting aspects of the process was attempting to identify academy ideas that might be of interest to Hillsborough students. To that end, several commonalities arose with existing programs from other schools, and some new ideas surfaced that seem particularly aligned to Hillsborough students. Academies for consideration include:

- STEM - These fields are among those in the highest demand by high school students,
many of whom seek to double-up on math and science courses in order to take as
many advanced placement courses as possible to earn credit in college and to be
viewed as competitive by admissions officers in the colleges to which they apply. A
dedicated STEM academy would simplify this process by streamlining the courses to
be taken, reducing the number of conflicts and maximizing time, staff, and facilities.
It would also allow the school to bring its Robotics program back on campus (and
expand it) instead of requiring students and staff to go to the Skillman Johnson &
Johnson facility.

- Medical Sciences - Pursuing a career in medicine is one of the most often cited goals
  of Hillsborough students. Having an academy on site that introduced students to
  anatomy and physiology, biology, pharmacology, and related fields would prove
  invaluable in preparing students for a future career as a doctor, surgeon, nurse,
  pharmacist, etc. There is an excellent academy of this nature affiliated with Somerset
  County Vocational-Technical High School, but most Hillsborough Township students
  choose not to attend it, preferring to remain in a comprehensive high school setting
  with easy access to the aspects of school life that are very important to many
  teenagers.

- Veterinary/Agricultural Services - Although on a much smaller scale than in the past,
  Hillsborough is still true to its farming roots. This academy would enable students to
  learn about careers that are affiliated with veterinary medicine, agriculture,
  hydroponics, etc.

- Concept to Creation: Engineering, Design, and Manufacturing - Similar to a STEM
program, this would combine the more traditional academic engineering courses, the elective Computer-Aided Design (CAD) and mechanical drawing classes, and the hands-on manufacturing courses (woods, metals) to encompass the totality of product design, development, research, and manufacturing. This course has the potential to entice participants who want to be engineers, entrepreneurs, inventors, and contractors, for example, developing a very productive cross-section of the student body who can work collaboratively on theoretical and practical solutions to a wide array of engineering and product challenges.

- Business, Finance, and International Studies - This academy would introduce students to the skills needed to work in a corporate environment in both the domestic and global arenas.

- Fine and Performing Arts - Hillsborough has many talented students, many of whom are unable to pursue those talents in the current high school setting due to restrictions such as the current bell schedule and the rigorous course loads they take. Creating such an academy on site will increase access dramatically and is likely to be among the most popular programs because students can pursue something they love while still having access to the full contingent of course offerings at a comprehensive high school.

- Law and Public Safety - This academy could be aligned to a future career in local, state, or national law enforcement, the military, or a career as an attorney, forensics investigator, etc. Possible connections with JROTC could also be investigated.

- Politics and Government - Hillsborough High School students have been taught to be
informed citizens of the world, and quite a few of them have gone on to productive
careers as politicians, speech writers, etc. This academy could take civics to the next
level in high school, actively involving students in democracy now in preparation for
a wide array of careers in politics, law, lobbying, etc.

- Future Educators - The Future Educators Academy is one that can capitalize on
existing programs that can be easily expanded to incorporate more high school
students and provide a valuable resource to the township. This academy warrants
addition discussion, as well, as a result of the challenges school districts are currently
facing to staff their schools during a nationwide teaching shortage. Noguchi (2017)
reports on California’s challenges, stating that “many personnel managers are still
laboring over hard-to-fill jobs, particularly in special education, speech therapy, math
and science” (p. 2). For greater perspective, within the same period of time in
2015-16, California issued 15,400 standard certificates and 9,900 non-standard
certificates “for interns… temporary fill-ins and others seeking emergency permission
to teach,” which was more than twice the non-standard certificates awarded just three
years earlier (p. 2). Oklahoma requires teachers to “complete a full certification
program before becoming a teacher but with an emergency certification they can
work on the process after being hired… Since 2011, the state has seen a 3,000 percent
increase in the number of people taking this accelerated route” (Wendler, 2017, p. 2).
Often schools are unable to retain teaches who have come to the career without
adequate training in the art of teaching, even if they have a mastery of the content,
since a lack of experience and training in classroom management, planning, and
pedagogy often makes the job unsustainable, as most school administrators have witnessed on any number of occasions. In New York, New Dorp High School’s Future Teachers Academy helps students gain practical experience since “the most valuable part of the program comes senior year, when students take on internships in local elementary schools” (Veiga, 2017, p. 3). A Future Educators Academy would be the perfect complement to an Early Childhood Learning Center which, if housed on the high school campus, would enable high school students to become trained practitioners in this field prior to starting college, giving them a much greater likelihood to remain in the field for the duration of their career. A side benefit to the township would be a wealth of highly trained babysitters for Hillsborough’s families.

Academies would also offer opportunities for the type of learning that resonates the most with students and is the most enjoyable to students, including group projects, unstructured time for independent research/discovery, maker-space opportunities, blended learning, and asynchronous learning, all of which are common themes in state and district standards/curriculum or align with other district goals, such as those related to technology.

Academies may also enable the school to build an AP Capstone component into each where students engage in “independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges” (Broh, 2002). Arguably, these are the same skills that will prepare students for the workforce, helping them to develop important skills such as the ability to identify problems and research solutions, to work productively within a team setting, and to convey meaning effectively.

There is, of course, a caveat to implementing academies at Hillsborough High School,
and it is a big one. The existing high school building, although fully functional and adequate in so many ways, is not conducive to an academy structure nor does it permit the flexibility needed to implement academies with efficacy.

- The biggest impediment to any programmatic change at Hillsborough High School is the Commons. Able to seat only 800 students (uncomfortably) at a time, the space does not permit a unit lunch, which is the key factor in being able to implement a block, A/B block, or rotating drop bell schedule. Even if seating could be arranged in the only other large spaces at the high school (the gyms), the set-up time needed to put down a tarp and move tables into place would take instructional time away from the period before the unit lunch, and the clean-up, including cleaning and removal of the tarp and tables, would take away instructional time after the lunch period. If physical education classes are limited in such a way, it will have a devastating ripple effect on class sizes in physical education for the rest of the day.

- Science labs are also a serious constraint currently. Utilizing a six-day cycle, students are pulled out of physical education classes one or two days in the cycle (depending on the level of the course, CP/Honors or AP) in order to have an extended lab period. For a student who takes two science classes, the student could have up to four days in a cycle dedicated to lab, which necessitates assigning physical education to a separate period in order to meet the state requirements for instructional minutes. With a change to the bell schedule that enabled students to take eight classes instead of the seven currently possible, labs could occur in a regular class period in a rotating drop or any form of a block schedule which would only improve the consistency of health
and physical education classes. Currently, a single period may have a total roster of 60 students, but the H&PE teacher may never see all of them at once, likely seeing a group of them on five days of the cycle and some of them on four days. While that may not sound that bad, the teacher will not see the same groups of students on the same days, depending upon when their lab periods are scheduled. It is a logistical nightmare for a teacher and hugely impacts the flow of instruction and continuity of learning. Separating labs from physical education entirely also would allow students to take another class in the day that is of value to them academically or by personal interest. For some students, personal interest classes are the only things that get them to school each day, which is also an important point in favor of adding an instructional period. Finally, by lengthening the class periods, science classes could conduct labs whenever they best fit in the curriculum, instead of needing to wait until the appropriate extended class period within the six-day cycle, making their inquiry activities and/or application of their learning far more timely than at the present.

- In order to structure the high school in a way that would be conducive to implementing academies, a large-scale, costly renovation would need to occur, including updating science labs, overhauling other lab spaces such as the Applied Technology classrooms, and a wealth of other updates to ease implementation. However, this would be a “square peg in a round hole” solution since the size and configuration of the current building does not align with the overall concept of the best ways for academies to run at HHS while also creating smaller learning environments within the setting of a large school. In the end, after all of the
renovation work had been done, there would still be no solution for the lack of space for a unit lunch nor would the building allow for the flexibility needed to capitalize upon the interconnectedness of courses and concepts.

- Other facilities limitations will be discussed in the reports on related College and Career Readiness subtopics regarding the performing arts and athletic facilities, as well as the research completed on vocational programs.

**Closing**

Why should Hillsborough High School pursue academies? Charged with the task of envisioning a high school experience that will meet the needs of 21st century learners, the strategic planning subcommittee researched the concept thoroughly. Certain drawbacks notwithstanding, the academy model has the potential to: improve student attendance, engagement, and grades; reduce retention; cultivate a sense of community, connectedness, and wellness; and develop social, emotional, and problem solving skills. The research indicates that “career academies, after more than four decades of development and three decades of evaluation, have been found by a conclusive random assignment study to be effective in improving outcomes for students during and after high school. Career academies have therefore become the most durable and best-tested component of a high school reform strategy to prepare students for both college and careers” (Stern, Dayton, & Raby, 2010, p. 2), even if the difference is not noted in standardized assessments in the schools that were part of several research studies.

A high-performing school in its own right, Hillsborough High School now earns these achievements *in spite of* the blockades it faces. Where other high schools in the county have
already incorporated academies (Somerville), Hillsborough has not. Where other schools have updated their bell schedules to expand their educational programs (Montgomery, Watchung), Hillsborough has not. While other school have buildings that are designed for flexibility and have state-of-the-art equipment, Hillsborough does not. While others have room to grow, Hillsborough does not.

Simply put, Hillsborough High School is stuck… stuck with a bell schedule that no longer works… stuck with a cafeteria that cannot seat enough students at one time to allow the bell schedule to be updated… stuck with programs that teach students to do well in individual classes but do not generalize learning across disciplines… stuck with a facility that restricts opportunities rather than fosters them… stuck in a time period that has passed and may result in the world passing our students by…. stuck. Yes, Hillsborough students already reach many of their goals and aspirations, but they deserve and are capable of so much more once they are free of the restrictions currently limiting their opportunities.
Subcommittee: College and Career Readiness - Athletic Facilities

Subcommittee Member Names:

Mr. Michael Davis, District Supervisor of Health & Physical Education / Assistant Athletic Director

Mr. Michael Fanizzi, Athletic Director, Hillsborough High School

Mr. Steven Jablonski, Vice Principal, Hillsborough High School

Introduction

Hillsborough High School offers daily health and physical education (H&PE) courses to 2327 students, each of whom uses the current facility, its locker rooms and lavatories, its weight rooms and gym spaces, and its outside activity stations and fields. After dismissal, approximately 900 of those students become student-athletes, participating in 29 NJSIAA-sanctioned sports at all three levels (freshman, junior varsity, and varsity). The only NJSIAA sports not running at HHS are bowling and fencing.

The current athletic facilities do not meet the needs of the program and require extensive efforts with scheduling, including transportation within and outside the district to practice locations which is costly and extends a student’s day away from home simply for logistical reasons.

For the purposes of H&PE, the facilities are also a factor in how PE classes can be scheduled. Since there are limited spaces available, especially indoors, activities are planned based upon the number of available instructional spaces, which is normal for any subject area, and the possible threat of injury of different activities being staged next to each other, which is
far from normal for other subjects. The same is true for the stadium and the baseball field. Despite the size of the stadium and the open space around the baseball field, a sport such as lacrosse cannot be scheduled at the same time as baseball because of the high risk of injury in the stadium from an errant foul ball from the baseball field. The complexity of the issues related to the current facilities is staggering, and it is a wonder that the high school is able to schedule everything it currently does. However, it raises the question, “At what cost to the taxpayers and the students?”

**Review of Literature / Research Supporting the Need to Implement the Areas of Focus**

One does not need to look far to hear about the benefits of a physically active lifestyle to today’s youth and tomorrow’s adults. Whether through television ads for NFL Play 60, which encourages 60 minutes of active play a day, or participation in township recreational sports teams, it is common knowledge that an active child is likely to be a fitter, healthier child. In fact, physical health is so important that H&PE is the only course that students are required to take every year in which they are enrolled in high school, even those who only have one or two other courses to complete in a fifth year and even those who are classified students participating in a post-graduate program.

A physically fit body is more conducive to a physically fit mind and psyche. Ample research supports this, almost so much so that it could be considered common knowledge. However, when working with high school students who have very complex self-images, are under a great deal of stress about school and the future, and view themselves through how others perceive them, being physically fit is directly linked to being emotionally and mentally fit.
Fredricks and Eccles (2006) conducted a longitudinal study of 1500 families in Maryland in 2002, focusing on a comparison between athletes and non-athletes in the eleventh grade. They found that athletes had higher GPAs, that boys had fewer “externalizing behaviors (physical aggression, disobeying rules, cheating, stealing, and destruction of property),” that male and female athletes used alcohol less, and that girls used less marijuana (no effect for boys). High school athletic participation also fosters psychosocial benefits such as lower levels of depression, a greater sense of self-efficacy, and higher self-esteem (Denham, 2009; Guest & McCree, 2009; Spreitzer, 1994).

One might wonder about the long-term benefits from participating in high school athletics. Shifrer, Pearson, Muller, and Wilkinson (2015) report that “individual student’s educational expectations increase with participation in high school sports.” Based upon three studies with very large data sets (High School and Beyond, 1990; National Educational Longitudinal Study, 1988; Educational Longitudinal Study, 2002), they compared students over three decades, finding that high school athletes are more likely to go to college than non-athletes by a margin of 6 to 8 percentage points.

Even the Centers for Disease Control, as reported by Nichol, Pickett, and Janssen (2009), “recommend that children and youth engage in 60 minutes of moderate to vigorous physical activity on most if not all days of the week” (p. 248). Unfortunately, further study finds that not even half of children surveyed, ages 10 to 15 in 34 countries, met this goal. They worry that “this behavior may track into adulthood, where the health consequences are more evident.” If the school district’s purpose is to prepare students for the future, emphasizing the importance of physical well-being should certainly be part of the equation.
Hillsborough High School strives to provide equity for males and females in the athletic program, offering a balanced contingent of sports and levels regardless of the gender of the athlete. Denham (2009) referenced several studies with outcomes specifically related to the benefits of school athletics on girls, finding that sports participation improves girls’ social, psychological, and academic outcomes, further supported by the work of Crosnoe, 2002; Hanson & Krause, 1998; Pearson, Chrissey & Riegle-Crumb, 2009. Broh indicated that girls even benefit more than boys because sports provide them with a unique opportunity to develop behaviors or characteristics traditionally deemed unfeminine (e.g., strength, competitiveness) (2002).

The benefits of participation in all school activities, even beyond athletics, has also been studied extensively, with very similar findings in areas such as social-emotional well-being, communication, and self-esteem. In a longitudinal study based upon a data set from the National Center for Educational Statistics, Broh (2002) identified several added benefits to participation in extracurricular activities, including students talking to their parents more often about school-related issues, more student contact with teachers outside of class, and better communication between parents and teachers. In addition, Debbie Brockett, principal of Las Vegas (Nevada) High School and Duane P. Keller Middle School, points out that “student organizations also help students build ‘soft skills’ -- such as ambition and empathy -- and… ‘lifetime skills,’ such as collaboration, teamwork, leadership, problem solving, and service” (Patterson, 2016, p. 36). Patterson further reports that “the Association for Supervision and Curriculum Development (ASCD) compiled research suggesting how extracurricular activities are especially of value to minority or lower income students -- including a greater connection to
the school, increased chances of college attendance, lower dropout rates, and higher performance by ‘marginalized students’” (2016, p. 36).

In essence, there are few if any pitfalls to participation in H&PE classes and extracurricular athletic programs, short of students who overcommit themselves to extracurricular activities thereby creating a stressor. However, there are complications, costs, delays, and impacts on students who do participate as a result of the current configuration of the athletic facilities at Hillsborough High School.

With the current facilities limitations at Hillsborough High School there are inadequate fields for all of our sports each season. Several teams must leave the campus for their practices, including the boys lacrosse and boys soccer teams which practice at Auten Road Intermediate School, the swim team which practices at the Bridgewater YMCA, the tennis team which practices as Amsterdam Elementary School, and the ice hockey team which practices at ProtecHockey Ponds Ice Center in Somerset. As a result of the off-site practices, students lose nearly 60 minutes a day in travel, time that could be spent studying, with friends, or with family. In these off-site locations, there are no athletic trainers available to triage minor injuries and be present in the event of major ones. For soccer and lacrosse, as well as for track when the team practices off-site, there may not be access to shelter in the event of unexpected inclement weather. The district currently pays $50,000 annually for in-town transportation runs. The swim team practices at and considers the Bridgewater YMCA its home facility. Although the Hillsborough Township YMCA does have a competition-sized pool, it does not have a deck large enough to host the spectators who come with the home and away teams, necessitating the swimmers to travel quite a distance even just for practices. The facility rental costs the district
$9085 annually.

Hillsborough High School equally values all programs, athletic and otherwise, and wants to provide all groups with facilities that meet their needs and respect their participants. With the highest rated Group V Open marching band in New Jersey (and the third place band at the USBands Mid-Atlantic Regional Competition), our campus does not have a field on which the marching band can practice regularly. They are scheduled for specific times/days in the stadium, which is their own competitive arena, but they conduct the majority of their practices in the parking lot on the Amwell Road side of the building. To do so, they must block access to one of the driveways to have the space and proximity to the electric sources in the building to stage the pit section of the band. To start practice, they must wait until everyone remembers to move their cars out of the parking lot at the end of a school day, often necessitating repeated announcements to that effect inside the building. From the standpoint of healthy conditions for the students, the marching band and color guard members must practice their program on asphalt, even when choreography calls for them to kneel, tumble, dance, lie down, and so on. This causes a lot of wear and tear on the band and guard members and puts added stress on their legs and backs as they practice on this very hard, unforgiving surface. Although it is helpful for them to have the parking lot and claim it as their own for more rehearsals, it is not the surface on which they compete, which changes things as much for them as it does for a soccer or lacrosse player who practices on grass but competes on turf, which is also the case due to insufficient field space.

As mentioned earlier, the stadium cannot be utilized at the same time as the baseball field due to the risk of unobserved foul balls flying into the stands, track, and field. This creates a scheduling challenge, especially since the baseball field does not have lights, which
automatically forces lacrosse and track to compete and play later in the day. In fact, sharing facilities and scheduling them so tightly often results in double-headers with practice and games and extensive amounts of downtime between the end of the school day and the start of practice for some students. As a result, many athletes do not finish their day at school until 8 PM, several days a week in season. In addition, any home track meets and the team’s practices create a conflict for the other teams since the stadium is the only venue where the track team can practice, while some other teams can be more flexible with the other fields on site.

The lack of space also creates an equity issue. The boys soccer and lacrosse teams practice off-site, while the girls stay on campus. The boys’ coaches have opted for the ARIS location, but it would be beneficial to keep all teams on-site with access to all of the same services.

Additionally, when hosting large events such as football games, the away team’s locker room is very far from the stadium within the actual school building, which unfairly takes time from their half-time break and coaching opportunities. There is also no place to easily accommodate officials where they are not in close proximity to HHS athletes/coaches or exposed to the spectators who have opinions they may choose to share. To counter this, one of the staff members hired to do security is specifically responsible for escorting the officials to an out-of-the-way location and intervening if they are approached by any spectators.

Even on the fields and courts the school has now, there is limited to no seating for spectators, depending upon the location. It is also important to note that the facilities have many elements that have reached or exceeded their lifespan, including the stadium track (which is cracking and separating), the press box (which needs work on the roof and is not big enough for
the people who need to be in it, especially for a football game), the tennis courts (which are due for resurfacing and do not offer enough courts), the grass fields (which do not have built-in hydration), the baseball/softball fields (which do not have adequate fencing or netting to avoid spectator injury), and so on.

With the current configuration of the fields and the high demand for the gyms, there are also no flexible spaces that permit intramurals or non-athletic activities to occur without conflict. HHS has a rugby team/club (rugby is not an NJSIAA-sponsored sport) that competes across the state. The team practices wherever it can, weather-permitting, including in the Commons, where its terrazzo floor is hardly the appropriate surface for a contact sport’s practice, resulting in skill work and not in actual gameplay practice.

For any home event of a large nature, such as football games, basketball games, the marching band show, the state track meet HHS historically hosted annually (and just lost hosting privileges due to the condition of the school’s facilities), school events like Back-to-School Night, and the coveted senior parking privilege, parking on the campus is completely inadequate. Drivers park illegally, on grass and in mulch beds, and in any other spot they can find, even if it is somewhere they should never park. This poses issues for visibility, maintenance and upkeep of the grounds, and hazardous driving conditions.

From the perspective of H&PE classes, the facilities are too small to accommodate the number of students assigned to many H&PE classes, especially those in the largest periods (often Periods 2 and 9 due to how the science lab schedule works). In some activities, the students need to cycle through the activity, rather than participate actively for the duration of the period which is certainly antithetical to the goal of all of the research cited above, simply because the space is
inadequate for the size classes that can occur. In the spring and fall, there are outside options that relieve some of that pressure, but in the winter the use of the athletic facilities is scheduled extremely tightly, which increases the risk of injury from equipment or other players.

It is remarkable that the high school students, staff, and coaches work so effectively in spite of the constraints placed upon the H&PE and athletic program by facilities that the school outgrew long ago, but they do, and that is because they take extreme pride in working in Hillsborough and being a Raider.

**Review of Literature / Research Against the Need to Implement the Areas of Focus**

There is no research base that speaks against the value of physical activity or participation in extracurricular activities in school. In addition, helping students become healthy, vibrant, well-rounded people aligns with the philosophy of the Hillsborough Township School District on many levels.

**Budget**

Building new and improved athletic facilities will be a costly endeavor, although the many repairs needed to update and repair what currently exists is not an inexpensive pathway. Cost is the most prohibitive aspect.

**Recommendations with Rationale**

With the idea of a new high school comes the opportunity to completely redesign, update, and modernize the athletic facilities, which will have substantial benefits for athletic, band,
physical education, and all school programs at large, as well as benefits for the community. What would a new athletic complex look like at Hillsborough High? Although the list of recommendations is quite long, these are very specific suggestions that would address issues already discussed, and many more:

- Dedicated athletic fields (multipurpose) - If each team/sport had a dedicated field and those fields were marked in ways that made them multipurpose (as the current stadium is marked), each team would have a specific, on-site location to practice and hold games. If the fields were multipurpose, they would also provide flexibility for other purposes, such as intramurals, township programs, H&PE classes, and, in the event of a field needing to be closed for recovery (if there are grass fields), another on-site location for relocated games/practices. Aside from the cost savings from transportation, it would save a substantial amount of time in a student’s day and would allow additional time to study or decompress with family and friends.

- Locker rooms - Teams currently need to share locker rooms due to insufficient space and the number of participants in the program. This raises issues of security, safety, and privacy. Larger lockers in the physical education locker rooms are also a necessity as the current lockers are so small that students cannot fit all their belongings in the locker, which opens them up to theft. Sadly, locker room thefts are not uncommon at Hillsborough High School, although nothing has ever been stolen from a locked locker when students elect to secure their valuables, even if they choose not to secure everything.
• Designated Team Facilities - Space is at a premium in many ways, among them a lack of designated team spaces where meetings can be held, teams and coaches can study film, college recruiters can meet with players/coaches, and so on. Currently, one small conference room is available, but it is also used for equipment storage at times, which makes it crowded, cluttered, and less conducive for college representatives recruiting Hillsborough players.

• Athletic training facility - Because of the size of the athletic program and the number of participants, HHS employs two full-time athletic trainers. They share a space that is not even half the size of a classroom, including tables, offices, ice baths, and the access doors to the golf carts. The training facility is located far away from any of the outdoor venues, which requires them to “carry in, carry out” the typical items needed for every outside event. Within the space itself, the equipment maintained there is the bare minimum for a program of this size, and students often have to wait to access services, equipment, etc., due to the small confines of the trainers room.

• Storage (Equipment) - Every possible inch of storage available in Hillsborough High School is being used currently. With taped lines on the floors to secure a safe perimeter around electrical boxes, athletic equipment is pushed to the very limits of the space available. Storage spaces are reorganized with each new season to make the necessary materials accessible, and most of the equipment is not light or easily manageable. As new programs have been added and additional levels included for all ages, more equipment was needed. There is no room to store additional equipment as
the program grows, which is likely to occur as the enrollments increase in the coming years.

- Parking (in relation to fields) - Currently, there is very limited parking in close proximity to the fields, necessitating that spectators park and then go for a walk. In order to be more accessible to all of the spectators, including the elderly and those with physical limitations, adequate parking nearer each venue would be helpful.

- Accommodations for officials - As mentioned previously, there is no place to stage officials for events that does not require a staff member to escort them to the private location. Such a space would keep the officials away from the crowds, parents, and naysayers who can be rude, disparaging, and disrespectful. Also, it is important to keep the officials away from the players/coaches for both teams for the sake of fairness, which is also challenging given the current configuration of the athletic complex.

- On-site swimming pool - By adding a swimming pool on the campus, the district would bring the swim team home for practices and home events, saving costs of transportation and facility rental. This would build a substantial amount of time back into the swimmers’ day and would normalize practice times, allowing them to occur right after school as opposed to whichever time slot the district is assigned at the YMCA (which is also Bridgewater-Raritan High School’s home pool, which somewhat tempers the Raiders’ sense of pride in competing in their “home” pool).

As discussed earlier, there is no local pool that is suitable to be the home pool, which is why it is necessary to transport the students and coaches to Bridgewater. Adding a
pool would also add a completely different H&PE station, which would give several new offerings to students including improving general swimming and endurance skills, earning lifeguard certification, and introducing students to one of the healthiest lifelong physical fitness activities in existence. The pool could also become a revenue generator and could serve a community purpose to expand or support other recreational programs in the township.

- 8-10 Lane Running Track in Stadium - The current track is in need of serious repair, which has been shelved for several years during the budgeting process. Although the facility is used for competitions, a larger track would streamline events by allowing more runners to participate in each heat, thereby reducing the number of heats. This adds up over time and gets Hillsborough athletes and visiting opponents done and home sooner. It also opens up the possibility for the school to host major events, which is advantageous to Raider athletes who then enjoy and benefit of competing on their home court.

- 3- to 6-Lane Indoor Running Track above Gymnasium - By adding an indoor track above the gymnasium, in what is otherwise completely unused space, the H&PE department would pick up a new station, and activities like running and speed-walking could occur simultaneously with other activities. Currently, there is not enough space for students to walk/run laps around the gym without interfering with or risking injury from the other activities scheduled on the open gym floor. HHS has a very active strength and conditioning program, and athletes (regardless of sport) could also use an indoor track for conditioning purposes, which ultimately reduces
the likelihood of injury. Finally, the track team currently uses the hallways in the building for indoor practices in inclement weather, leaving them dodging teachers who are in and out of classroom, custodians who are trying to clean after a school day, and, perhaps most worrisome, making it impossible to secure hallways to keep students from wandering around the building after hours.

- Beach/Outdoor Volleyball Courts - Volleyball is probably the most popular H&PE activity in the high school, but there is inadequate space to set up additional courts. An outdoor sand court would add one or more H&PE stations, be motivating to students, and would work students’ muscles differently since playing on sand requires the body to move differently than when playing on a wooden floor.

- Outdoor Basketball Courts - Additional outdoor spaces would add another H&PE station and would entice students to be outside on nice days, which is a good motivator to be physically active. They can also be used on temperate days for skill work by the basketball teams, expanding the likelihood of athletes getting more individualized practice and instruction.

- Tennis Courts (6-10) - HHS currently has six courts, and they are in need of resurfacing. By adding additional courts, the tennis teams (all levels) would be able to practice on-site (the JV team must go to Amsterdam Elementary school to practice at times), and it would allow additional matches to occur at the same time when Hillsborough competes at home. Once again, more space means more athletes participate at once, which means that students get home sooner and have time to do
other things that are important to them. Additional courts may also permit community use, as well.

- Air Conditioning - Currently, the gyms at Hillsborough High School are not adequately air conditioned. The “old” gyms, which largely benefit from hallway air conditioning finding its way inside, are tolerable. The main and auxiliary gyms do not have air conditioning but do have sealed windows that let the sun in and raise the temperature in the gym to very uncomfortable levels during the warmer months. Not all H&PE activities move outside in the spring and fall, and the heat in the gyms can be unmanageable. Rainy days also bring all activities inside, making the gym intolerable. The gyms are also used for the annual Spirit Night event, and it can become unbearably hot each year, often resulting in at least one student becoming faint or dehydrated despite all of the efforts taken to urge students to take appropriate precautions.

- Concessions - The current concession stand in the stadium is inadequate for the size events the school and community hold there. There are no concession stands on any of the non-stadium fields. Adding them would increase possibilities for fundraisers, apparel sales, etc., which support the efforts of the school and booster organizations.

- Trophy Display Case - Hillsborough High School is a very competitive, regularly celebrated school, and students/coaches win many awards and accolades. There is insufficient space to display them, so they often get changed out quickly or, worse, tucked into storage where no one sees them. Our students work hard and deserve to see their trophies proudly on display in their school.
• Ticketing Area - Whether in the stadium or the gym, the ticketing areas are woefully insufficient for large events. Lines for football games can stretch through the parking lots. The setup of the stadium entrance also makes it difficult to police entry, which increases the likelihood of people entering without tickets or bringing in alcohol. In the gym, the ticketing area has been repurposed into an office for the Athletic Director’s secretary, which means tickets are sold at tables in the foyer, which crowds that space appreciably.

• Climate-Controlled Athletic Secretary Office - On the note of the secretary’s office, there is no climate control at all. This staff member relies on space heaters and fans to adjust the temperature to comfortable levels and, in the winter, can often be found wearing a winter coat while sitting at her desk. That is unacceptable.

• Field Events for Track - The existing field event spaces and equipment are in need of upgrade, and the actual design risks injury since a steep slope is directly behind several event locations. The school needs two (each) pole vault, high jump, long jump, shot put, javelin, and discus stations. Doing so would enable the school to host county, conference, and state championship events. These also open possibilities for H&PE activities and build interest and the team roster simply through exposure.

• Press Box with Adequate Inside and Outside Accommodations - The current press box is reaching its end of life and is in need of repair, notably the roof. It is too small for Hillsborough’s needs. Between coaches and announcers, as well as radio and news reporters, there is not enough space inside the press box, much less on the roof where the various line coaches assemble during the games. Getting to the roof
happens by climbing a nearly vertical ladder, and there is little shelter from the weather (although a lot of electronic equipment) in the event of rain. The sound systems and microphone setups are dated and glitchy. Also, there is no wi-fi in the press box at all, which causes issues for using technology to simplify scoring, play-calling, etc.

- Multipurpose Turf Fields (2) for Lacrosse, Field Hockey, and Soccer - With the addition of two turf fields for multiple uses, very little maintenance would be required which would increase student access to fields on campus. Grass fields get hard and patchy with overuse (or because of insufficient rain), but turf fields can be used without interruption, will allow multiple teams to practice or play games at one time, and will allow students to get home earlier to concentrate on academics and other interests.

- Turf Baseball/Softball Fields (2) with Bullpens and Batting Cages - One of the primary considerations for redesigning the athletic complexes is being able to make better use of the diamonds at the same time as the other fields/stadium are being used. On turf fields, the teams would be able to play more games without weather issues. Turf will also drastically reduce the maintenance required, which will save time and money and keep the field safe for play. These can also be activity stations for H&PE, and batting cages and bullpens allow for more participants within an activity to hone specific skills.
• Cinder Jogging Trail around Perimeter of Facility - A very simple and inexpensive item, the cinder trail is a station for H&PE, as well as a resource for the track team and conditioning for all teams.

• Light All Fields - In the late fall and early spring, it gets dark earlier, and it can be a real challenge to finish games with daylight, which makes actual gameplay difficult and increases the possibility of injury due to shadows and darkness.

• Indoor/Outdoor Adventure Course for PE Classes - The adventure/ropes course currently offered at HHS is a perennial H&PE favorite for students and is worthy of expansion and the addition of outside obstacles.

• State-of-the-Art Weight Training Facility - HHS currently has two weight/exercise equipment rooms. The equipment is aging, and the physical spaces are too small for the number of students who use the rooms. This is a safety issue, first and foremost, but it also limits the number of participants who can access the space during popular times, which dissuades students from coming. The strength and conditioning program actively seeks to teach students how to avoid injury through use of key regimens, stretches, and workouts, so it is unfortunate that students may not be able to access these programs due to facility limitations.

• Dedicated Gymnastics Gym - Currently the gymnastics equipment is set up and taken down each gymnastics season. A dedicated gym would make that unnecessary and add gymnastics as a teaching station for H&PE.

• On-Site 9-Hole Practice Golf Course - In keeping with the cost of transportation and rentals, the golf teams would benefit from being able to work their skills here without
needing to travel for all practices. This would also be a great way for students who are typically not exposed to golf to learn the game through H&PE class.

- All Facilities up to Current Code - Currently, portions of the athletic facilities do not have sprinklers installed. Although they meet code based upon their time of construction, sprinklers are a must to protect students, staff, and property.

- Stadium Lavatory Facilities - The lavatories in the stadium have seen much better days. They are old and battered, and they are far too small for the events held in the stadium, resulting in long lines and frustration.

- Scoreboards on All Fields - Scoreboards that are built into all fields with easily accessed controls will ensure equity for all teams/levels/genders and increase excitement at games.

- Maintenance Building - A great deal of equipment is needed to properly maintain the athletic facilities. Having a maintenance building on the campus that stores the equipment, has a workshop for basic repairs, and allows for secure, climate-controlled storage will save time and money in the long run.

- On-Site Ice Rink - Just kidding!

Several New Jersey high schools have renovated or built facilities in the not too distant past, and aspects of each warrant closer study should the opportunity arise to build a new high school. Franklin High School should be considered for its gym space and football field; South Brunswick, for outdoor facilities; Livingston High School, for indoor facilities; Montgomery, for their pool; and Bordentown High School and Saint Peter’s Prep for their complexes. Hillsborough students compete with many of these programs and see facilities that match the
level of their opponents’ performance, but the Hillsborough facilities do not match what HHS students accomplish.

**Closing**

Hillsborough High School, with over 2300 students and 900 athletes, is doing quite well despite the current facilities constraints. With 29 sports and 75 teams, every sport offered by NJSIAA, except bowling and fencing, is offered here. Teams consistently win county, conference, and state titles. Students move on to become Division I, II, and III athletes in college. Niche.com ranked the Hillsborough High School athletic program 16th in the state, 2nd in the Skyland Conference, and 1st in Somerset County (Stanmyre, 2017).

On the surface all of this looks really wonderful, and it really is. However, the facilities are not keeping up with the level of program offered at HHS. They were built at a different period in the history of HHS, when only 1600 students were in the school and the athletic program was appreciably smaller. In reality, Hillsborough High School is currently a Group 4 school, the second largest category, working in Group 2 facilities. In Group 2, schools have 600-1000 students and offer fewer sports and fewer levels (often just varsity and junior varsity, while HHS offers freshman, junior varsity, and varsity in all sports).

One might question why this is a big deal, but even research supports the impact that the condition of a facility has on the players. “The cumulative effect of school recreational features on students’ physical activity was greater than the modest association observed between individual characteristics and adolescents’ physical activity at school” (Nichol, Pickett, and Janssen, 2009). In other words, students were more physically active in schools where the
“features” or environment were exciting and conducive to their goals and attitude toward the program. If Hillsborough High School athletes can compete at the level they do despite the constraints of the current facility, imagine what they could do with extra time back in their day from practicing on campus, opportunities to improve their strength and conditioning, and a facility that matched and raised the level of Raider pride that they already feel. The sky is the limit.
Subcommittee: College and Career Readiness - Performing Arts

Facilities

Subcommittee Member Names:

Mr. Michael Callahan, District Supervisor of Visual and Performing Arts
Mr. Nicholas Clipperton, Teacher, Hillsborough High School
Ms. Julianna LoBiondo, Teacher, Hillsborough High School
Ms. Barbara Szabo, Teacher, Hillsborough Middle School

Introduction

Hillsborough Township School District has a vibrant reputation for an active and thriving Performing Arts Program. The wind ensemble is recognized annually and welcomed to invitation-only performances at Rutgers University. The marching band earns consistently high scores in overall performance, as well as in caption awards for music and other subsets of the total band show. The choirs earn the highest possible awards in adjudicated competitions. Many of Hillsborough High School’s students are accepted to All-State Orchestra, All-State Band, and All-State Choir. After careful analysis of the current facilities being used to support these programs, as well as facilities of districts with comparable populations and/or socioeconomic demographics, it is evident that there is a noteworthy disparity to the detriment of Hillsborough’s students and program. Comparable districts have built new or renovated/updated their facilities to support 21st Century Performing Arts and 21st Century Life and Career readiness standards, while Hillsborough’s facilities no longer bolster the program as much as they provide obstacles
that staff and students need to overcome to achieve as much as they do.

**Review of Literature / Research Supporting the Need to Implement the Areas of Focus**

By most metrics, the quality of performing arts instruction afforded to Hillsborough students is stellar. As noted above, most of the ensembles, vocal and instrumental (inclusive of extra-curricular activities), are consistently award-winning and participate in invitation-only competitions and performances. Nevertheless, a look at enrollment in performing arts when compared to similar districts is alarming. There are strong indicators that Hillsborough is offering instruction in the area of performing arts to far fewer students than in comparable districts. Currently, Hillsborough enrolls 10.6% of the high school student body in performing arts instruction, while the percentage of students in comparable school districts is appreciably larger in most cases: Bridgewater-Raritan - 17%, South Brunswick - 22%, Montgomery - 30%, East Brunswick - 39%, Jefferson Township - 40%, and Roxbury - 41% (based upon percentages provided to Hillsborough staff through their colleagues in similar positions in those districts). This suggests that the norm is for a high school to be able to provide performing arts instruction to 31.5% of its student body. In hard numbers, that actually means that, as a district, Hillsborough is neglecting to provide opportunities in the area of performing arts to 466 students annually.

Arts education often becomes one of the first areas to be marginalized or cut in school districts when budgets get tight. In New Jersey, students are fortunate that they are required to earn five credits in visual and performing arts to meet high school graduation requirements, which is not the case in other states. Many Hillsborough students take more than the required
five credits if their schedule allows and, most especially, if the arts are particular passions of theirs. In many cases, in order to take a music course every year of high school, students choose to take other electives online at a personal cost to their family in order to allow space in their schedules for their beloved band or choir class.

Education in the arts is of critical importance to students, not just for the social/emotional reasons that come from doing something that they love, but also because of the benefits that the arts cause in education. American writer Henry Miller stated, “Art teaches nothing, except the significance of life.” Within all of civilization, the arts have been used to convey meaning and emotion, to tell stories, to connect people, and to be a voice of the times. Artists also benefit intellectually and behaviorally from their work. Johnson and Memmott (2007) found that “students in high-quality music programs often score higher on standardized tests compared to students in schools with deficient music education programs, regardless of the socioeconomic level of the school or school district.” This is reinforced by College Board regarding outcomes of students who self-reported that they studied music for four or more years compared to those who studied for a half-year or less. Those who studied music scored an average of 55 points above average in reading, 54 points above average in math, and 60 points above average in writing on the 2012 SAT (College Board, 2012):
In Florida, Kelly (2012) conducted a comprehensive analysis of student outcomes as related to participation in the arts, finding that “the results showed the positive effect of participation in arts-related classes on a broad base of individuals, including students from varying races, ethnicities and socioeconomic levels” (p. 8).

From [http://cfaefl.org/advocacy/](http://cfaefl.org/advocacy/) - Complete Presentation - All Slides

Kelly’s analysis demonstrates that students who participate in visual arts, theater, and music (but not dance) and take 2.5 credits or more of arts instruction have consistently higher...
outcomes on the verbal and math SATs compared to students who take no credits in the arts. “The data demonstrated that students participating in arts classes for eight or more semesters… benefited even more” (Kelly, 2012, p. 8). His analysis also revealed lower dropout rates with increased participation in arts-related courses. He summarizes his work, stating, “Consequently, the multisensory phenomena experienced through the arts appear to influence students’ social behavior and academic performance, as well as artistic awareness. Few experiences in school curricula provide such a comprehensive growth” (p. 10).

Another consideration about the importance of the arts is the impact that they have on the workforce. Benefits to arts training include work ethic and tenacity, as virtually any artist can attest. Dr. Elliot W. Eisner, Stanford University, identifies “key competencies of cognitive growth that are developed through an education in the arts. These include: perception of relationships; a skill in finding multiple solutions to problems; attention to nuance; adaptability; decision-making skills; and visualization of goals and outcome” (Psilos, 2002). Creativity is also a factor. Participation in the performing arts is not a guarantee that a child will go on to pursue it professionally. Instead, the spotlight should be on learning life skills in a creatively charged environment. Michelle Lees, principal of the Maryland Youth Ballet, says, “Those who don’t go onto professional careers in the arts, they go on to become doctors and physicists because they have the discipline” (Carter, 2014). According to Carr (2010), creativity is valued above integrity and global thinking by 1600 CEOs from 60 countries as the characteristic they most desire for those they want in leadership. Arts education seems a fitting start to broadening horizons, embedding respect, and nurturing the arts early in the leaders of tomorrow.

There are also studies that say that studying music will have no effect on students’
academic performance (Elpus, 2013; Costa-Giomi, 2004; Rickard, Bambrick, & Gill, 2012) and that performance is based upon other identifying factors such as demographics and attitude toward school. However, historically there has been no debate in Hillsborough Township Public Schools about the advantages or importance of the arts, so what is important for the purpose of strategic planning is not whether or not Hillsborough should have arts programs but what those programs should look like and, perhaps more importantly, if current practices are restricting access to the arts for Hillsborough’s students.

With only 10.6% of the HHS population participating in the arts, compared to an average of 31.5% from other New Jersey districts with comparable programs, it seems clear that there must be impediments to students’ ability to access the arts programs. As the strategic planning subcommittee considered the state of the current program at Hillsborough High School, the members identified two, specific factors holding the program back from better serving existing arts students and from serving more arts students overall -- the need for a new bell schedule and appropriate facilities.

As has been discussed at length in other areas of the College and Career Readiness research, Hillsborough High School only offers a seven-period day, which allows for a total of 140 credits over four years, 120 of which are graduation requirements. The remaining 20 credits must encompass interest courses/electives, remedial courses (credit recovery for class failures or targeted intervention needed in accordance with outcomes on state testing), coursework for specific career-pathways, and the “resume-builders” that students and parents select to make college applications highly competitive. That leaves little time for anything but the highest priorities for each student, and it leaves little time for “joy” classes in the day. Hillsborough’s
students are incredibly talented, and the number of instrumentalists, bands, singers, and dancers in this community is woefully underrepresented in the arts programs at the high school. There simply is not enough time in the school day for the students to fit in arts classes without sacrificing something else.

The other area identified -- facilities -- should not be viewed as mutually exclusive from the bell schedule due to the symbiotic relationship between the two items. With more time in the day for an extra class, space would be needed to offer those classes, and the current arts facilities are already stretched to the limit. In essence, for the music program to see the benefits, the outcome of this process cannot be an “either/or” but a “both.”

The facilities for the music program are particularly problematic given the conflicts between our current program offerings and the space available in which to hold the classes. Freshman Band, Concert Band, and Wind Ensemble are programs that increase in rigor and ability, both for educational purposes and due to instructional space constraints. The band room is filled to capacity for band classes currently, and the disparate levels cannot be taught at the same time because there is no other classroom large enough (or appropriate) in which to place another band class simultaneously. Three teachers (two instrumental band and one string orchestra) vie for space in the same room, and some years the orchestra class gets scheduled in the choir room due to unresolvable conflicts, which means that the students must bring their instruments from the backstage dressing room storage cabinets… and bring music stands… and then return everything at the end of every period, taking away from instructional time. Although there are practice rooms, they are too small to use for ensemble rehearsals and more appropriate for one-on-one lessons, which creates a time-crunch for the music teachers who conduct lessons
individually unless they are fortunate enough to have lessons during a period when another band is not scheduled in the band room. This also creates a ripple effect across the building since students are pulled from non-music classes for their music lessons. If there were more spaces for ensemble rehearsal, a group could be taken at once, which would reduce removing students from their other classes one by one. When the auditorium is used as a backup instructional space, it limits access for classes (English, social studies, etc.) who could have access to the space for student-centered, performance-based instructional activities.

The Music Technology class is scheduled in a room that only seats 13 students. The equipment for the course is outdated, both in hardware and software, and students often say that they are able to do more at home on their own devices. With a larger room and upgraded equipment, the many vocalists and musicians in the student body would find immediate use for the information and training that course could better impart.

The auditorium is incredibly restrictive to the current program. It was state-of-the-art when it opened in 1999. Now, its sound system, lighting system, and acoustics are antiquated. When mold closed the auditorium last year, Montgomery High School kindly offered Hillsborough their performing arts center for concerts. Hillsborough staff, students, and parents left stunned at the difference in sound quality in the Montgomery PAC, and even digital recordings sounded appreciably better than when they were recorded with the same students performing the same pieces in the HHS auditorium.

The seating capacity in the auditorium is also prohibitive. With 1600 students enrolled in the high school when the auditorium was renovated, there was ample seating room for each class for assemblies. Eighteen years later and with enrollments climbing toward 2400 or more
students, the auditorium only seats 596 students. There have been years, and there are likely to be more years on the not-too-distant horizon, when all students in a single grade will not fit into the auditorium. For this year’s freshman class, there are three seats to spare. Compared to other schools, Hillsborough is behind on this, just as the school is with the number of students participating in the arts. Currently, the HHS auditorium can seat 26% of the student body. Comparable school districts can seat substantially more (based upon the number of seats as compared to total enrollment): South Brunswick - 38%, Ridge - 53%, Monroe - 56%, Montgomery - 58%, Phillipsburg - 58%. It is also important to note that, when an entire class is in the Hillsborough auditorium, there is no seating for staff, who must stand around the perimeter of the room no matter how long a presentation is going to be. While this may serve a purpose for supervision, Hillsborough High School’s students are extremely well-behaved in assemblies, which makes the need for teachers to stand unnecessary, uncomfortable, and unfair.

The stage itself is not large enough to seat instrumental bands without making logistical decisions that are often contrary to artistic decisions. In a band, sections may be split (which changes the sound), students/equipment may be perched on the edge of the artificial floor when concerts are happening too close to theatrical performances due to how tight the calendar is, and there are delays in the middle of actual performances as chairs/stands are adjusted to meet the needs of each group playing. The wing space in the stage is not large enough to allow room for props, sets, and actors during a performance, and set designs must take this into account, which inhibits the overall plan for the plays and musicals. Without an actual instrumental pit recessed in front of the stage, a faux pit must be built on the floor in front of the stage, which then necessitates removal of several rows of seats, further diminishing the number of seats available
to ticket holders and the number of tickets that can be sold, which then impacts the revenue
generated which is what funds the productions. Pit members also block visibility to the stage in
the coveted front row seats.

The backstage area is inadequate for the size of the program. Set materials like wood,
flooring sections, and other props are stored there and kept orderly and safe only due to the
extreme diligence of the staff who constantly stress the importance of order and safety in the
backstage area. In addition, the dressing room sizes are too small for the groups of performers
for most shows. Since they serve the double purpose of being the storage space for the string
instruments, there is an increased risk of theft or damage, especially since so many outside
groups use the stage and dressing rooms.

The current music facilities are so heavily subscribed that there is no flexibility to
reschedule events should something occur or to add events should an opportunity arise. Once the
sets for the plays/musicals are under construction, the stage is completely off-limits to other
events for the school and to outside renters.

Secured storage is an issue. With hundreds of thousands of dollars of musical
instruments, recording equipment, marching band uniforms, sheet music, microphones and
cables, music and microphone stands, sound boards, light boards, and so on, there is thoroughly
inadequate space to secure the school’s property. When the facility is rented to outsiders, school
property is lost almost every time as the renters or their guests avail themselves to anything they
see that they would like to use or keep. In addition, carefully programmed settings to the sound
system and lights are undone when inexperienced and untrained renters access the system.

Finally, the Hillsborough Township School District does not have a single place in the
district where professional development or all-staff meetings can occur where everyone is in the same place at the same time. That causes a disconnect in messaging, widens the communication gap that can occur between grade levels and buildings, and takes away from the very cohesive district Hillsborough has always been.

**Review of Literature / Research Against the Need to Implement the Areas of Focus**

In spite of restrictions in scheduling and crowded facilities, the HHS Performing Arts Department has continued to maintain strong music programs and be recognized by trained adjudicators for the quality of the programs and the high-level performances brought out of Hillsborough’s students. That will not change, despite the hurdles that must be jumped daily to meet with such continuous success. The Hillsborough Township School District has historically valued and supported the arts in our schools, and the question here is not about running an arts program but about updating the facilities to increase access for all students.

**Budget**

As with the rest of the college and career readiness concepts, the price tag is not small. However, if Hillsborough builds a new high school, including a new performing arts center, it opens the district to so many opportunities for school and district activities, as well creates opportunities for the community to enjoy events held here and possibly generate revenue for the district.
**Recommendations with Rationale**

The committee recommends building a new performing arts center (PAC) on the new campus of Hillsborough High School. The advantages are well worth the cost, will better align with the program already offered, and will increase access to the performing arts program for those students who currently cannot fit it into their schedules.

To best meet the needs of Hillsborough High School’s program and students, the following recommendations warrant careful consideration. The PAC should have:

- Ample seating, enough to seat at least two grades at once, which would also provide one place in the district where the entire staff could meet. Minimum seating should be 1500, although seating for 5000 (with dividers that allow the areas to be made smaller for flexible purposes) would serve several other important purposes:
  - It would allow graduation to come back on-site. Even with classes of 700, seating for 5000 would allow graduates to invite 6 guests each, which should be enough for most families. In a climate-controlled environment, this would save families a great deal of time and travel, and it would restore the tradition of graduating on campus, which means a lot to the students. The facility could also be rented to other high schools for their own graduations, another way to bring money into Hillsborough.
  - The venue could be used for rental purposes for other performers and guest lecturers, which would make it a revenue generator.
  - South Brunswick can seat 1100; Ridge, 1000; and Phillipsburg, 950. Broken Arrow High School in Oklahoma has a facility that seats 1507, including 17
designated handicapped seats. Hillsborough can seat 596.

- A stage much larger than the current stage to enable an entire band to fit on the stage without being tucked into the wings or perched on the very edges. The stage should also have ample wing space for sets and cast during a performance, and the stage ceiling should be high enough to afford rafter space that also gives flexibility to sets and screens.

- Flexible spaces that can be used for district professional development and act as a conference center to provide professional development to other educators. Hillsborough’s supervisory and administrative staff members are already respected presenters in many circles, so providing those sessions on-site can be another revenue generator.

- A black box theater that seats approximately 150 people, possibly with flexible seating. This would allow big productions to use the full theater, while still leaving a smaller space for ensembles, coffee houses, “battle of the band” shows, community church, and cultural dance presentations, etc., without shutting down the entire facility for extended periods of time. This could also be a location for Board of Education meetings.

- A true orchestra pit set below the stage. This takes the pit players out of the line of sight of the audience, leaves seating intact, increases available tickets for sale, and does not interfere with cast on the stage. Appropriate technology would be required to allow for visual communication between the pit and those on stage.

- Larger dressing rooms with ample lavatory access in close proximity to the main
stage. It currently takes an entire intermission to cycle student performers through the backstage lavatory.

- A fully operational, fully securable sound and lighting booth. The controls should be programmable and then lockable to provide basic settings to untrained renters.
- Ample storage space to secure equipment, set pieces, flooring sections, costumes, marching band uniforms, etc., in places that are not frequented by students (as is the case now). To simply bring materials in and out, the PAC should also have a loading dock. There should also be a set-build room (workshop) in close proximity to the stage.
- Instructional classrooms large enough to accommodate growth in the music programs and enough large rooms by design that teachers have ample room for instrument storage and so that the schedule is not forced into a certain configuration (thereby restricting enrollments) because of room availability.
- Ample space to enable Hillsborough to host large events such as the Central Jersey Music Educators Association band festival, all-state band and choir festivals/competitions, etc. This would also save the district money on transportation.
- Museum space to display student artwork, including hallways walls, display cases, etc., as well as trophy cases to take the many awards our students have earned out of private classrooms and into the public eye.

In consideration of the other aspects of the strategic plan, it would be a specific goal to build a PAC that supported the other areas to fully capitalize upon the opportunities that such a focused connection would bring. For example, a new PAC, attached to a new high school with
an academy structure, would allow students who are very interested in the arts to select that academy without needing to go off-site to the full-day vocational program. With revisions to the bell schedule to allow for an eighth period of instruction, it is very likely that enrollment in the arts will soon match or exceed the average percentages from similar schools. Students would be able to continue their rigorous course work at Hillsborough High School while still choosing a program that will teach them an entirely different array of skills. Placing a new PAC adjacent to an Early Childhood Learning Center would allow arts and education to be integrated much earlier and would only enhance emerging student skills. In addition, the opportunity for multi-level engagement would be beneficial for all students throughout the district, with high school students working with the younger children to teach them performing arts skills. The Hillsborough School District embraces a “whole child” approach to education, and the arts support and enhance these themes. The social-emotional competencies of relationships, recognition of emotions, and decision-making are integral parts of ensemble performance. In addition, the Student Life subcommittee has highlighted the importance of the “global mindset,” a global perspective premised upon exposure to cultures as a hallmark of quality educational and music programs. Music students learn about cultures through music exploration and performance.

Having a PAC in Hillsborough that mirrors the high level of education delivered here may also be an inspiration to students to pursue the arts as careers or as lifelong passion projects. The stronger the foundation and the more realistic the experience, the more willing students will be to take risks and to think of themselves and their experiences as having a strong enough base to put themselves in the mix on a bigger stage or in a rigorous collegiate audition process. This
can be a self-perpetuating process… great facilities embed a sense of pride in participants and may entice new students to get involved, which leads to an array of successes and failures, which help build skills and grit, which help guide choices, and which ultimately play important roles in bravely pursuing dreams and dealing with stumbling blocks.

Finally, research in arts education through the years reinforces again and again the impact that this course of study has on students individually and within a community. As students hone skills that will develop them as strong musicians, artists and performers, the school community benefits from this creative and positive energy.

**Closing**

A performing arts center can become a cornerstone of the high school and the district, much as the high school itself is a cornerstone of the community. Whether because of academy use of the space, growth in the arts department, a bell schedule that allows greater participation, connection to programming for early childhood students, on-site professional development / conference center opportunities, or any of the other huge benefits to updating these facilities, Hillsborough’s students will benefit enormously from the investment.

Imagine concert night for the band, seated and tuned behind a curtain that can actually open before them, hiding all of the logistical efforts that go on behind the scenes and only showcasing the time-honored final tuning conducted by the concertmaster/mistress. Students eagerly await that first view of the audience and the audience its first view of the students -- sons, daughters, brothers, sisters, grandchildren -- and the music begins. Sounds soar in the rafters and surround and fill the players and those fortunate enough to hear the work of the
outstanding and talented students at Hillsborough High School.

Imagine opening night of the musical, where a sold-out house is now 1500 or more, not under 600. Actors breathlessly take their own place behind the curtain as the orchestra plays the entracte from the pit, and the curtains part to a new and exciting world that will transport the audience to other countries, lives, and experiences for the next two hours. Small children sit enthralled and in awe of their idols -- teenagers -- and parents blink away tears wondering where all of this talent came from in someone who, just yesterday it seems, was an infant.

Imagine the black box theater with a rock band playing to a crowd of adoring fans and friends, who previously only saw these teen rockers perform in a backyard, basement, or garage, followed by a folk trio, a teen comedian, a poetry slam, a soloist, and so on. High schoolers are unlimited in their interests and their passions, and their school, where they spend the majority of their time between the ages of 13 and 18, should be pretty close to unlimited in the ways that it can support their dreams. It is in our power to shine the spotlight on them and reveal them all for the blossoming stars they are.
Subcommittee: College and Career Readiness - Vocational Education

Subcommittee Member Names:

Mrs. Kim Losch, Teacher, Hillsborough High School

Mr. Eric Rosenthal, Teacher, Hillsborough High School

Mr. Michael Simborski, Vice Principal, Hillsborough High School

Introduction

If the purpose of high school is to prepare students for their postsecondary pursuits, then that preparation needs to include the wide array of pathways a student may take, not just the narrow scope of college preparedness. Citizens of the United States are vast and varied in their interests and careers, and the march of time, as well as developments in technology and changing needs for the country, have created patterns of postsecondary studies and jobs, but it begs the question if high schools of today are adequately preparing students for the array of experiences they might encounter after earning a high school diploma. In past years, high schools have focused on clear messages of encouragement to help all students realize that they are capable of going to college, so much so that other programs, like vocational/technical programs, have fallen to the wayside at schools with the resources being redirected to college-preparatory programs. Since Hillsborough High School’s inception in 1969, an automotive shop has been disbanded (1998, approximately), the work program for general education students became defunct (2010), and enrollment in several courses for Applied Technology and Information & Communication Technology (I&CT) courses has been on the decline as students have pursued more
college-preparatory pathways. Yet, “after years of focusing intensely on college readiness, states are turning their attention to students’ futures as workers, enacting a flurry of laws and policies designed to bolster career education and preparation” (Gewertz, 2017, p. 1). What does this mean for Hillsborough High School and how can the district support students in all of their future aspirations, regardless of the pathways the students may choose?

Review of Literature / Research Supporting the Need to Implement the Areas of Focus

As has been discussed at length in other portions of the Strategic Planning report, Hillsborough High School’s growth has been staggering since it first opened its doors. Originally serving a student clientele from families who lived in a relatively small town, many of whom were farmers (the school mascot was nearly the “Farmer,” not the Raider) and other careers, some of which did and some of which did not require a college degree, the township’s demographics have taken a turn, with a current District Factor Group designation of “I,” the second from the top for the state. Hillsborough has been cited as one of the best places to live in the country according to Money magazine (earning a rank of 30) with a median income of $110,435 and a median home price of $311,500… in 2015 (Best places, 2015). This is a lot of growth in an area once known for its extensive farming community. Eventually, a lot of that farmland gave way to housing developments, mini-mansions, townhouses, and apartments, turning the township in a new direction demographically and in the goals of its residents.

As times and the community changed so did the school system, focusing increasingly on preparing students for college as the preferred goal after high school. On the surface this appears to be a good thing. However, financial woes in the United States within the last decade, “left
millions unemployed for prolonged spells, with recent workforce entrants such as young graduates being particularly vulnerable” (Kroeger, Cooke, and Gould, 2016, p. 1). In a report completed by the Economic Policy Institute entitled, “The Class of 2016: The Labor Market is Still Far from Ideal for Young Graduates,” these authors researched the employment rates of recent high school graduates (ages 17-20) and college graduates (ages 21-24). As much as there has been a push in high schools for students to strive for college degrees, this study found that “the vast majority (65.8 percent) of people age 24-29 do not have a college degree,” further stating that “access to good jobs for these individuals is especially critical, as stable employment allows them to build a career or pay for further schooling” (p. 2). The study considers those who are unemployed and those who are underemployed (part-time workers who want full-time work or the unemployed who have stopped seeking employment within the last four weeks).

**Unemployment / Underemployment Rates - Comparison between 2007 and 2016**

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<tr>
<td>Unemployment Rate</td>
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<td>9.6%</td>
<td>33.7%</td>
<td>26.8%</td>
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(based upon data from Kroeger, Cooke, and Gould, 2016, p. 2)

Those who have chosen to go to college are also shackled with additional loans, far more so than in the past. In a ten-year span ending in 2014-15, a college education (including tuition, fees, room, and board) “increased 119.5 percent for private school and 124.7 percent for public school (according to the College Board)” (p. 4). In the same time span, “there was a 92 percent increase in the number of student loan borrowers and a 74 percent increase in average student loan balances (according to the Federal Reserve Bank of New York)” (p. 4). One of the key factors
that may be contributing to such high rates unemployment and underemployment may be that young workers, who lack experience, may lose out on positions to those more qualified (p. 5). In addition, those without degrees may not get positions that are going to overqualified college graduates who have opted to work in jobs that do not require a degree. Even when the economy was better, “38 percent of employed college graduates age 22-17 worked in jobs that did not require a college degree (Federal Reserve Bank of New York 2016)” (p. 13). A unique outcome from the recent depression, as further noted by Kroeger, Cooke, and Gould, was that young, unemployed workers have not been using the periods of economic difficulty to seek additional education to improve their likelihood of employment, which has historically been the case (p. 16). College graduates also face very high levels of debt at much higher rates than previously. Based upon the Survey of Consumer Finances (as referenced in the Economic Policy Institute’s report), “37 percent of the nation’s households headed by an adult younger than age 40 owed money on student debt, a proportion that has more than doubled since 1989… The average amount was $26,682 in 2010… and 10 percent of households owe $61,895 or more” (p. 25). In broader terms, “the number of student loan borrowers increased by 92 percent, and average debt per borrower increased by 74 percent” between 2004 and 2014 (p. 26).

In the Final Report of the New Jersey Department of Education College and Career Readiness Task Force (2012), the committee stated their own findings, reporting, “‘in a 2005 survey by the Washington-based non-profit group Achieve, Inc., employers estimated that 39% of recent high school graduates were unprepared for entry level jobs, and 45% were not prepared to advance beyond those positions (Musgrove, 2010)” (2012, p. 17). The task force further argued that “business and industry… [are] required to expend substantial amounts of time,
energy, and money on training entry-level workers (as well as continuing professional
development) so that these employees can meet minimal expectations for continuing
employment” (p. 17). This appears to be a theme that is building momentum across the country
as an underprepared workforce undermines the work that a company is able to do with new hires
and as human and financial resources are diverted into conducting the necessary training. If this
is the case for typical entry level jobs, it also raises concerns for the preparation recent graduates
may have in career fields that require more specialized training, such as a trade or certification
program, but not a college education.

The ripple effect for schools is attempting to find the magic formula of an educational
system that balances the needs/goals of the college-bound and career-bound students. The
answer would seem to be infusing more vocational-technical programs into the students’
experiences. The 1990 Perkins Act defines vocational education as “organized educational
programs offering a sequence of courses which are directly related to the preparation of
individuals in paid or unpaid employment in current or emerging occupations requiring other
than a baccalaureate or advanced degree” (U.S. Department of Education, retrieved November 7,
2016).

In NJ Spotlight, Reitmeyer stated that the “demand for vocational-technical training is on
the rise across the state, but there’s not enough space available now in existing school facilities
to meet the demand” (p. 1). Much like the community connections in earlier discussions of
academies, where the types of academies selected for a school are based upon the employment
needs of the community, “leaders of New Jersey’s manufacturing industry have been indicating
for some time that they need more skilled workers to fill job openings” (p. 1). In other states,
similar concerns have arisen, as have specific steps to counsel students on the wide array of postsecondary avenues that exist, not strictly limited to college. Colorado “now requires schools to include options like certificates, apprenticeships, and the military in their career counseling” (Gewertz, 2017, p. 1). Gewertz further reports that, “as they focus more intently on career preparation, some states have opted to use their diplomas to send signals to employers. Tennessee will now award a special ‘tri-star scholar’ designation to students who add an industry-recognized certificate and minimum scores on the SAT or ACT to their completion of all graduation requirements” (p. 2).

Internationally, there is evidence that the United States has departed vastly from the preparatory steps used with future contributing citizens and employees. Hanushek, Schwerdt, Woessmann, and Zhang (2017) report that “some [countries] stress vocation education that develops specific job-related skills in order to prepare students to work in specific occupations while others emphasize general education that provides students with broad knowledge and basic skills in mathematics and communication and serves as the foundation for further learning” (p. 49). The United States more closely meets the latter portion of the description with a nationwide system that is more attuned to creating a generalist instead of a specialist through completion of high school. In “Seeing Hope for Flagging Economy, West Virginia Revamps Vocational Track,” published in The New York Times, the author provides further comparison with other countries, stating, “When it comes to technical education, the United States is an outlier compared with other developed nations. Only 6 percent of American high schoolers were enrolled in a vocational course of study, according to a 2013 Department of Education report. In the United Kingdom, 42 percent were on the vocational track; in Germany, it was 59 percent; in
the Netherlands, 67 percent; and in Japan, 25 percent” (Goldstein, 2017, p. 2). In Hillsborough during the 2016-2017 school year, forty-two (42) students were enrolled in the county vocational school, which is less than 2 percent of the high school population:

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Where once employees stayed with companies and careers for decades if not an entire working lifetime, that is no longer the case. “Many young workers struggle to find their place in the labor force, changing not only employers but also occupations multiple times before they settle down to stable jobs. One appealing way to deal with these transition problems is to link students more closely to jobs through vocational education programs and through apprenticeships with firms” (Hanushek, Schwerdt, Woessmann, & Zhang, 2017, p. 49). If a high school program could expose students to a broader array of real-life experiences, help students identify specific fields of interest, connect students to practitioners, and train students to do, at the very least, the entry level positions in these fields well and with minimal on-the-job training, it would seem that those students had been well-served. There is also an emotional upheaval that accompanies young workers as they find their way in their working lives, especially if trial-and-error becomes their method for identifying their chosen fields. A vocational program could help to minimize some of that angst, as well as help to expedite the worker’s earning capacity, by providing insight and experience in elements of specific fields to help the students determine sooner what careers may or may not be for them.

The opening lines of Barron and Darling-Hammond’s article, “Powerful Learning:
Studies Shows Deep Understanding Derives from Collaborative Methods,” state:

“Today's students will enter a job market that values skills and abilities far different from the traditional workplace talents that so ably served their parents and grandparents. They must be able to crisply collect, synthesize, and analyze information, then conduct targeted research and work with others to employ that newfound knowledge. In essence, students must learn how to learn, while responding to endlessly changing technologies and social, economic, and global conditions.”

A similar theme is stated by the National Center on Education and the Economy (2007, p. 6), which focuses on problem-based learning and thinking expansively and outside the box:

“This is a world in which a very high level of preparation in reading, writing, speaking, mathematics, science, literature, history, and the arts will be an indispensable foundation for everything that comes after for most members of the workforce. It is a world in which comfort with ideas and abstractions is the passport to a good job, in which creativity and innovation are the key to the good life, in which high levels of education — a very different kind of education than most of us have had — are going to be the only security there is.”

Not only do these words harken back to the district’s former mission statement, this far too aptly defines the crux of the problem for schools, as educational programs worldwide strive to develop programming that is both concrete and abstract, that prepares students to work not only upon graduating from high school/college but also twenty years later, that fosters in them the ability to create the future for themselves and others…without knowing exactly what that
future may hold. This, in and of itself, is an argument both for and against vocational programming.

An important consideration is how Hillsborough students would feel about changes that would give them more access to vocational programming. In the middle of the 2016-17 school year, a survey was completed with high school students, which received 681 responses (approximately 31% of the student population) and at Hillsborough Middle and Auten Road Intermediate schools, which received 767 responses (roughly 32% of the student population).

**High School:**

I am more interested in participating in a vocational program at HHS than at Somerset County Vocational School because: (Choose all that apply):

(681 responses)

- I am not interested in participating in a vocational program at HHS. 248 students (36.4%)
- I would not have to worry about transportation concerns that affect my academic programming by requiring me to take online courses. 181 students (26.6%)
- I would not have to worry about transportation concerns that could impact my participation in student life at HHS. 204 students (30%)
- I would have better course selection at HHS (meeting graduation requirements and/or having more choices by topic and level). 222 students (32.6%)
- I want to continue my education with my friends/schoolmates in my town's school. 298 students (43.8%)
- I want to be a part of the Hillsborough High School community rather than the Somerset County Vocational community. 237 students (34.8%)
- Other: 30 (4.4%)
In this question, slightly more than a third of the respondents had no interest in any form of vocational education. The remaining respondents (63.6%) were not opposed to vocational school but preferred to have the option on the campus of Hillsborough High School. While transportation and online classes played a part on these opinions, the strongest response was in a category that is very important to students, being with their friends in their home school.

**HMS/ARIS:**

I am more interested in participating in a vocational program in Hillsborough rather than another town: (Choose all that apply): (767 responses)

- I am not interested: 240 (31.3%)
- I would not have had a choice: 128 (16.7%)
- I would not have had options: 151 (19.7%)
- I would have had options: 243 (31.7%)
- I want to continue with my friends in my town's school: 404 (52.7%)
- I want to be a part of the Hillsborough High School community rather than the Somerset County Vocational community: 276 (36%)
- Other: 42 (5.5%)

This is the same question as the one posed to the high schoolers, but it took out the name of the county vocational school so that students’ answers were not skewed by their lack of
knowledge about SCVTHS. Once again, nearly a third of the students (31.3%) had no interest in vocational school at all, but of the 68.7% who would consider it, the most prevalent consideration was a familiar theme -- wanting to attend school in one’s hometown with one’s friends (52.7%).

**Review of Literature / Research Against the Need to Implement the Areas of Focus**

Vocational-technical programs may not prove to be the “be all and end all” for high schools, and they do not guarantee that students will even pursue the fields they may study in high school. According to data gathered by exit poll from the Somerset County Vocational-Technical High School (SCVTHS), roughly 20% of SCVTHS graduates from the Class of 2015 went into the workforce, 36% went to four-year colleges, and 36% went to two-year colleges (New Jersey Council of Vocational-Technical Schools). Although the reasons for the graduates’ choices are unknown, what is clear is that 72% of the graduates did pursue additional schooling, regardless of the field of study, which may indicate that the vocational experience was largely for high school purposes only or may have appealed to a student’s specific interests that may or may not have translated to actual career plans.

In “General Education, Vocational Education, and Labor-Market Outcomes over the Lifecycle,” Hanushek, Schwert, Woessmann, and Zhang found that long-term success of vocational-technical programs and their students’ employability may actually decline over time and, at age 50, generalists may be more employable due to a broader skill set and availability of training (2017).
Other issues exist with developing an on-site vocational program, notably in the area of cost. Each unique program is very specific in its needs and equipment, which may ultimately prove cost-prohibitive to development on the campus of a reimagined Hillsborough High School.

Perception can play a big role in a student’s (or parent’s) willingness to consider sending a student to a vocational-technical program. There has long been an unwarranted social stigma attached to vocational programs, perhaps harkening back to the days when the students who did not seem to be successful in a comprehensive high school instead attended a VoTech program. However, that stereotype is a thing of the past. Within the last ten years, the entrance requirements for SCVTHS have increased substantially in rigor, and the admissions process has become far more discerning. The VoTech students of the past, who may not have had strong grades or a clean behavior record, are no longer likely candidates for acceptance. To the contrary, SCVTHS looks for students who are academically competitive, do well on standardized assessments, and are not classified as students with special needs. This was a big adjustment for a lot of schools, HHS included. If there is any stigma currently attached to the vocational-technical school, it is truly unfounded as the programs have become highly competitive among students with histories of high academic achievement, almost to the detriment of students who would be better served learning in different ways than those typically employed in a comprehensive high school.

Just because the times have changed does not mean that student interest has changed. In the survey conducted with HHS, HMS, and ARIS students, the idea of a themed/career-based course of study was appealing to only one-third of the respondents:
In both groups, there was only a difference of approximately 2%, with the younger students being slightly more interested in taking classes related to one guiding/theme or career choice. These responses do not bode well for a vocational program or the concept of academies at the high school, as students appear to be more interested in having a multitude of choices available to them.
Should the district choose not to pursue any form of vocational structure, there are options that could be afforded to high school students that may bridge the gap between a full vocational program and the current traditional program being offered at HHS. There are currently only six Applied Technology classes offered at Hillsborough High School. With more flexibility in the bell schedule, electives that are engaging, enjoyable, and practical can be developed, such as a “farm to table” elective that combines skill sets from the Family & Consumer Science (FACS) department and the science department; a “home survival” elective that teaches students the skills needed to perform many basic repairs themselves without needing to hire an electrician or plumber; a basic auto shop program that trains students how to change tires and oil, as well as how to handle other minor issues that may strand someone on the side of the road; an on-site Robotics class that gets more students involved in something that closely aligns with many of the career plans of current students but currently cannot fit in the school day, surviving only as an extracurricular activity; and an expanded wood technology program that could handle student demand (currently, this course is limited by the facilities, outdated equipment, and the number of periods in the day, and students are turned away every year), as well as extend the core beliefs that are part of this program regarding use of sustainable materials, repurposing existing materials, and giving back to the school and community. Creating time in the day for more extensive elective opportunities, combined with having the facilities to handle those options, would also allow students to have full access to the very varied, multi-leveled academic courses available at Hillsborough High School.
**Budget**

As with the other areas of this report, the budget can only be defined once the decisions are made about what the Hillsborough Township Public School District values in this area. If vocational-technical training is incorporated in broad terms with academies and does not offer very specialized shop experiences (as one might find at SCVTHS), the cost will drop. However, if each unique shop, already in existence at SCVTHS, is duplicated, that expense will increase exponentially as some of the specialized equipment may run into the hundreds of thousands of dollars for one unit (such as an automotive painting booth). Additional considerations would entail appropriate and additional staffing and training to ensure that the new programs were taught by people with the necessary specialties to address each of the thematic areas.

**Recommendations with Rationale**

The subcommittee for vocational programming does not recommend duplicating the programming already available at Somerset County Vocational-Technical High School, but it does strongly recommend infusing vocational-technical programming into Hillsborough High School within the context of academies or, where possible, through revising, updating, and expanding course offerings. SCVTHS already offers (as listed on the Somerset County Vocational-Technical High School website):

- Theater Arts (a gifted and talented program, by audition only)
- Welding
- Plumbing
- Law and Public Safety
- Integrated Technology Systems
- Health Occupations
- Graphic Communications
- Electrical Constructions
- Dance (an honors program, by audition only)
- Culinary Arts
- Cosmetology
- Carpentry
- Automotive Diesel Technology
- Academy for Health and Medical Sciences (with Raritan Valley Community College, resulting in a high school diploma and an Associate’s degree)
- Agricultural Science
- Auto Body Collision Repair
- TOPS (Technical Occupational Preparation for Success, an alternative school program)
- Mechatronics, Engineering, and Advanced Manufacturing

Some of these areas have potential for programs that could be run at Hillsborough High School that may result in more participants if the programs are held on the home campus. However, a far more expansive idea is to couple a student’s access to SCVTHS with academy programs at Hillsborough High School within a new high school that would allow a change to the bell schedule. One serious issue for students at Hillsborough High School is the travel time to SCVTHS. Shared-time vocational students leave a class at HHS early to get to SCVTHS on
time for the afternoon session or arrive late to a class at HHS once the morning vocational program is done. These students also lose a full instructional period just for travel and often are not afforded an official lunch period, enabling them to take only six classes in a day (three at VoTech and three at HHS). In order to graduate on time, students must commit to taking one or more online courses to earn the required number of credits. In addition, if a student fails even one class in high school, there is a challenging ripple effect of hard choices with summer school, online courses, or trying to carve out time in the school day to repeat the class. For a student who struggles academically, all of these options can be very difficult. If HHS could add one more period to the day, VoTech might become more palatable to more students as a shared-time option since the students would still have the ability to earn all of their high school credits without needing to complete online coursework.

If SCVTHS became a viable option for more HHS students, the district would not need to expend money to duplicate any of the programs offered there and, instead, could enhance the offerings for students by developing different programming on the HHS campus. Aligned with the academy concept, these programs could weave together academic and practical components to provide students with a truly connected, comprehensive, philosophical, and practical experience that would help them simultaneously broaden and narrow their interests as they consider their post-secondary plans.

Students have very clear ideas of the areas of interest to them for electives and the pathways that they are likely to follow. In the survey administered to ARIS/HMS/HHS students, distinct trends appeared. Business classes earned first place at HHS while computer science was first at ARIS/HMS (business was third there). All grade levels selected engineering classes as
the second choice. At the high school, health occupations slightly edged out computer science for third place. Rounding out the top five for HHS was culinary arts. The fourth and fifth place selections for the younger grades were culinary arts and performing arts, respectively.

**High School:**

![Bar chart showing elective preferences at high school.]

**ARIS/HMS:**

![Bar chart showing elective preferences at ARIS/HMS.]

142 of 226
There are other steps that could be taken that, once again, could enhance students’ access to experiences that would inform and prepare them for their futures. Among those are apprenticeships and career/technical education programs much like the cooperative work program that was dropped in 2010 where students attended school for a portion of the day and worked at real jobs earning real money and credit for last two periods of the day. With diverse socioeconomic ranges in Hillsborough, this type of program could be very palatable to some students who want jobs for their wish list items while others could help to support their families without needing to drop out of high school to do so. While Hillsborough does not have many larger corporations in the immediate vicinity, partnering with those that are less than thirty minutes away may be possible so that students can work as interns, research assistants, etc., some of which is happening now but on a much, much smaller scale. Courses could even be embedded that address important career skills like resume writing and the skills needed for successful interviewing, including preparation before an interview and the actual interview itself. The more connected the programming can become at Hillsborough High School, the more likely it is that students will internalize their learning and be able to generalize that learning across areas of study. Problem-based learning is increasingly important to help students investigate problems, use inquiry methods to develop solutions, and then follow through with the possible solutions until the best answer is found. That is the construct of most jobs they will fill as adults. The answers are rarely set in stone and, far more often, require the worker to analyze a problem, research solutions, and then select the appropriate course of action. This is the model for a plumber, a contractor, a teacher, a lawyer, a doctor, a researcher, and an engineer, to name just a few; although every field has its “right” and “wrong” answers, finding out which answer is the
best one is the challenge of each. Building those highly transferrable skills in Hillsborough High School students may possibly be the most important thing that they are taught while they attend school here. The added factors of the grit that they develop, the bravery that they apply to take risks, and the resilience that they learn through failure will also contribute to their ability to work through problems rather than be derailed by missteps. As Thomas Edison so famously said, “Genius is one percent inspiration and ninety-nine percent perspiration.” If that phrase could sum up the work of a man whose inventions changed this world, many of which were developed in this very state, it can be part of the guiding message that prepares students for the unknown that faces them at adults, armed with the confidence and experience to know that they have the tenacity to weather the ninety-nine percent of the time when they are struggling as they await that one percent of the time that is pure genius.

**Conclusion**

The College and Career Readiness subcommittee is but one-third of the interconnected topics raised as focal points of the Hillsborough Township Public School District’s strategic planning process, although the argument can be made that college and career readiness is, in fact, the purpose of the entire strategic plan. Every aspect of an education is leading to the ultimate goal of preparing students to become adult, contributing, successful members of society. How can that occur if steps are not taken early in life to close achievement gaps and give students access to the best educational programs in existence? With a preschool program and full-day kindergarten, the playing field is leveled sooner and the most basic of foundational skills in literacy and mathematics are set not in sand but in concrete. The important soft skills of
socialization and playing well with others are addressed at young ages, which helps build empathy and communication. Later in life, these skills are among those that help students feel like they are part of something bigger and that something bigger is a part of them, which helps with friendships, relationships, self-image, resilience, and perseverance, all of which are contributing factors to personal and professional success.

Now, as this leg of the strategic planning journey comes to an end, it is time for the Board of Education to consider why this is so important and why the thoughtful reflections of the community and the committees are worthy of consideration and hopefully support. To understand that better, here is a little more about the history of Hillsborough High School, from the perspective of the principal who has been fortunate to work with an outstanding staff and incredible students for the past nineteen years and wants nothing more than to give the HHS Family everything she can to remove the impediments to success.

In my first few years as principal, I assembled teams of staff members to research new bell schedules for the high school. Traditional and avant garde, the committee looked at them all. The current bell schedule is a traditional one, with seven instructional periods, each approximately 48 to 52 minutes long, and a half-period for lunch. A four-by-four block schedule (four classes in first semester and four in the second, with each class running nearly twice the length per period as a traditional class) was a consideration, but it was dismissed after concerns about the lack of continuity of instruction arose, notably in areas like world language, math, and music, where developmental skills were likely to wane the more time passed without the skills being used. A strong contender was the A/B block, which remains a possibility for any redesign yet to occur. In an A/B block, four longer classes occur on an “A Day” and four other classes
occur on a “B Day,” with the cycle repeating all year long. This keeps the continuity going and keeps skills fresh while extending the time students spend in each class to provide the flexibility to embed highly engaging student activities, science labs, and problem-based learning into lessons without the restriction of short periods. Finally, the model that was chosen at the time was the rotating drop schedule, where students would be scheduled into eight classes but would only attend six of them on a given day, three in the morning and three in the afternoon. The other two would be “dropped” daily, using a rotation so that different pairs of classes would be dropped each day of the cycle until the cycle began again.

These scheduling options would help Hillsborough High School in many ways. They would separate science labs from Health & Physical Education classes, allowing students to double-up on any combination of science classes they might choose since those classes would all run independently and without any connection to any other class in the school. H&PE classes would no longer consist of different sets of students each day of the cycle but would have a full roster of students who had time in their schedules to work on being physically fit each day and to learn about ways to stay physically, mentally, and emotionally fit in health class to prepare them for a long and healthy life (as well as learning to drive during sophomore year!). This schedule change would also stop classes that run during lunch periods feeling like they are cobbled together due to the constraints of the size of the cafeteria. With five, “half-period” lunch periods, each approximately 25 minutes long, students may take two classes and a lunch during the midday periods. The simplest construct is a Period 4/5 class, a Period 6 lunch, and a Period 7/8 class. However, almost every combination of those lunch periods can occur, such as Period 4 lunch, Period 5/6 class, and Period 7/8 class. Finally, there are some configurations that split a
class in half, with the lunch period sandwiched in between the start and end of the same class, such as a Period 4/6 class, Period 5 lunch, and Period 7/8 class. The lack of continuity in the Period 4/6 class is a challenge, and certain departments or levels bear the brunt of split classes because a science class cannot be split without interfering with the lab periods, special education classes are hurt by the split due to the break in instruction, and AP classes struggle to complete timed, practice AP exams if they are split, which leaves the burden of balancing lunch periods on the CP and honors classes in the world language, math, English, and social studies departments. Currently, HHS has 33 classes that are split (Period 4/6 or Period 6/8), resulting in 667 students having to leave midway through a class period to go to lunch only to return to the second half of the same class. Although they adjust, this is a momentum-killer in a classroom and requires completely different planning for a teacher who has to prepare testing materials differently to minimize cheating, cannot plan an activity that does not have a hard-stopping point for the lunch break, and cannot allow an excellent discussion thread to continue without interruption.

One of the biggest benefits to a new bell schedule would be adding an additional period to the day/rotation. Hillsborough High School is one of the very few schools in Somerset County with only seven instructional periods. Most have eight periods, and some have nine. One additional period would allow students the very important opportunity to explore new areas of interest to them, possibly being the catalyst for future careers or, at the very least, a lifelong interest or hobby. Another period would mean that students who had a passion (music, art) would not need to make sacrifices in order to take classes in a beloved area every year. Currently, many music students choose not to take a fourth year of social studies or world language in order to be in that music class. Some take online courses to open up their schedules,
although there are times when a student still cannot get that beloved class because it conflicts with something else that they need to take for graduation purposes or because the conflicting course is part of their career trajectory or highly competitive college application package. The extra period could also be used for higher level classes, exploring a new world language, independent studies, internships, and even study halls, which might go a long way in reducing stress for some students who feel thoroughly overwhelmed and overworked by their classes and the high school experience.

When all of this is combined, the answer seems so simple. Design a new bell schedule, implement it, add a period, increase opportunities, relieve stress, and set the students on the pathway to success. As mentioned earlier, a change to the bell schedule is the singular most instrumental change needed at Hillsborough High School. Our students deserve an extra period in their day to fill with a rigorous course, a joyful course, or a study hall. Their competitors have the extra period. Our students deserve longer, uninterrupted periods of study that maximize class time by minimizing interruptions from lunches or passing time. Their competitors have those streamlined schedules. Our students also deserve longer than the average twenty-five minutes for lunch to decompress, eat at a healthy pace (it can take half of a lunch period to get 600 to 700 students through the lunch lines during Periods 4, 6, and 8, the three largest lunches), leaving them only ten or twelve minutes to eat and relax. Their competitors in other schools have over forty minutes at lunch in most cases, can eat in a leisurely way, can work on homework, can get extra help, can have a club meeting, and can decompress before starting the second half of the day. We cannot offer Hillsborough High School students those same opportunities because we cannot run a unit lunch. In short, everything that we would like to do to improve the
instructional program, increase opportunities, and decrease stress at Hillsborough High School is limited by lunch. We cannot fit a unit lunch anywhere in the building, and we cannot use fewer lunch periods without taking away yet another instructional period.

It is both funny and sad to hear it said aloud that LUNCH is the biggest impediment to important, student-centered changes at Hillsborough High School, but there it is. There is no way around it, and there are no other options but to start over with a new facility, a new schedule, and a whole new world opening up to HHS students. We have the students with their unlimited possibilities in this world, and we have the staff of dedicated, smart, student-centered teachers. We are successful already -- there is no denying that -- but we are successful in spite of -- not because of -- the mortar and brick structures that should open doors for students but, in reality, are limiting what our school district can give them.

The binder of research the scheduling committee assembled on the rotating drop schedule has collected dust on my office shelf for the better part eight years. With the former superintendent, I presented the schedule proposal and outlined the pros and cons, and lunch remained an insurmountable sticking point. When Dr. Schiff arrived in the district, he asked what my “big idea” was, and I clearly recall thinking that an overhaul to the master schedule was the biggest idea we could even consider at that time, and I explained, once again, how soundly it would benefit our students and how solidly mired in the current schedule we were because of limits to our facilities. Dr. Schiff asked what we would need to make these necessary, student-centered improvements, and I did not hesitate to state that a new high school was the only solution. Nearly seven years later, that is actually a possibility, which is terrifying and thrilling in the same breath.
There is no denying that the idea of a new high school can take one’s breath away: the cost, the enormity of the process, designing and building the facility, completely redesigning the program of studies into academies with increased capacity for career connections and community relationships, releasing the bonds that have shackled the performing arts and athletic programs, and creating an internal structure that enables students to make use of county vocational programs without taking online classes to graduate on time and without missing out on the experience of being a Raider. All of this, especially to the Board who needs to make the decision and most especially to this principal who would then have to make it happen, freezes the breath in one’s lungs with the massiveness of this project, even while only at the conceptual level.

But then I think about life at Hillsborough High School once we outgrew our building… a Group 4 school in Group 2 facilities… stuck in so many ways by a world of opportunities that has and will continue to pass us by, and I realize that Hillsborough High School hasn’t been able to breathe in a long time. Why would we ever allow that to be acceptable when an infusion of new life is completely within our hands? Its time has come.

“The only thing that is more expensive than education is ignorance.” (Benjamin Franklin)
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Elements of Student Life

Subcommittee: Student Life- Health and Wellness

Subcommittee Member Names:

Mrs. Lorraine Borek, District Nursing Supervisor
Ms. Melissa Callens, Effective School Solutions, Community Member
Ms. Rebecca Cordisco, School Counselor, Triangle Elementary School
Ms. Ashley Griffith, Teacher, Hillsborough High School
Ms. Mary Elizabeth Hughes, Teacher, Auten Road Intermediate School
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Ms. Jessica Smedley, Director of Guidance
Ms. Alyson Williams, Teacher, Auten Road Intermediate School

According to the World Health Organization, 10 - 20% of children and adolescents worldwide experience mental disorders; half of which begin by the age of 14 and 75% by the mid-20s. The Mental Health Foundation believes that good mental health begins in infancy. They quote the Children’s Society (2008) statistics that 10% of children and young people (aged 5-16 years) have a clinically diagnosable mental health problem, yet 70% of children and adolescents who experience mental health problems have not had appropriate interventions at a sufficiently early age. One of the key findings in the Mental Health Facts, Stats, and Data
document published by Mental Health America indicates that youth mental health is worsening. Rates of youth depression increased from 8.5% in 2011 to 11.1% in 2014. The National Alliance on Mental Illness (NAMI) reports that one in five children ages 13-18 have, or will have a serious mental illness. They go on to report the following statistics: suicide is the third leading cause of death in youth ages 10 - 24 and 90% of those who died by suicide had an underlying mental illness; approximately 50% of students ages 14 and older with a mental illness drop out of high school; 20% of youth ages 13 - 18 live with a mental health condition, 11% of youth have a mood disorder, 10% of youth have a behavior or conduct disorder, and 8% of youth have an anxiety disorder. In their *At a Glance: 2017 Children’s Mental Health Report*, the Child Mind Institute explains that depression and bipolar disorder prevalence at age 13 is at 8.4%, and it is at 15.4% at age 18. It goes on to report that outcomes and treatment-seeking behaviors may be dramatically improved. According to Child Mind, school based education and anti-stigma programs improve mental health attitudes by 68%, and school-wide high school interventions have reduced the number of actively suicidal students by 36%, from 4.4% to 2.8% in one study. Furthermore, half of teens diagnosed with major mood disorders do not adhere to treatment, but studies also show that 81% of teens with anxiety, 71% of teens with depressions, and 85% of teens with ADHD get better with treatment (Child Mind Institute; *At a Glance: 2017 Children’s Mental Health Report*).

**Introduction**

Children in 21st century classrooms are required to enter a world in which they will need to think creatively and critically, solve complex problems, evaluate and analyze information, and
communicate effectively (ASCD, 2012). By differentiating instruction to address not only academic needs but also social and emotional needs, schools will be preparing their students to *increase their probability of success in a fast-paced, ever-changing world*. Teaching the whole child means ensuring students are healthy, safe, engaged, supported, and challenged (ASCD, 2012) in an environment that increases their capacity to learn (Durlak et al., 2011). Developing students' social-emotional competencies -- such as knowledge, skills, attitudes, and behaviors that individuals need to make successful choices (Yoder, 2014) -- will help students recognize and manage emotions, build relationships, solve interpersonal problems, and make effective and ethical decisions (Payton et al., 2002). Focusing on students' long-term development, and not just on their academic achievement, will better prepare them for success after their academic careers are complete.

**Review of Literature / Research Supporting the Need to Implement the Areas of Focus**

A network of research in support of the implementation of social emotional learning (SEL) has been increasing over the last three decades and continues to grow to the point of becoming a priority for schools across the country. A bill introduced into the House of Representatives titled the *Academic, Social, and Emotional Learning Act of 2015*” supports the implementation of evidence -based social and emotional learning programming. The bill defines “social and emotional learning” as

the process through which children and adults acquire the knowledge, attitudes, and skills associated with the core areas of social and emotional competence, including

self-awareness and self-management to achieve school and life success, such as
identifying and recognizing strengths, needs, emotions, values and self efficacy, impulse control and stress-management, self-motivation and discipline, and goal setting and organizational skills; social awareness and interpersonal skills to establish and maintain positive relationships, such as perspective taking and respect for others, communication, working cooperatively, negotiation, conflict management, and help seeking; and decision making skills and responsible behaviors in personal, academic, and community contexts, such as situational analysis, problem solving, reflection and personal, social and ethical responsibility.

Social and emotional learning, as explained on the New Jersey Department of Education (NJDOE) website, refers to the process by which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to do the following: understand and manage emotions, set and achieve positive goals, feel and show empathy for others, and make responsible decisions. The website goes on to indicate that “students in SEL programs are more likely to attend school and receive better grades, and are less likely to have conduct problems. Successful infusion of SEL can result in positive behaviors, increased academic success, and caring communities.” Moreover, it is clearly indicated that “the New Jersey Department of Education has been promoting social and emotional learning to enhance the building of positive school climates and the healthy development of young people.” The NJDOE also provides links to a myriad of SEL resources in New Jersey, including lesson plans and activities, information and research, and resources for families. Furthermore, SEL competencies and sub-competencies (August, 2017) are outlined and available for public review.

Social emotional learning has gained significant momentum over the last several years
and will continue to do so due, in no small part to its inclusion into the Every Student Succeeds Act (ESSA). While the ESSA does not refer specifically to “social emotional learning,” it does refer to “nonacademic” factors that can be used in accountability (Ferguson, May 2016). Ferguson (May 2016) points out that ESSA encourages schools to “establish learning environments and enhance students’ effective learning skills that are essential for school readiness and academic success” as well as “activities to support safe and healthy students.” Moreover, Gayle (2017) points out that educational leaders have greater flexibility to define student success and to design their own systems and programs to ensure educational equity while addressing “the multidimensional aspects of children’s development” (Gayle, 2017).

According to Weissberg and Cascarino (2013), when schools promote students’ academic, social, and emotional learning, students will possess the basic competencies, work habits, and values for engaged postsecondary education, meaningful careers, and constructive citizenship (Dyminicki, Sambolt, & Kidron, 2013). A balance between academic and social-emotional learning must be realized in schools across the United States. The Association for Supervision and Curriculum Development (ASCD) agrees that preparing students for life success requires a broad, balanced education that both ensures their mastery of basic academic skills while preparing them to become responsible adults (2007).

The authors report that more 20 years of scientific research shows that high-quality, well-implemented SEL can have positive effects on school climate and promote academic, social, and emotional benefits for students including the following:

- improved social and emotional skills, self-concept, bonding to school, and classroom behavior
• fewer problems associated with disruptive classroom behaviors, aggression, bullying, and delinquent acts
• Reduced emotional distress such as depression, stress, or social withdrawal (Weissberg & Cascarino, 2013).

Additionally, Weissberg and Cascarino (2013) purport that, despite widespread demand for social and emotional learning and recognition of its value, SEL remains at the periphery of K-12 education. They believe that SEL needs to be part of the core as it is in preschool and that districts ought to prioritize SEL at the same level as academic achievement, high school completion, and college and career readiness (Dymnicki, Sambolt, & Kidron, 2013). The College & Career Readiness & Success Center at the American Institutes for Research reports that, by providing students with comprehensive SEL programming characterized by safe, caring, and well-managed learning environments and instruction in SEL skills, many learning barriers and associated risk factors can be addressed (Dymnicki, Sambolt, Kidron, 2013). The authors point out that, according to Durlak, et al., 2011; Durlak, Weissberg & Pachan, 2010; Dymnicki, Kendziora, & Osher, 2012, the most compelling evidence for the benefits of SEL programs comes from a review of positive youth development, SEL, character education, and prevention interventions designed to promote personal and social skills in children and adolescents aged 5-18 (Dymnicki, Sambolt, Kidron, 2013). They explain that participation in SEL programs was associated with positive impacts on six major student outcomes, including improved SEL skills, attitudes towards self and others, social behavior, and academic performance, as well as reduced conduct problems and emotional distress. The impact on academic performance translated to an 11 percentile point gain in student’s achievement test scores. Moreover, the research indicated
the effectiveness of this approach across a range of student populations and contexts (Dymnicki, Sambolt, Kidron, 2013).

Much of the research and meta-analysis referenced and cited in the literature review refers to research conducted by the Collaborative for Academic, Social, and Emotional Learning (CASEL). In a December 2008 executive summary published by CASEL, findings from three scientific reviews on the positive impact of social and emotional learning for kindergarten to eighth grade students were reviewed. The three reviews included over 300 studies and involved 324,303 children. Payton, et al. (2008) reported that SEL programs yielded multiple benefits and proved effective in multiple settings (school and after school), for students with and without behavioral and emotional challenges, across the K - 8 range, and for ethnically and racially diverse students from urban, rural, and suburban settings.

Overall, the main findings show positive and consistent support for SEL programs in all settings (school and after-school) with all student populations (ethnically and socio-economically diverse, classified and non-classified, urban, suburban, rural settings). The results of SEL programming outlined gains, including, but not limited to students’ improvement in multiple areas of their personal, social, and academic lives, including their attitudes towards self, school, and others; social behaviors; conduct problems; emotional distress, and academic performance (average gain on achievement tests scores of 11 to 17 percentile points) (Payton, et al., 2008).

Gayle (2017) points out that, in the forever changing landscape of challenges faced by today’s youth, to be successful in school, work, and life, students need to be able to develop competencies that enable them to persevere through challenges, empathize with others, resolve conflicts, and make safe choices.
According to a 2015 report published by the American Enterprise Institute and the Brookings Institution, social-emotional learning competencies are critically important for the long-term success of all students. Ninety-three percent of teachers indicated that they wanted a greater focus on SEL in schools because they believe that the skills are essential to 21st century success (CASEL, 2013).

Recently, early research acknowledging the willingness and importance to consider SEL through the lens of equity have prompted deep discussion between and among state policymakers and districts across the country. It seems that even in districts wherein SEL has been successfully implemented, trends in equity persist.

In an AJE Forum article titled *The Difference Between Educational Equality, Equity, and Justice . . . and Why it Matters* (2016), Joseph Levetan explores, among other terms, the meaning of educational equity and educational equality. He posits that the idea of each are often both misused and misunderstood. He goes on to explain that that each carries “implicit and underlying assumptions about what is ‘fair’ . . .” and further believes that “each concept also carries implications about how students should be treated and how resources should be distributed” (p. 2). He explains the popular cartoon visualizing the difference between equality and equity and extends the metaphor by stating, “The educational equity orientation reframes the policy discussion and orients it around ensuring that schools help all students to achieve, even if that means distributing resources “unequally.”
Rutgers University's Anne Gregory points out that equity oriented social-emotional learning includes consciousness about disparities in schooling, opportunity gaps, and the history of unequal schooling as well as the consideration of culture.

Dena Simmons (2017), the Director of Education at the Yale Center for Emotional Intelligence, opines social-emotional learning programs need to be taught within a culturally relevant context due to the level of implicit bias that exists. Essentially, implementation of an SEL program is not enough. She believes that since “students of color suffer more adversely than their white peers on nearly every measure of well-being, educational, social, financial, emotional, and physical- which impacts them in the long run” the need “to expand the definition and practices of social-emotional learning to ensure” all students are served more equitably (p. 2). Simmons (2017) goes on to briefly explain three practices she believes will assist educators
in teaching and creating “social-emotional learning context within an equity-literacy lens” thereby assisting teachers and administrators to identify inequities and make conscious efforts toward change. Simmons highlights the following practices:

- Flex your self awareness muscles to understand your power, privilege, and unconscious bias
- Make social-emotional learning instruction and programming meaningful for students
- Build relationships with students, their families, and their community (2017)

Simmons concludes the article by stating, “As educators, we must recognize and respond to the subtle and not-so-subtle inequities that hinder student success. If we teach social-emotional in ways that ignore equity, we will woefully fail our students, particularly our most disenfranchised” (2017, p. 4).

The American Enterprise Institute for Public Policy Research and the Brookings Institution collaborated on a project resulting in the 2015 publication of Opportunity, Responsibility, and Security- A Consensus Plan for reducing Poverty and Restoring the American Dream. They created a politically balanced working group on poverty and opportunity, ultimately offering recommendations to assist America’s citizens to live up to the identified values of opportunity, responsibility, and security. In addition to a number of other foci, facts, and related research, the study focused on family, work, and education.

The Executive Summary outlines twelve recommendations, four in each area. The four recommendations the working group made which they believe will “improve education in ways that will better help poor children avail themselves of opportunities for self-advancement include:
1. Increased public advancement in two underfunded stages of education: preschool and postsecondary
2. Educate the whole child to promote social-emotional and character development as well as academic skills
3. Modernize the organization and accountability of education
4. Close resource gaps to reduce education gaps (p. 5)

While some of these recommendations are well beyond the Hillsborough community, strides are absolutely reasonable for others or portions of others.

The authors point out that an increasing worry exists that children growing up today enjoy fewer social supports and pathways into the middle class than generations past if they are members of a lower income family. They additionally point out that although children of poor families have greater access to healthcare, fewer are born to teen parents, their parents have a greater level of education, and fewer are exposed to toxic environments and violence, circumstances and outcomes of children not born to lower income families have improved much more quickly thereby widening the gap of inequality.

Furthermore, the authors confirm:

The major educational and school reforms of the K-12 system over the last few decades have not focused sufficiently on the socio-emotional factors that are crucial to learning. Though most teachers believe that schools have a fundamental responsibility to educate the whole child, education policy has focused disproportionately on high-stakes accountability strategies based on results from standardized academic achievement tests (2015, p. 60).
They cite a 2011 study which reviewed over 200 studies involving over 200,000 children. The study found that SE programs facilitated by K-12 teachers improves their SEL skills as well as their mental health, their problematic behaviors, and their assessment results.

Overall, the authors conclude with a quote from Abraham Lincoln’s July 4, 1861, message to Congress wherein he said the government’s leading object is “to elevate the condition of men—to lift artificial weights from all shoulders, to clear paths of laudable pursuit for all, to afford all unfettered starts and a fair chance, in the race of life” (2015, p. 5).

Increasing our understanding of and focus on issues of equality and disproportionality crosses all portions of our educational system. Embracing and working toward building a shared understanding of how social-emotional learning supports and mutually benefits all students in Hillsborough will maximize its impact when it is modeled and practiced throughout the school-community as well as the community-at-large. Integrating an evidence-based SEL program will yield highest results when leaders, both educational and community, model SEL in daily interactions, create and embrace conditions for learning for ALL students and adults (family, teachers, etc.), and lead a mindful reflective approach to integrating SEL into daily work.

While it is interesting that the CCSS (NJSLS) and SEL are interdependent, both are essential to properly prepare students for college and career as well as post-secondary readiness. Additionally, the CCSS/NJSLS expect students to think critically, be creative, collaborate, and share their thinking. These skills are paramount to social-emotional learning.

The Centers for Disease Control (CDC) have a specific framework for organizing a comprehensive approach to school health called the Coordinated School Health (CSH) Model. It
has been a pillar of school health in the United States since 1987. While national health and education organizations have supported this CSH approach, it has been viewed by educators as a health initiative focusing on health outcomes only, thereby resulting in minimal utilization. However, the research and evidence are very clear about the interrelatedness of learning and health. Evidence also shows that the health of students is linked to their academic achievement. All would agree that health and education directly impact individuals, society, and the economy; therefore, working together whenever possible is the goal for all stakeholders. Approximately 95% of all children in the United States attend school making schools the perfect setting for a health and education collaboration. Schools are one of the most efficient systems for reaching students in order to provide health services and programs. Therefore, increasing the integration of health services and programs into the daily life of schools and students represents an underutilized tool for developing the whole child and raising academic achievement.

The Association for Supervision and Curriculum Development (ASCD) is a leading global educational organization spanning over 130 countries. In 2007, ASCD launched its whole Child Initiative, setting in place the most effective means to ensure that each child is healthy, safer, engaged, supported, and challenged. Concurrently, ASCD challenged “communities to redefine learning to focus on the whole person.” Not surprisingly, similar requests for collaboration came from the health systems including the CDC.

In an ASCD powerpoint presentation, CDC’s Lloyd Kolbe proclaimed, “In sum, if American schools do not coordinate and modernize their school health programs as a critical part of educational reform, our children will continue to benefit at the margins from a wide disarray of otherwise unrelated, if not underdeveloped, efforts to improve interdependent education,
health, and social outcomes. And, we will forfeit one of the most appropriate and powerful means available to improve student performance” (2012, p. 7).

This collaboration between ASCD and the CDC resulted in the launching of a school health model for the 21st century. The Whole School, Whole Community, Whole Child Model (WSCC) was launched in March 2014. The WSCC is a collaborative approach to learning and health, across the community, across the school, and across sectors to meet the needs and reach the potential of each child. It places onus on all who are part of the school to see themselves as responsible for both learning and health and highlights the relationships between sectors.

By promoting the health and wellbeing of students, staff, classrooms, and schools, we develop the environment most conducive to effective teaching and learning. By taking the time to learn about our students and who they are beyond the walls of the classrooms, building relationships and enhancing their connectedness with the school, we increase their sense of belonging and safety while understanding each student individually, allowing us to differentiate instruction to suit his/her needs. Reaching out to families and the community expands the safety net and empowers key stakeholders in the responsibility and purpose of education. Greater emphasis has been placed on the areas of social and emotional climate, physical climate, family engagement, and community involvement, as well as the tenets of the Whole Child Approach with the components of an effective coordinated school health focus, affirming that when it is about learning, health, and development, both sectors are critical and essential for the success of each child.
ASCD is attempting to redefine what a successful learner is and how we measure success. The whole child approach to learning, teaching, and community engagement include five tenets.

- Each student enters school **healthy** and learns about and practices a healthy lifestyle.
- Each student learns in an environment that is physically and emotionally **safe** for students and adults.
- Each student is **engaged** in learning and is connected to the school and broader community.
- Each student has access to personalized learning and is **supported** by qualified, caring adults.
- Each student is **challenged** academically and prepared for success in college or further study and for employment and participation in a global environment (ASCD, 2012).

Each of the tenets must work together to ensure the success each and every student in order for them to be prepared to grow into productive, self-sufficient adults with the social emotional skills and stamina to thrive in this 21st century and beyond.

**Budget**

Implementation of a social-emotional curriculum including all essential elements will not be a costly endeavor as compared with the recommendations put forth from the Early Childhood and College and Career subcommittees. While the cost cannot possible be accomplished within the current budget allocation, it ought not be prohibitive. Ultimately, the resources and
commitment to educating the whole child presently will yield results for our students throughout their lives.

**Recommendations**

<table>
<thead>
<tr>
<th>Implement an Integrated Health, Wellness, and Emotional Support Programs and Adopt the WSCC Model</th>
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<tbody>
<tr>
<td><strong>BENEFITS</strong></td>
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<tr>
<td>Reasonable financial commitment overall</td>
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<tr>
<td>Increased parent / community involvement</td>
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<tr>
<td>Increased turn-key training for staff</td>
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<td>Several excellent resources available at low or no cost</td>
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<tr>
<td>Unified and collaborative approach to learning and health</td>
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<td>Improved attitudes in students personal, social, and academic lives</td>
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<tr>
<td>Develops competencies necessary for long-term success (perseverance, empathy, conflict resolution, collaboration, tolerance, acceptance, etc.)</td>
</tr>
<tr>
<td>Provides long-reaching benefits for students</td>
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<tr>
<td>Provides multiple pathways to support engagement and support</td>
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**Closing**
It is clear that establishing ourselves as a whole child-centered district will provide long-reaching benefits for our students throughout their educational careers. Supporting our students' social and emotional well being throughout all of the vulnerable stages of their lives will ensure that they are prepared to adapt to and succeed in an ever-changing 21st century world.

In order to achieve academically, fundamental needs of health, safety, engagement, support, and challenge must be met. Integration of social-emotional learning as a pathway to enhancing the education of the whole child “represents a fortuitous opportunity to prepare students for a workforce and help close academic achievement gaps, while simultaneously addressing the learning needs of each and every child.” (Rennie Center for Educational Research & Policy, 2015, p. 3).
Subcommittee: Student Life - Curriculum Innovations: Enrichment Opportunities

Subcommittee Member Names:

- Dr. Cynthia Assini, Social Studies / REACH Supervisor
- Ms. Susan Eckstein, Principal, Hillsborough Elementary School
- Ms. Barbara Parker, Teacher Emeritus / Community Member
- Ms. Nancy Patrick, Teacher, Auten Road Intermediate School

Introduction

Merriam-Webster defines innovation as “the introduction of something new; a new idea, method, or device.” Synonyms for innovation include modernization, departure, leading edge, alteration, modification, shift, variation, and cutting edge. Curriculum innovation may include encouraging collaborative learning, recognizing the value of diversity within the population, creating more opportunities for globalization, developing interesting courses of study, and incorporating enhancements to current programs.

As part of our mission to prepare all students for the future, opportunities for enrichment beyond the grade-level curriculum helps students meet their full potential. To address the needs of students at various levels, the enrichment opportunities sub-committee considered current programming offered and compared it to best practices in the field of gifted and talented education.

The following table provides an overview of the programming at each level throughout
the district.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Professionals Responsible</th>
<th>Summary of Programming</th>
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<tbody>
<tr>
<td>K/TP</td>
<td>Elementary REACH Teachers (1 per school)</td>
<td>Enrichment support for classroom teachers 1 class per cycle of enrichment for all students</td>
</tr>
<tr>
<td>1</td>
<td>REACH Teacher</td>
<td>Pull-out program</td>
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<tr>
<td>2</td>
<td>REACH/SS Teachers</td>
<td>Class that replaces team social studies class</td>
</tr>
<tr>
<td>3</td>
<td>REACH/SS Teachers</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Varied across departments</td>
<td>Honors/AP courses Senior Internship Option</td>
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<td>9-12</td>
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The REACH Senior Intern Option provides students with the opportunity to explore a career path and develop practical skills while assisting a local organization that serves the public interest. Interested students participate in a selective application process. The partnerships between the school and host sites earn rave reviews from students and community leaders. While the students have an authentic, hands-on experience, the community partners benefit from the service hours and projects that the students complete. Past capstone projects range from implementing events to creating products like websites used long after the intern departs.

**Purpose**

The overall purpose of strategically planning to increase enrichment opportunities is to maximize student learning throughout a child’s educational career. Considering the current programming at each level and input from stakeholders, the sub-committee identified varied purposes for increasing programming related to enrichment. At the elementary level, the purpose of having enrichment opportunities is to address the needs of high ability students across
the curriculum. While this also holds true for secondary programming, students at the secondary level could benefit from more options to learn in a self-directed fashion. In order for the district to achieve an increase in enrichment opportunities for students, teachers need support in learning about and implementing related best practices. Families can also benefit from information to support enrichment for their child.

The purpose of this report is to summarize the findings of the review of research related to curriculum innovations conducted by the Student Life subcommittee of the larger Strategic Planning committee and to offer recommendations to the Board of Education in preparation for the development and implementation of the next Hillsborough Township School District Strategic Plan.

**Major Areas of Focus / Anticipated Benefits**

To help all students achieve their fullest potential, the district should focus on ways to offer enrichment for those students who have successfully mastered content and skills being taught in the classroom. As students grow and curricula are revised, the district depends on teachers to differentiate instruction in order to meet the variety of needs in classrooms throughout the year. Teachers across the content areas need support in how to design and analyze assessment results in order to provide students with the opportunity to enrich their learning experiences and make connections via manageable yet challenging tasks. Providing services to students based upon assessment results does not take into consideration a student’s passion for learning and dedication to task. Providing a variety of options for students based on needs observed through assessment and task commitment of the child may provide Hillsborough
Township School District with the opportunity to broaden the number of students participating in enrichment. By offering a variety of programming at all levels, the district can help students achieve in accordance with their abilities.

In addition to helping all students meet their potential, offering a variety of enrichment opportunities is essential for maximizing the learning of gifted and talented students. The field of gifted and talented, while diverse in its definitions and prescriptions, agrees that students with high ability have specific and varied needs. While state law requires identifying students as gifted and talented as well as offering a program, the code offers few further specifics. The district currently address the needs of gifted and talented students through the efforts of elementary specialists and middle level social studies teachers. Given the diversity of our students’ abilities, interests, and needs, more varied enrichment opportunities will better serve our students.

**Review of Literature / Research Supporting the Need to Implement the Area of Focus**

Two main bodies of literature provide useful information related to enrichment opportunities: 1) research on instruction and 2) research in the field of gifted and talented education. Some recent research suggests that a significant number of students would benefit from enrichment on a regular basis. In one study that involved over 170,000 students at 2,000 schools nationwide, students identified as high achieving through standardized testing of reading grew more slowly than their peers during the year; these students grew over the summer while their peers did not (Rambo-Hernandez & McCoach, 2014). This suggests that work in the classrooms may not be helping high achieving students learn as much as they do outside of
school. As a district committed to helping all children achieve their fullest potential, research suggests the close examination of exactly how teachers challenge learners throughout different units of study.

In terms of literature on instruction and enrichment, the cycle of using assessment results to plan for differentiation is an accepted best practice in the field (Eaker, DuFour, & DuFour, 2002; Stronge, Ward, & Grant, 2011). Ideally, teachers have a plan for addressing both students who struggle to meet learning targets and students that demonstrate mastery of the targets prior to any instruction. The standards we have for teachers and research in the field supports the practice of differentiation due to the differing needs of students (Stronge & Associates, 2012; Tomlinson et al., 2003); however, some educators disagree on a theoretical basis that teachers can actually meet varied needs of students (Delisle, 2015). Flexible grouping has been shown to increase student achievement (Puzio & Colby, 2010; Steenbergen-Hu, Makel, & Olszewski-Kubilius, 2016). Specifically, Steenbergen-Hu et al. (2016) completed meta-analyses that examined research over a one-hundred year period to find positive effects of flexible grouping practices including acceleration. The overwhelming evidence suggests that the district can improve student achievement by providing teachers support in differentiating instruction.

Literature on gifted and talented education provides specifics about how to support students who often require enrichment opportunities. Experts in the field suggest varied programming designed to meet as many needs of learners as possible. Programming with a strong basis in research includes compacting, acceleration, differentiation, flexible grouping, and independent research (National Association for Gifted Children, 2010; Reis & Renzulli, 1992; VanTassel-Baska, 2005).
Research in the field of gifted and talented provides many suggestions of how the district can improve our offerings for students who need enrichment. Compacting is when students take a pretest prior to a unit of study. Students who show mastery on the pretest work on enrichment activities instead of relearning what they already know. Acceleration is when students work on the curriculum of the next grade level. It is important to note that, teachers will need professional development to implement these best practices (VanTassel-Baska, 2007).

Some educators would argue that the district must only focus on state requirements and students who struggle to meet grade level expectations. In addition to a state mandate to identify and serve gifted and talented students, those students with high ability may struggle in school despite their potential. In fact, up to 20% of dropouts nationwide tested within the gifted range (Colangelo & Davis, 2003). In addition, a report commissioned by the Gates Foundation found that 88% of high school dropouts nationwide had passing grades but dropped out due to boredom (Bridgeland, DiJulio, & Morison, 2006). The programming and practices suggested in the gifted and talented literature can help all students, especially those at-risk, high ability individuals.

Those engaged in this subcommittee also collected and discussed information about gifted and talented programming in other districts at both the elementary and middle levels. At the high school level, the needs of high ability students are typically met through a variety of course offerings and extracurricular activities. The following table summarizes research the subcommittee completed about six New Jersey elementary and middle level programs.

<table>
<thead>
<tr>
<th>District</th>
<th>Elementary Programming</th>
<th>Middle Level Programming</th>
</tr>
</thead>
<tbody>
<tr>
<td>West-Windsor</td>
<td>Flexible grouping and differentiation supported by specialists through grade 5.</td>
<td>Students attend GT (PRISM) during a flex period and participate in competitions.</td>
</tr>
<tr>
<td>Bridgewater</td>
<td>Self-contained classes for all subjects</td>
<td>Enrichment courses available in all</td>
</tr>
<tr>
<td>Location</td>
<td>Description</td>
<td>Result</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Edison</td>
<td>Pullout possible in math, literacy and/or engineering, each for one-third of the year for identified students.</td>
<td>Acceleration in literacy and math.</td>
</tr>
<tr>
<td>Montgomery</td>
<td>Differentiated instruction without pullout.</td>
<td>Acceleration options in math.</td>
</tr>
<tr>
<td>Scotch-Plains Fanwood</td>
<td>Pullout program starting in grade 4.</td>
<td>Pullout program that rotates through different periods of the day.</td>
</tr>
<tr>
<td>Princeton</td>
<td>Differentiated instruction and enrichment during a flexible period.</td>
<td>Accelerated math begins at the middle school.</td>
</tr>
</tbody>
</table>

Pursuant to the extensive literature review coupled with the knowledge of programs in other districts, the subcommittee brainstormed the benefits and challenges of improving the district’s enrichment offerings across four areas: elementary programming, secondary programming, teacher learning, and community connections. Tables summarizing the aforementioned benefits and challenges follow. Research and further details about options suggested by the subcommittee are outlined in the Recommendations section.
### Elementary Programming:

#### Elementary Programming Idea 1: Increase compacting (pretesting and enriching students who show mastery on the pretest of a unit) through teacher coaches.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible groupings depend upon curricular topics</td>
<td>Teacher time/stress to create activities that remediate and extend the curriculum</td>
</tr>
<tr>
<td>Provides students with respectful learning tasks</td>
<td>Measuring student skills and needs</td>
</tr>
<tr>
<td>Preempts behaviors that emerge when students work on tasks they have already mastered</td>
<td>Locating and/or developing educator expertise in compacting</td>
</tr>
<tr>
<td>Efficient use of student’s learning time</td>
<td>Cost</td>
</tr>
<tr>
<td>Follows best practices in education overall and GT specifically</td>
<td>Scheduling the limited time of additional staff effectively</td>
</tr>
<tr>
<td></td>
<td>Does not completely address extreme high ability</td>
</tr>
<tr>
<td></td>
<td>Measuring the impact of coaches</td>
</tr>
</tbody>
</table>

#### Elementary Programming Idea 2: Increase compacting (pretesting and enriching students who show mastery on the pretest of a unit) through professional development workshops.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible groupings depend upon curricular topics</td>
<td>Addressing teacher stress of the time involved in creating assessments and activities to remediate and extend the curriculum without support available in each school</td>
</tr>
<tr>
<td>Provides students with respectful learning tasks</td>
<td>Measuring student skills and needs</td>
</tr>
<tr>
<td>Preempts behaviors that emerge when students work on tasks they have already mastered</td>
<td>Does not follow best practices of teacher PD being job-embedded and situational</td>
</tr>
<tr>
<td>Efficient use of student’s learning time</td>
<td>Identifying and/or developing educator expertise in compacting</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Follows best practices in education overall and GT specifically</td>
<td>Does not completely address extreme high ability</td>
</tr>
<tr>
<td>Targeted professional development for teachers</td>
<td>Cost</td>
</tr>
</tbody>
</table>

**Elementary Programming Idea 3:** Develop an elementary program in Science, Technology, Engineering, and Mathematics (STEM), in which students would be provided instruction by a qualified educator.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addresses student and community interest</td>
<td>Cost</td>
</tr>
<tr>
<td>Meets the needs of students with gifts/talents in STEM</td>
<td>Scheduling / logistics</td>
</tr>
<tr>
<td>Enrichment for all</td>
<td>Space</td>
</tr>
<tr>
<td>Connection to global, national and local community through real-life / authentic application.</td>
<td>Teacher with depth of knowledge in content</td>
</tr>
<tr>
<td>Skills identified as needed for college and career readiness in a highly competitive 21st century world.</td>
<td></td>
</tr>
</tbody>
</table>
Secondary Programming:

**Secondary (7 - 8) Programming Idea 1:** Incorporate a self-directed research project into the REACH social studies curriculum, including the opportunity for students to exhibit their work.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides students with authentic learning opportunities related to their interests</td>
<td>Teacher time to learn about and implement passion projects</td>
</tr>
<tr>
<td>Aligns with best practices in the field of gifted and talented education</td>
<td>Limited student time to master the large number of social studies content standards while working on these projects</td>
</tr>
<tr>
<td>Enhances professional development for teachers</td>
<td>Limited in addressing the needs of students whose gifts and talents lay outside of social studies</td>
</tr>
<tr>
<td></td>
<td>Cost of PD for teachers</td>
</tr>
</tbody>
</table>

**Secondary (7 - 8) Programming Idea 2:** Incorporate the opportunity for self-directed research projects across the disciplines through hiring middle level specialists in gifted and talented.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addresses REACH needs assessment</td>
<td>Cost of hiring</td>
</tr>
<tr>
<td>Addresses interests and needs across the curriculum</td>
<td>Scheduling</td>
</tr>
<tr>
<td>The specialist could facilitate both curricular and extracurricular learning opportunities</td>
<td>Identifying and / or developing staff expertise to meet the needs of middle level learners with a flexible program</td>
</tr>
<tr>
<td>The specialist could support compacting, differentiation, mentoring, and STEM</td>
<td>Identifying specific student needs</td>
</tr>
<tr>
<td></td>
<td>Measuring student progress</td>
</tr>
<tr>
<td></td>
<td>Measuring the impact of coaches</td>
</tr>
</tbody>
</table>
Secondary Programming Idea 3: The district will provide a broader range of academically-focused extracurricular activities for grades five through eight, including those in STEM. These extra-curricular activities would focus on problem-solving.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meets a variety of student needs</td>
<td>Cost of stipends and program start-up</td>
</tr>
<tr>
<td>Requires task commitment</td>
<td>Avoiding overscheduled, stressed students</td>
</tr>
<tr>
<td>Provides students with opportunities to interact with high ability students outside of Hillsborough</td>
<td></td>
</tr>
<tr>
<td>Highly collaborative and focused on problem-solving</td>
<td></td>
</tr>
<tr>
<td>Focus on enhancing 21st Century Skills</td>
<td></td>
</tr>
</tbody>
</table>
**Teacher Learning:**

**Teacher Learning Idea 1:** Provide elementary teachers with professional development to support passion projects. If the district increases compacting, passion projects could flourish at the elementary level.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can address student interests in a variety of areas</td>
<td>Teacher time to learn and implement without increasing stress</td>
</tr>
<tr>
<td>Aligns with best-practices in the field of gifted and talented education</td>
<td>Student time/energy to master standards while also engaging in self-directed learning</td>
</tr>
<tr>
<td></td>
<td>Cost of professional development</td>
</tr>
</tbody>
</table>

**Teacher Learning Idea 2:** Provide social studies teachers with professional development to support passion projects. If the REACH program remains only social-studies specific, social studies teachers would need support to implement independent research projects.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can address student interests in a variety of areas</td>
<td>Teacher time to learn and implement for a large number of students without increasing stress</td>
</tr>
<tr>
<td>Aligns with best-practices in the field of gifted and talented education</td>
<td>Student time/energy to master standards while also engaging in self-directed learning</td>
</tr>
<tr>
<td></td>
<td>Scheduling time for students to work on projects</td>
</tr>
<tr>
<td></td>
<td>Cost of professional development</td>
</tr>
</tbody>
</table>

**Teacher Learning Idea 3:** Share information about acceleration with staff. This best practice has a variety of considerations that depend on the individual student. If teachers and administrators understand the research behind acceleration, this is a first step to developing a set of procedures to make acceleration a viable option for students within the district.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aligns with best-practices in the field of</td>
<td>Overcoming myths about acceleration</td>
</tr>
</tbody>
</table>
gifted and talented education

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meets the needs of a very small number of students with extreme high ability</td>
<td>Parent pressure to accelerate, especially when parent perception is not in alignment with the district / school assessment of student needs</td>
</tr>
<tr>
<td>Creating a plan to monitor and address any “holes” in student preparation</td>
<td>Development of a procedure for making acceleration decisions</td>
</tr>
</tbody>
</table>

**Community Connections:**

**Community Connections Idea 1:** Create different names for the different programs we have. There are three separate programs we offer: a special for grades 1-2, a pull-out program for grades 3-4, and a social studies replacement program in grades 5-8. Having different names for the programs will clarify that they each meet different needs.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will address the idea that some students get time in an extra special</td>
<td>Informing the community about the newly developed names</td>
</tr>
<tr>
<td>May decrease pressure around the CogAT test</td>
<td></td>
</tr>
<tr>
<td>Appropriate identification for the separate programs that already exist</td>
<td></td>
</tr>
</tbody>
</table>

**Community Connections Idea 2:** Create, develop and facilitate family nights across the content areas and levels. Programs such as “Cultivating Joyful, Lifelong Learning” and “Family Math Night” are well-attended and received.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assists families in meeting their child’s needs across content areas</td>
<td>Cost</td>
</tr>
<tr>
<td>Provides the opportunity to promote authentic learning in families and cultivate a growth mindset approach</td>
<td></td>
</tr>
</tbody>
</table>
**Community Connections Idea 3:** Conduct an in-depth gifted and talented K - 12 program review utilizing outside researchers.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides the opportunity to collect information from a variety of stakeholders</td>
<td>Cost</td>
</tr>
<tr>
<td>Provides unbiased and comprehensive suggestions for improving programming</td>
<td>Implementation of challenging and/or unpopular to recommendations</td>
</tr>
</tbody>
</table>

**Recommendations**

Overall, the subcommittee has outlined a total of nine recommendations. While the benefits and challenges have been previously addressed, a summary of recommendations follows.

The first recommendation regarding increasing enrichment in elementary programming involves creating coaching positions to assist teachers with differentiation, including compacting. Compacting is a research-based best practice where students take a pre-test to determine whether they need to complete the unit with the class (National Association for Gifted Children, 2010; Reis & Renzulli, 1992; Steenbergen-Hu, Makel, & Kolszewski-Kubilius, 2016). Compacting will allow students who have mastered the content and skills of a given unit to continue to learn new material. Over multiple years, coaches at each elementary school would work with teachers and supervisors to develop and implement pre-assessments and facilitate alternative learning activities for students who have mastered the content and skills of the unit prior to instruction.

The sub-committee’s second recommendation for increasing enrichment opportunities is to offer teacher professional development on compacting and differentiation. While coaches
offer job-embedded and continuous support necessary for implementation, in-service presentations can expose teachers to basic concepts and methods relating to compacting. These workshops will focus on subject-specific supports for teachers to meet individual student needs. As numerous studies have explained, effective professional development is job-embedded and continuous support is necessary for teachers to learn tools that they can use to teach their subject matter (Darling-Hammond & McLaughlin, 1999; Elmore, 2002; Firestone, Mangin, Martinez, & Polovsky, 2005; Wineberg & Grossman, 1998). This research supports both the use of coaches along with workshops and the provision of relevant resources.

STEM education can help students solve real world problems and demonstrate 21st century skills (Lombardi, 2007). Therefore, our third recommendation for increasing enrichment opportunities at the elementary level is to develop an elementary STEM program. This would require considering different options for scheduling and staffing, yet offer students direct experiences in STEM provided by a qualified educator. Involving students in the type of critical thinking that STEM requires (problem-solving, transferring skill, etc.) boosts student achievement (Higgins, Hall, Baumfield, & Moseley, 2005). There is both community and educator support for offering STEM-related enrichment at the elementary level, based on students’ interest.

Best practices in the field of gifted and talented education suggest providing avenues for students to explore their interests (Renzulli, 1999; National Association for Gifted Children, 2010); therefore, the fourth recommendation is specific to secondary programming and involves supporting the option for self-directed learning for students. This will require the hiring of middle level specialists to work with students’ interests in a cross-disciplinary manner. Middle
level specialists will facilitate both independent projects and more structured learning opportunities such as National History Day and Future Problem Solving Programs based on student interest and commitment. This will address the issue that our gifted and talented program is a replacement social studies program at the middle level and does not specifically address the needs of students with high ability in other content areas.

The sub-committee’s fifth recommendation regarding how to meet the needs of students in various content areas is to increase extracurricular opportunities at the middle level. The activities offered at Auten Road Intermediate School and Hillsborough Middle School could be expanded to include a broader range of academically-focused extracurricular activities, including those in STEM. The additional extra-curricular activities will focus on problem-solving and critical thinking in order to increase student achievement (Higgins, Hall, Baumfield, & Moseley, 2005; National Association for Gifted Children, 2010). Offering more academic extra-curricular activities would also expand the possibility of enrichment to all students in the district based on their commitment to participate.

In order to increase enrichment opportunities for students, teachers will need information and support to implement new practices; therefore, the next category of recommendations involves teacher learning. Our sixth recommendation related to enrichment opportunities is to provide elementary teachers with professional development to support passion projects. Should the district decide to move forward toward implementing the best practice of compacting, passion projects would most assuredly flourish at the elementary level with the proper supports.

Acceleration, which involves teaching the curriculum of the next grade level in one or all subjects is considered a best practice in the field of gifted and talented education (National
Association for Gifted Children, 2010; Steenbergen-Hu, Makel, & Olszewski-Kubilius, 2016). In a survey of districts nationwide, over 50% accelerated students by subject areas are at the middle school level (Callahan, Moon, & Oh, 2013). The decision of whether to accelerate a student and when to do so requires the consideration of a variety of factors which are dependant upon the individual student. As teachers and administrators garner a greater understanding of the research behind acceleration, a set of procedures to make acceleration a viable option for students within the district may be developed. Doing so will provide all students greater opportunities to achieve in accordance with their abilities; therefore, our seventh recommendation is that information about acceleration be shared with teachers and administrators.

In addition to supporting the learning of teachers, the subcommittee’s eighth recommendation enhances our partnership with parents centered on ways to understand the programming offered and providing guidance about enriching student learning outside of the school day. Hillsborough Township School District district currently offers three separate programs related to enriching students including a special for grades one and two, a pull-out program for grades three and four, and a social studies replacement program in grades five, six, seven, and eight. The subcommittee recommends creating alternate names for each enrichment opportunity thereby addressing the issue that students who are currently identified for overall high ability and creativity at the elementary level end up in a social studies replacement class at the middle level. A best practice in the field is to align identification criteria with the program offered (National Association for Gifted Children, 2010). Having separate names for the programming will clarify that each one meets different student needs.
Studies indicate that increased involvement of parents increased students academic performance and is characteristic of a more effective school (Cotton & Wikelund, 1988; Epstein, 1985; Jeynes, 2003). Opportunities to provide parents with information to enrich their child’s learning will provide additional opportunity for us to partner with our stakeholders for the benefit of student learning. Currently, there are several well-attended evening events offered district-wide that appeal to our constituents including, but not limited to Family Math and various enrichment-focused events held through the curriculum office under the auspices of the REACH program. Therefore, the ninth and final recommendation pertaining to enrichment is to create and facilitate family nights across each of the content areas whereby parents will engage in the learning process with their children.
Subcommittee: Student Life - Curriculum Innovations: Assessment & Professional Development

Subcommittee Member Names:

Mr. Scott Kallens, Teacher, Hillsborough High School

Mr. Steven Kerrigan, Principal, Woodfern Elementary School

Ms. Alyson Williams, Teacher, Auten Road Intermediate School

Introduction

The following describes detailed analyses pertaining to proposals researched and vetted by subcommittee members. Topics of proposals include detailed evaluations for implementing performance-based end of year assessments, instituting standards-based assessments, and providing support for these innovations through innovative professional development opportunities. Anticipated benefits and drawbacks, based upon educational research, a detailed review of research and literature and specific recommendations are also included.

Purpose

The development of Common Core standards creates an exciting opportunity to develop new programs and experiences for our students that address the needs of the 21st century. The traditional methods for evaluating student performance seem to contradict current research findings in the areas of growth mindset and intrinsic motivation while also failing to adequately
develop and measure 21st century skills. The need for revision in the area of assessment as well as the need for high-quality professional development to support innovative methods is therefore obvious and necessary.

Traditionally at the secondary level, students learning is assessed en-masse two times a year. Traditional midterm and final exams currently occupy 20 days of in the academic year when factoring in “last test days,” review days and exam days. These tests attempt to measure what students have learned in the previous semester but often fail to assess the application of acquired skills and devalue the process of learning emphasized throughout the year. Furthermore, the time and effort put forth in developing, administering, studying for, and taking these exams sacrifices valuable resources on behalf of both teachers and students; time and resources that could easily be spent on developing valuable and meaningful learning experiences for our students. Performance-based end of term assessments would enable students to demonstrate skills and apply their knowledge at a much higher level than currently offered with the added benefit of increasing intrinsic motivation within our students by placing a greater emphasis on the process of learning.

With the development and implementation of performance-based assessments, the need to revise the current method of assessment must also be considered. Our current traditional model of assessment attempts to measure a student’s knowledge through point accumulation. In this approach, students’ earned points over a given term are divided by the points available to be earned to produce a final average. This traditional approach is convenient to compare students and serves as an efficient means to collect data on supposed student progress. An unintended consequences of this method is that students often become inappropriately focused on the results
of learning at the expense of progress and process. Therefore, what motivates and often
demotivates students in this model is the competition for point accumulation rather than the
development of skills. Students misplace their academic pursuits on the end result at the expense
of the process that led to the result. Traditional grading practices have been used for over one
hundred years, and, to date, there have been no meaningful research reports to support it
(Marzano, 2000).

This model contradicts the concept of growth mindset and the intent of school in general
-- that students develop skills through the accumulation of knowledge in order to be functioning
and contributing members of society. Worse yet, the current model contributes to widening
achievement gaps and provides little if any support to struggling students. In the case of
motivation, it is suggested that if grades are considered motivating factors, the quality of work
decreases (Pink, 2011). Put simply, the greater the emphasis on grades, the less motivated our
students become and the lower the quality of work they will produce as a result. In this model,
established achievement gaps are reinforced where student progress is measured strictly by the
average of points accumulated and gives little to no emphasis on process and growth over time.

Standards-based assessment is an alternative approach to assessment that more accurately
measures student achievement and provides more valuable and regular feedback for teachers
who, with better data, can more effectively differentiate for students while also fostering student
motivation in the pursuit of learning. Today grading experts (Guskey, 2014; Marzano, 2000;
O’Connor, 2009; Reeves, 2008) agree teachers should update their grading practices to better
align with the realities of how and what students are learning in schools (Townsley & Buckmiller
2016).
Upgrading assessment to reliably and validly measure student performance must be closely aligned with upgrading the standards on which performance is measured. In order to effectively link these two concepts together, standards-based assessments must be utilized. In the past century, everything from modern medicine to personal computing has evolved and improved; yet our educational system’s grading practices have remained the same, despite a lack of supporting evidence. A standards-based system of assessment seems to be a significant and defensible improvement over traditional grading practices (Townsley & Buckmiller, 2016). Adopting a standards-based grading system in our district will provide students with multiple opportunities to demonstrate learning while providing regular and meaningful feedback. Grades will also carry greater meaning and allow teachers to account separately for behavior, work ethic, attendance, participation, and various other factors that currently muddy and skew our grading policies.

The benefits of standards-based assessment apply to all grade levels throughout a school district. In a standards-based assessment system, all children have access to challenging curriculum and instruction that are focused on grade-level content and achievement standards (Quenemoen, et. al., 2004). This type of system requires assessments that involve ongoing collection and use of information to evaluate the effectiveness of instruction (Fuchs & Deno, 1991; Helwig, Heath, & Tindal, 2000; Langenfeld, Thurlow, & Scott, 1997; Lindsey, 1990; Marston, 1989; Paulson, Paulson, & Meyer, 1991; Stecker & Fuchs, 2000; Stiggins, 2001; Wiggins & McTigue, 1998). As Hillsborough already has common assessment and analysis mechanisms (e.g. Performance Matters) throughout all levels at all schools, movement to standards-based assessments will prove to be a more seamless transition when compared to a
district that does not have such internal mechanisms already in place. Alignment of common assessment tasks with performance standards is vital.

It is important to note potential drawbacks of standards-based assessment. A short-term drawback would be the need for professional development of staff in order to appropriately implement standards-based assessments. On a larger scale, descriptions of standards can be difficult for students and parents to understand (Quenemoen, et. al., 2004). As this system is a departure from what most parents understand as how schools assess student progress, there will most certainly be trepidation and resistance from the community. Consideration of implementation, course placement procedures, and subsequent explanation of these to parents, must also be considered. There will also be concerns that standards-based instruction and assessments could negatively affect student performance on college-level courses (AP classes) and assessments (SAT, ACT, etc.) (Quenemoen, et. al., 2004).

Making the transition from traditional methods of assessments to performance-based end of term assessments and standards-based assessments strategies requires ongoing, high quality, and immediately applicable professional development for teachers to support effective implementation. In order to address the short-term drawbacks related to professional development within our district, a closer evaluation of best practices in professional development is warranted. School districts should be evaluating how teachers learn as much as they are evaluating how students learn. The Association for Supervision and Curriculum Development (ASCD) in 2017 reported that "high quality professional development leads teachers to gain and refine knowledge of content and pedagogy; reflects best practices in teaching and learning; helps adults with varied interests, learning profiles, and readiness learn to work together and feel part
of a community of learners; and has a positive impact on the classroom in terms of both teacher effectiveness and student learning" (ASCD, 2017). Thus, evaluating the quality of professional development programs and opportunities for teachers in Hillsborough will ultimately result in quality programs throughout the district. Targeted, ongoing, and timely professional development presented as an ongoing process throughout the school year will keep teachers accountable for their own learning while helping them apply best practices in their classrooms every day.

**Major Areas of Focus / Anticipated Benefits**

On the topic of performance-based end of term assessments, the following describe the potential benefits and drawbacks of this model overall and with specific respect to the Hillsborough Township Schools. By reallocation the days reserved for review and testing and using these recovered days by challenging students to design projects that demonstrate and apply their skills, greater opportunities can be created for students to apply 21st century skills while increasing motivation by placing greater emphasis on process.

In these two-week periods, teachers will “assign teams and define challenges while students take the lead in designing, discovering and evaluating possible solutions” (Connected Learning Alliance, n.d.) Students will be compelled to collaborate with peers in experiences that allow them to connect classroom challenges with their own interests. These challenges can also provide community involvement. In some instances, students might be required to provide daily podcasts to family members apprising them of updates on their progress. Additionally,
many schools using a similar model open their doors to families during showcases of student achievement.

The following tables summarize research the subcommittee completed surrounding the benefits and challenges associated with performance-based and standards-based assessments.

<table>
<thead>
<tr>
<th>Performance - Based Assessments</th>
<th>BENEFITS</th>
<th>CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students fully immersed in problem solving and cooperative learning</td>
<td>Community acceptance of non-traditional approach to teaching and learning</td>
<td></td>
</tr>
<tr>
<td>Students network with area professionals to authenticate their projects</td>
<td>Limits open-endedness in student-directed project design</td>
<td></td>
</tr>
<tr>
<td>Encourages students to include areas of interest which builds intrinsic motivation and ownership of the learning process</td>
<td>Concern over meeting standards and performance on standardized tests</td>
<td></td>
</tr>
<tr>
<td>Allows students to empathize, establish relevance, and apply knowledge from the semester or term and apply 21st century skills to promote future growth</td>
<td>Training staff to deliver consistent experiences for all students</td>
<td></td>
</tr>
<tr>
<td>Standards-based assessments focus on the NJSLS</td>
<td>Potential concerns over lack of commonality between teachers in the same courses</td>
<td></td>
</tr>
<tr>
<td>Direct observation of student learning and achievement</td>
<td>Concern that students may not be adequately prepared for College Board exams due to less “practice”</td>
<td></td>
</tr>
<tr>
<td>Multiple opportunities for revision, development and improvement</td>
<td>Building consensus and training teachers for project expansion</td>
<td></td>
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<tr>
<td>Opportunities for authentic assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy transference and adaptations to students of all grade levels and content areas</td>
<td></td>
<td></td>
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<tr>
<td>No short-term financial cost</td>
<td></td>
<td></td>
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<tr>
<td>Academic calendar remains intact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reclaims lost instructional time currently devoted to last-test days, test review and test implementation by effectively utilizing 10 instructional days at the end of the year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rigorous and authentic student-directed opportunity to apply skills and content learned throughout the semester to identify and propose solutions to real world problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater opportunity for meaningful and authentic assessment of student work and achievement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Opportunities for continuous improvement through teacher and peer revision

<table>
<thead>
<tr>
<th>Standards - Based Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BENEFITS</strong></td>
</tr>
<tr>
<td>Establishes a clear set of grading standards that allows for separate quantifying of various factors such as work ethic, behavior, punctuality, participation, and achievement</td>
</tr>
<tr>
<td>Assessments involve ongoing collection and use of information to evaluate the effectiveness of instruction, (Fuchs &amp; Deno, 1991; Helwig, Heath, &amp; Tindal, 2000; Langenfeld, Thurlow, &amp; Scott, 1997; Lindsey, 1990; Marston, 1989; Paulson, Paulson, &amp; Meyer, 1991; Stecker &amp; Fuchs, 2000; Stiggins, 2001; Wiggins &amp; McTigue, 1998)</td>
</tr>
<tr>
<td>Common assessment and analysis mechanisms (e.g. Performance Matters) are already in place district-wide</td>
</tr>
<tr>
<td>Provides access to challenging curriculum and instruction focused on grade-level content and achievement standards, (Quenemoen, et. al., 2004)</td>
</tr>
</tbody>
</table>

**Review of Literature / Research Supporting the Need to Implement the Areas of Focus**

An early adopter of this instructional/assessment model is Quest2Learn in NYC.

Quest2Learn is a 6-12 public school formed with the goal of infusing game-based learning principles into everyday instruction. This school developed a program such as the one suggested in this proposal, called Boss Level. Boss Level projects occur at the end of each school trimester.
and are student-directed research projects where students identify problems based on teacher
guidance and support, research and design solutions to these problems, and then open the school
to parents to present and defend their work. While specific data on Boss Level is not currently
available, NYU Professor of Sociology Dr. Richard Arum studied Quest2Learn and has found,
and will be publishing in an upcoming book, that, “the average rate of growth of a Quest to
Learn 8th-10th grade student in one year is comparable to the average rate of growth of a college
student on a similar test called the CLA – across all four years of college.” Furthermore,
according to New York state testing data, Quest students in 2015 were 54% proficient in ELA as
compared to 30.4% of students city-wide. Clearly Quest students are being prepared to address
21st century problems with performance-based, student-directed, end of term assessments at the
center of this work; while direct comparison is difficult between differing schools, states and
communities, it is reasonable to conclude that Hillsborough students would benefit from some of
Quest’s programs, namely Boss Level end of term performance-based assessments. As this
model is on track to be piloted among five high school teachers this year, a full review of the
results, including student work and feedback will be included at a later date.

Implementing strategies and concepts presented in professional development workshops
is "an ongoing and complex process" (Dixon, et al., 2014). Making the transition from
traditional formats of assessing to performance-based end of term assessments and
standards-based assessments requires ongoing, systematic, and supportive professional
development in order to maximize efficacy and efficiency within the classroom. Allison
Gulamhussein, in her presentation for the Center of Public Education, stated that "the real issue
isn’t that teachers aren’t provided professional development, but that the typical offerings are
ineffective at changing teachers’ practice or student learning” (2013, p. 1). She cites a study in which 90 percent of teachers have participated in professional development, but most teachers found the professional development to be ineffective or irrelevant to their individual assignments (Darling-Hammond et al., 2009). Simply put, a teacher's greatest challenge is not in lack of knowledge but "comes when they attempt to implement newly learned methods into the classroom" (Gulamhussein, 2013, p. 10).

Research, therefore, suggests that the most effective and quality professional development programs come in the form of in-house PD opportunities and coaching. This way, information is presented in an ongoing, systematic manner that allows teachers to solve any implementation problems with proper supports in place. This method of providing professional development would not be evaluative in nature; rather, staff members and coaches are available to help other staff members utilize strategies and best practices within their classrooms effectively and with resources available to them on an as-needed basis. Mastery of new skills is time-consuming, and "teachers may need as many as 50 hours of instruction, practice and coaching before a new teaching strategy is mastered and implemented in class" (French as cited in Gulamhussein, 2013, p. 14). The current methods of one-time instruction and independent implementation of skills do not support teacher efficacy or student achievement in the 21st century classroom.

The most significant cost item in switching professional development methods comes in the form of providing time for teachers to spend in professional learning and with coaches (Gulamhussein, 2013).
**Recommendations with Rationale**

On the topic of performance-based end of term assessments, it is recommended that the district reallocate the days reserved for review and testing to implementing Boss Level-like challenges to our selected students. At the direction of the Assistant Superintendent of Curriculum and Instruction, it was recommended to pilot this innovation among five secondary teachers from different departments including Social Studies, Applied Technologies, English and Math for the 2016/17 Final Exam period. In lieu of administering the departmental final exams, participating teachers in selected Honors and CP level courses will assist students through the Boss Level design process to measure standards mastery of skills and content from throughout the second semester. Students will still be required to attend the scheduled exam period but attendance will be used to serve the design process assessment. Following a review of this year’s pilot program, it is recommended to continue and expand the pilot program into the 2017/18 school year including two to three teachers from every high school department.

**Closing**

As teachers consistently evaluate the learning needs of every student in their classroom, districts must also evaluate the learning needs of their staff members and provide ongoing, high quality professional development that meets those needs. Instructional coaches and staff placed in school buildings with the role of providing professional development to other staff members ensures that training can be molded and formatted to meet the individual needs of staff in every building. In this way, teachers will be less inclined to ask, "How does this content apply to me?" and more likely to ask, "How can I implement this information in my classroom right away?"
Subcommittee: Student Life- Curriculum Innovations: Student Exchange Programs

Subcommittee Member Name:

Mr. Enrique Pincay, Former District World Languages / ESL Supervisor

Introduction

Merriam-Webster defines innovation as “the introduction of something new; a new idea, method, or device.” Synonyms for innovation include modernization, departure, leading edge, alteration, modification, shift, variation, and cutting edge. Curriculum innovation may include encouraging collaborative learning, recognizing the value of diversity within the population, creating more opportunities for globalization, developing interesting courses of study, and incorporating enhancements to current programs.

As part of our mission to prepare all students for the future, opportunities for enrichment beyond the grade-level curriculum helps students meet their full potential. To address the needs of students at various levels, the enrichment opportunities sub-committee considered the creation and implementation of a student foreign exchange program. There are very few New Jersey districts that currently participate in student exchange programs. They are outlined in the chart below.

<table>
<thead>
<tr>
<th>District</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scotch Plains-Fanwood</td>
<td>Spain, France, Italy</td>
</tr>
<tr>
<td>Morris School District</td>
<td>The Council on International Educational</td>
</tr>
</tbody>
</table>
Purpose

The overall purpose of strategically planning to increase enrichment opportunities is to maximize student learning throughout a child’s educational career. The purpose of this report is to summarize the findings of the review of research related to curriculum innovations conducted by the Student Life subcommittee of the larger Strategic Planning committee and to offer recommendations to the Board of Education in preparation for the development and implementation of the next Hillsborough Township School District Strategic Plan.

Review of Literature / Research Supporting the Need to Implement the Areas of Focus

While empirical evidence about the education outcomes of travel is limited, outdated, and scattered across many fields of study, research surrounding the educational benefits of student travel, the worthiness of student exchange programs, and post high school pursuit of foreign languages exists, although the focus of the research is limited to university programs and programming. In fact, very limited research exists surrounding foreign exchange programs at the high school level. However, the subcommittee was able to provide a summary of the limited research as well as the benefits and challenges surrounding student exchange programs.

The State of New Jersey Department of Education conducted its first International Education Summit in Fall 2004 with the goal of providing information for the purpose of developing a five-year plan that would improve the capacity of its “schools to provide quality international education programs.” According to the NJDOE website, “the summit was the first
of many activities designed to:

- Raise awareness of the importance of international knowledge to social and cultural integration in New Jersey and to New Jersey’s economy;
- Mobilize political, corporate and educational leadership to support a greater focus on education about other world regions, their languages and cultures; and
- Build networks among educators and schools interested in infusing international knowledge and skills across the curriculum and strengthening existing international education programs”

Additionally, a vision, mission, and goals were outlined. The second of three identified goals reads, “To connect student acquisition of international literacies to real world experiences both in New Jersey and beyond state and national borders” (p. 6).

The New Jersey International Education Summit Report was presented to the State Board of Education in the Fall of 2005. The report provided background about the demographics and business in New Jersey as well as an overview of the summit with recommendations for moving forward. Page three of the report posits, “Given today’s economic and political realities, it has become increasingly important that states -- and schools -- increase their capacity to understand and respond to an ever changing world that has become more dependent on the international economy. Issues such as immigration and foreign policy increasingly influence the course of public education in a richly diverse state such as New Jersey” (p. 3).

While it has been twelve years since the New Jersey International Education Summit Report was published, the aforementioned statement remains unequivocally accurate. World societies are increasingly interconnected, and political differences can no longer prevent the
continuous development of the “global economy.” In today’s political climate where there seems to be a marked diminishment in tolerance and a marked increase in xenophobia, few would disagree that our differences are more apparent. As many of humanity’s issues are global issues, a global perspective is essential in order to properly and collaboratively address problems such as poverty, pollutions, disease, education, etc. The introduction of global perspectives challenges familiar understandings and commonly held assumptions. Providing our community with an opportunity to warmly welcome students from around the globe and allowing them to take part in the American / Hillsborough way of life and conversely providing the opportunity for our students to be warmly welcomed via immersion in other cultures is the true definition of globalizing the curriculum. We are literally and figuratively opening up the world to our students.

In a 1984 study titled, Life after Study Abroad: A Survey of Undergraduate Academic and Career Choices, author Gregory K. Armstrong reports the findings of a survey he mailed to 180 undergraduate students who experienced a study abroad opportunity while enrolled in high school. In attempting to assess how the participants perceived their high school study abroad experiences after graduating and entering college, he had a particular interest in finding out whether the experiences motivated them to continue studying languages, if it affected their study/career choices, and if they believed there were any residual benefits. In terms of perseverance in language study, Armstrong (1984) reported that 87% of those that responded believed the study abroad experience influenced their attitudes towards foreign language study although there was also general agreement that most of them held favorable views of such prior to the experience as well. Additionally, the participants reported that the experience they had in
high school seemed to produce a greater desire to “seek other cross-cultural associations through future travel and study” (Armstrong, 1984, p. 2) Furthermore, approximately 70% of those who responded indicated a language as a major or minor area of study in college, and over 55% believed that their overseas experience influenced their choice of study in preparation for a future career. Finally, student perception related to lasting benefits as a result of their participation in the program included, but were not limited to, the following: increased language fluency; increased interest in living, studying, or traveling abroad; increased exposure to and appreciation for cultural diversity; and acquisition of self-confidence and independence (Armstrong, 1984). Armstrong further concludes that “a successful foreign study experience during high school years continues to play an important role in participants’ attitudes and decisions regarding careers, additional language study, and increased cross-cultural activities” (1984, p. 4).

**Recommendation with Rationale**

The following table outlines the benefits and challenges associated with beginning a foreign exchange program.

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training for school officials</td>
<td>Significant cost</td>
</tr>
<tr>
<td>Increased language acquisition via immersion</td>
<td>Application Process- 9 - 12 month minimum</td>
</tr>
<tr>
<td>Increase in maturity, coping, and problem solving skills</td>
<td>Minimum of five students / year for five years</td>
</tr>
<tr>
<td>Increased understanding and acceptance of different cultural and community perspectives</td>
<td>“Responsible Officer” designation</td>
</tr>
<tr>
<td>Broader general knowledge and enhanced interest in global issues</td>
<td>Significant responsibilities</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Personal development and awareness leading to increased self-confidence and self esteem</td>
<td></td>
</tr>
<tr>
<td>Awareness of alternative multifaceted approaches to learning</td>
<td></td>
</tr>
<tr>
<td>Increased comfort level in “foreign” environments</td>
<td></td>
</tr>
<tr>
<td>Prospective employers deem foreign exchange programs favorable</td>
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</tr>
</tbody>
</table>

**Conclusion**

Study abroad experiences, as well as student exchange programs, are specifically designed for learning to occur. However, the research is limited, often outdated, and scattered across varied fields of study. Much research focuses on college students and adults. Furthermore, much of the research speaks to all types of travel experience, including, but not limited to, serendipitous, family, and independent travel. The research also stresses that no matter what the travel experience, it most often resulted in greater general knowledge, higher academic achievement, personal growth, and societal/cultural awareness.
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