MISSION

The Mission of the Academy is to promote the interests of urban education in both public and private schools and universities in the Metropolitan area.

VISION

The Vision of the Academy is to create an AGORA for the exchange of ideas among educators who wish to encourage and uphold the promotion of the highest standards and ideals of Public Education in the Greater New York Metropolitan area.
As we close out this academic year, I would be remiss in not crediting the Peer Review Committee for their perennial excellent work in editing our Research Journal articles. Now in our third year of this research format, we have nine very interesting manuscripts. Each of the researchers put in long hours to write and refine their articles. Our success is primarily due to their diligent work and generosity.

To complement our Research Journal, The Academy has renewed its Forum Series at Fordham University. This past winter, we had several panelists present their views on the Opt Out problem associated with the state standardized tests. The panel presentations and discussions were both spirited and informative. Many of those in attendance claimed that this was one of the finest forums they had attended.

Although the topic for our next forum has not yet been selected, the date has. We will be returning to the President’s Meeting Room on the top floor of the Fordham University Graduate Education Building at the Lincoln Center Campus in Manhattan on November 12, 2019. Please be sure to set aside the date and plan to attend. I am sure that you will not be disappointed.

I would also like to thank each of our authors for contributing their articles to this issue of The New York Academy of Public Education Research Journal.

Finally, as we begin to wind down this school year, I wish each of you a very safe, productive, and enjoyable summer.

Respectfully,

John C. Jangl, Ed.D.
New York Academy of Public Education Research Journal
Triagedu@aol.com
The New York Academy of Public Education founded in 1912 as a professional learning organization has maintained a strong and timeless interest in a variety of areas not strictly connected to education. The list of our Medalist Award winners reflects the scope of those in government, history, publishing, science, journalism and of course, supervision and administration of schools at every level. From the industrial age of 1912 to the present 21st century of the digital age, times have changed. The manner of educating students continues to be in a state of change. In our mission to promote the interests of urban education in both public and private schools and universities in the metropolitan area, the Academy continues to recognize guest speakers who offer thought-provoking insights in the challenges present and in the future to collectively improve our public education system.

In our vision to create a gathering space for the exchange of ideas among educators who wish to encourage and uphold the promotion of the highest ideals, the Academy provides a common forum and meeting ground for fostering educational activities between the professional community and the public at large.

As President of the Academy this past year, I am most appreciative to our members, Board of Directors, Officers and guest speakers who serve to inspire us to continue the invaluable work of the Academy.

I would like to thank Editor-in-Chief, John C. Jangl, Ed.D. and the Peer Review Committee for this eighth annual Research Journal.

Respectfully,

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Teacher training in early childhood education typically involves preparing teachers to understand and promote social skills in the classroom, including appropriate behavior and positive peer interactions (e.g., National Association for the Education of Young Children, 2009). Nevertheless, there is a need for teacher education and professional development programs to address the experiences, difficulties, and needs of the teacher in the preschool classroom setting and to design trainings that stem from these experiences and needs. The goal of this study was to explore teachers’ experiences in the preschool classrooms in order to inform the design of training that can help teachers promote social skills in early childhood.

This study aimed at identifying teachers’ perception of problem behaviors and challenging peer interactions in preschool classrooms serving low Socio Economic Status (SES) children. Furthermore, this study intended to explore the type of classroom activities in which problems behaviors and negative peer interactions arise. Identifying and understanding these experiences can inform interventions that will present teachers with better tools to promote social skills for children in the preschool classrooms, especially in classrooms serving low SES children.

The number of young children served in preschool programs in the United States and around the world aiming at improving the educational experiences of low SES children has been growing rapidly (e.g., Administration for Children and Families, 2013; UNESCO Global Monitoring Report, 2007). Informing interventions and trainings in order to help teachers promote appropriate behavior and positive peer interactions should prove essential to the success of preschool programs serving low SES children.

Why is Promoting the Development of Social Skills Important in Preschool?

There is mounting evidence that quality preschool programs can impact children's academic success (Barnett, 2008). Children's social and emotional adjustment to the preschool classroom has been shown to influence early school success. For example, social competence and positive relationships between children and the preschool teacher has been found to have a positive association with children language skills, and the quality of interactions between teachers and preschool children has shown to influence children’s social competence in the second grade (McWayne, Fantuzzo, & McDermott, 2004). Similarly, the development of positive peer relationships during the preschool years has shown to be related to positive adjustment to kindergarten, and positive outcomes in elementary and high school (McWayne et al., 2004). In addition, poor social skills in the early years are associated with lower academic performance and emotional maladjustment (McWayne et al., 2004). Accordingly, the preschool classroom is an appropriate context to promote social skills in young children, as these benefits extend into the school years.

Research has found that children develop skills to cope with demanding social situation and to comply with adults’ demands between the ages of two and five and that a child’s ability to deal with a demanding social situation and with adults’ request, remains stable through early childhood (Raikes, Robinson, Bradley, Raikes, & Ayoub, 2007). This findings point at the importance of reinforcing these skills at the preschool age, as promoting these skills in the preschool classroom can affect the way these skills are displayed in subsequent educational settings.

The development of social skills is particularly important to children growing up in high risk environments such as poverty, since poverty puts children at greater risk of behavioral problems as well as problems in school achievement (Raikes et al., 2007). Thus, teacher training needs to focus on helping teachers fostering children’s social skills, since social skills serve as a protective mechanism by which children in high risk environments reduce behavioral problems and eventually increase school success.

Which Social Skills Need to be Addressed in the Preschool Classroom?

The most common social skills teachers reported as important for children to develop before their entry to kindergarten were impulse control, ability to get along with others, being accountable for their own actions, and ability to share with others (Lara-Cinisomo, Fuligni, Ritchie, Howes, & Karoly, 2008). Rimm-Kaufman, Pianta, and Cox (2000) found that children’s lack of social skills, including challenging
behavior, was reported by kindergarten teachers as most problematic. In their study as many as 46 percent of a national representative group of kindergarten teachers reported that about half their class or more have difficulty following directions. Similarly, more than 30 percent of those teachers reported that half their class or more have difficulty working independently, difficulty working in groups, and a disorganized home environment. These findings indicate that there is a need to identify problem behaviors during the preschool years and to promote these skills before children enter kindergarten.

**Classroom Situations and Type of Activities**

According to the dynamic transactional model, problem behaviors might arise as a way for children to negotiate a mismatch between the expectations of the settings and their skills and capabilities based on their previous experience or developmental stage. Some of the demands of the preschool and the teacher’s expectations of children are attentions to tasks, appropriate play, teacher and peer play interactions and establishment of friendship patterns. In order to better inform interventions and appropriate practice, it is important to investigate problem behaviors at particular time in day and in different situational contexts. This would be informative in advancing our understanding of strategic interventions for struggling children (Boulotsky-Shearer et al., 2008).

Different classroom scenarios might create different challenges for adaptation and behavior for different children. Researchers point at the importance of looking both at problematic behavior and at types of classroom situations in which most problems occur (Bulotsky-Shearer et al., 2008). Learning about how well children’s behavior match the environment expectations can inform interventions that do not just focus on the child but a more developmental-ecological approach, in which the settings and the conditions that need interventions are taken into account (Bulotsky-Shearer et al., 2008).

**The Present Study: Research Questions**

The development of social skills is central to the preschool classroom. Problem behaviors and difficult peer interactions have been shown to be challenges experienced by kindergarten teachers. Training preschool teachers in addressing those challenges in the preschool classroom might better prepare children for kindergarten. Nevertheless, there is little information on the typical challenges preschool teachers experience. Similarly, training has rarely relied on first-hand accounts of teachers’ challenges and needs. The present study attempted to address this gap by exploring teachers’ challenges in the preschool classroom in order to inform teacher training. The present study aims at answering the following questions.

1. What are teachers’ perception of the prevalence of problem behaviors in the preschool classroom?
2. What are teachers’ perception of the prevalence of conflicts in peer interactions in the preschool classroom?
3. During what type of activities do problems behaviors or conflicts in peer interactions arise?

**Method**

The participants were 328 teachers in Head Start preschool centers coordinated by the Administration of Children Services of New York City. Six percent of the teachers were in classrooms with two-year-old children, 36.2% of the teachers were in mixed age three and four year-old classrooms, 28.9% were in three-year-old classrooms, and 28.6% were in four-year-old classrooms. Table 1 depicts the age composition of the classrooms in the sample. All children reached their classroom target age by December 31. The majority of children attending Head Start in New York City are children from cultural and linguistic minority backgrounds, and this is highlighted in Table 2, which illustrates the typical Head Start population in New York City.

**Table 1: Teachers’ Classroom Age Composition**

<table>
<thead>
<tr>
<th>Age Composition of Teachers’ Classrooms</th>
<th>Percentage</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers in:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two-year-old classrooms</td>
<td>6.1%</td>
<td>20</td>
</tr>
<tr>
<td>Three-year-old classrooms</td>
<td>28.9%</td>
<td>95</td>
</tr>
<tr>
<td>Mixed-age classrooms</td>
<td>36.2%</td>
<td>119</td>
</tr>
<tr>
<td>Four-year-old classrooms</td>
<td>28.6%</td>
<td>94</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>328</td>
</tr>
</tbody>
</table>

**Table 2: Children’s Background Characteristics†**

<table>
<thead>
<tr>
<th>Background</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic/Latino</td>
<td>46%</td>
</tr>
<tr>
<td>North American/European</td>
<td>33%</td>
</tr>
<tr>
<td>Multiple/non-Specific</td>
<td>27%</td>
</tr>
<tr>
<td>Black/African American</td>
<td>25%</td>
</tr>
<tr>
<td>Asian</td>
<td>5%</td>
</tr>
<tr>
<td>American Indian</td>
<td>2%</td>
</tr>
</tbody>
</table>

†Data based on New York State Council on children and families
Procedure

This study consisted of preschool teachers reporting on their experiences and observations in the classroom. Teachers’ reports are widely used in the study of social processes in the classrooms (Rimm-Kaufman et al., 2001) and have shown to have predictive validity (Fuhs, Farran, & Nesbitt, 2015). Teachers were recruited by the New York City Administration of Children Services (ACS), which coordinates about 300 Head Start preschool centers throughout New York City (New York City ACS, 2010). The New York City ASC Division of Head Start oversees the largest municipal preschool system in the United States, and it provides services to approximately 100,000 children ages two, three, and four (New York City ACS, 2010). The director of each center recruited teachers for the study, and teachers were asked to fill out a survey and a consent form. A survey was developed based on measures available in previous research studies. Before the survey was administered, it was shared with small focus groups of Head Start preschool teachers to ensure that it reflects common social processes taking place in the classroom based on teachers’ experiences. The survey was edited based on teachers’ feedback. This was part of a larger study addressing social skills in Head Start classrooms in New York City.

Measures

Teachers’ Perception of Prevalence of Problem Behaviors

Teachers’ Perception of Prevalence of Problem Behaviors was measured by a scale developed by Rimm Kaufamn and colleagues (2000) for kindergarten teachers, which focused on the most common challenges children face in their kindergarten classrooms. Teachers were asked to identify for how many children in a typical class the following behaviors were a problem. The items were rated on a three-point scale with higher scores indicating a larger percentage in the classroom displaying the behavior. Sample items include “difficulty following directions” and “difficulty working in a group,” and for each characteristic teachers were expected to identify if a few, about one-fourth of the class, and about half of the class. Three items from the original survey were not included since they did not apply to a preschool setting.

Teacher’s Perception of Prevalence of Conflict in Peer Interactions

Teacher’s Perception of Prevalence of Conflict in Peer Interactions was measured by an adaptation of the play disruption dimension of the Penn Interactive Peer Play Scale (PIPPS), developed by Hampton and Fantuzzo (2003). This scale was designed as a teacher’s rating scale of children’s disruptive peer interactions during play in preschool. This measure was found to be valid for low-income children and has been shown to have sound construct, confirmatory, and predictive validity (Hampton & Fantuzzo, 2003). Teachers are asked to rate how often they observe a specific behavior in their classroom. Items included behaviors such as “child is physically aggressive” or “disrupts the play of others.” There are a total of eleven items in the scale, and teachers use a Likert-type scale ranging from one to four indicating whether the behavior is seen 1) never, 2) seldom, 3) often, and 4) always. Higher scores indicate higher incidences of the behavior.

Type of Activity in which Problems Behaviors / Peer Conflict Arise

Teachers were asked to indicate what is the most challenging time during the day? Lunch/snack, free play/outdoor play, structured activity time, circle time/story time, and transition time. Teachers were asked to give a number from one to five to each of these activities with one being least challenging and five being the most challenging.

Results

This study attempts to inform teacher training by accomplishing three goals. The first goal was to learn about teachers’ perceptions of prevalence problem behaviors in the classrooms. The second goal was to learn about teachers’ perceptions of prevalence of peer conflict in the classroom. The third goal was to learn about the type of activities in which problems behaviors and conflict arise. These questions were answered using descriptive statistics.

Teacher’s Perceptions of Problem Behaviors

Table 3 and Figure 1 highlight teachers’ perceptions of problem behaviors in the classroom. Teachers were asked to indicate how many children in their class exhibited a certain challenge: a few, about one fourth of the class, and about half of the class. Most of the teachers found most problem behaviors to be common among “about one fourth of the class”. For each problem behavior 50.2 % to 68% of teachers found that a few children in the class exhibited that problem, and for each problem behavior 62 % to 89% of teachers found that about a quarter of the class exhibited that problem behavior. When looking at teachers’ responses in the third column (about a quarter if the class), “problem following directions” seems to be the most common (89.7 % of teachers found that close to a fourth of their class had this problem). This was followed by “problems with communication,” which was followed by “problems working with others.” “Problems getting along with other children, lack of academic skills and
disorganized home environment” were fourth, fifth, and sixth in teacher’s ratings. These results indicate that teachers find that children have most problems listening and following teacher directions, as well as difficulties with communication and working in groups.

Table 3: Teachers Perception of Problem Behaviors

<table>
<thead>
<tr>
<th>Percentage of teachers who indicated this a problem for children in their class</th>
</tr>
</thead>
<tbody>
<tr>
<td>For how many children in your class is this a problem?</td>
</tr>
<tr>
<td>Difficulty following directions</td>
</tr>
<tr>
<td>Difficulty working in a group</td>
</tr>
<tr>
<td>Problems getting along with other children</td>
</tr>
<tr>
<td>Difficulty communicating/language problem</td>
</tr>
<tr>
<td>Disorganized home environment</td>
</tr>
<tr>
<td>Lack of academic skills</td>
</tr>
</tbody>
</table>

Figure 1: Percentage of Teachers that indicated this to be a problem for ¼ of the children in their class

Teachers’ Perception of Prevalence in Peer Conflict

Teacher’s perception of peer conflict are summarized in Table 4 and Figure 2. In general, teachers’ experiences of peer conflict had an average of 2.44 with a range of 1-3, indicating that most teachers rated their perceptions of peer conflict to be relatively high. Teachers rated the experiences of children who “are physically aggressive” to be the highest (M = 2.80). This was followed by experiences with children who “disrupt class transition”, “disrupt the play of others”, and “cry or show temper”. These three experiences were second in the ratings as they all had a mean of 2.57. Experiences with children who “say mean things to others” or “feel scared or insecure” came in third place (M = 2.43). Teacher experience less children who “are very shy”, “grab things, or “do not take turns” (M = 2.34). Nevertheless, the differences among means are not very pronounced and teachers on average experienced difficulties in peer interactions.

Table 4: Teachers’ Perception of Prevalence of Conflict in Peer Interactions

<table>
<thead>
<tr>
<th>Conflict</th>
<th>Mean</th>
<th>S.D.</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are physically aggressive</td>
<td>2.80</td>
<td>.52</td>
<td>1-3</td>
</tr>
<tr>
<td>Disrupt the play of others</td>
<td>2.57</td>
<td>.66</td>
<td></td>
</tr>
<tr>
<td>Disrupt class during transitions</td>
<td>2.57</td>
<td>.73</td>
<td></td>
</tr>
<tr>
<td>Grabs others’ things</td>
<td>2.34</td>
<td>.76</td>
<td></td>
</tr>
<tr>
<td>Do not take turns</td>
<td>2.34</td>
<td>.75</td>
<td></td>
</tr>
<tr>
<td>Cry, show temper</td>
<td>2.57</td>
<td>.67</td>
<td></td>
</tr>
<tr>
<td>Say hurtful things to others</td>
<td>2.43</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>Are very shy</td>
<td>2.37</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>Feel scared or insecure</td>
<td>2.43</td>
<td>.73</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2: Teachers’ Perceptions of Peer Conflict

Types of Activities in Which Problems Arise

The results are summarized in Figure 3. Teachers indicated that transition time was the most challenging time of the day (M= 3.72), this was followed by circle time/ story time (M= 2.88), and by structure activity time (M = 2.85). In general less structured activities such outdoor play and free play were less problematic and lunch time was the least problematic of all.

Figure 2: Teachers Ranking of Type of Activities in Which Problem Behaviors / Peer Conflict Arise
Discussion

The main goal of this study was to inform preschool teacher training and professional development by taking into account the teachers’ own experiences, perceptions and needs. Preschool education programs are expanding both in the U.S. and around the world (e.g. Administration for Children and Families, 2013; UNESCO Global Monitoring Report, 2007), and the training of early childhood teachers should carefully reflect the experiences in the classroom.

Teachers’ Perception of Children’s Problem Behaviors

The results show that “difficulty following directions” was the most common problem for children in preschool classes. Almost 90% of teachers found that close to a quarter of their class exhibited this problem. This finding is similar to what was found by Rimm-Kaufman and colleagues (2000). In their study difficulty following directions was reported to be the most common problem children encountered in their transition to kindergarten. In their study close to 50% of the teachers reported that this is a problem for about half their class. This might suggest two things; first, as children grow older these problems seem to become more common, which points to the importance of preschool classroom interventions. Second, this finding might point to the importance of preparing children and teachers for the transition to kindergarten by both understanding children previous experiences and by helping children in preschool develop skills to follow directions.

In addition to difficulty following directions, teachers found that problem communicating and language problems were common in their classrooms. In contrast, Rimm-Kaufman and colleagues (2000) found this problem to be the least common in the kindergarten classroom. This could be explain since language development and the ability to express one-self verbally are developmental tasks of early childhood, and are less salient in later years. Yet, this finding points at the need to help teachers teach children to communicate and solve conflicts verbally. In addition, this finding points to the importance of screening to detect delays in speech and language development.

Teachers’ Perception of Prevalence of Conflict in Peer Interactions

In general, teachers reported high levels of peer conflict interactions, as most teachers indicated the conflict are observed often. Teachers rated their experiences with physical aggression the highest, suggesting that teachers need support helping children develop social skills to deal with aggression. Especially, teachers need support helping children express frustration through verbal communication. Teachers’ experiences indicate the need for new strategies to deal with children who disrupt the play of others, disrupt classroom during transitions, and cry or show temper as secondly important. Children who cry and show temper is highly related to children’s ability to express themselves verbally, pointing once more to the need for strategies that will help teachers promote verbal expression in young children.

Type of Activities in Which Problems Arise

In general the results of this study show that teachers have the most difficulties during activities that are structured in nature such as circle time, story time, or projects. This type of activities were also reported in focus groups to be the longest and most enjoyed by teachers. It seems to be the case that teachers enjoy these activities because they feel that this is where they can promote most academic skills, act as educators, and introduce new knowledge to the children. Nevertheless, it seems important to train teachers in appropriate length of such activities. Similarly, teachers might benefit from learning skills that promote learning in small groups and play-based activities. Most teachers indicated that transition time is the most difficult time of the day. This finding suggests that it will be important to incorporated skills that will promote children positive behavior during transitions, such as redirection and non-verbal reminders of the rules (Webster-Stratton, 1999).

Limitations and Further Research

This study had several limitations. First, it is based on survey data and it does not include observations of children’s behaviors. Teachers’ experiences and per-
ception are valuable and should be considered when developing materials for training. Yet, this study cannot give an objective account of the problem behaviors in the classrooms. Another limitation is that teachers interviewed knew that the purpose of the study was to inform training, and this factor may have resulted in their over-reporting their need for new strategies. Further studies might benefit from examining the role of neighborhood characteristics such as poverty status on teachers’ experiences.

**Conclusion**

The purpose of this study was to inform preschool teachers’ training programs as to how promote more effectively the development of social skills in the classroom. Social skills in the preschool classroom have been shown to be predictive of later school achievement, and is essential for programs serving children growing up in poverty, since it promotes school readiness and school success (McWayne et al., 2004). This study has implications for the design and development of teacher training as it takes into accounts teachers’ perceptions of needs and difficulties and it describes the areas in which intervention is needed.

**References**


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The Low on Latinx Leadership
Alex Marrero, Ed.D.

“Latinos are diversity—they are a cultural and ethnic group, not a race. Latinos are Brown, Black, White, Yellow, and all the beautiful hues in between. Some Latinos have ancestors who were here before this country was the United States. Others have recently immigrated. Our extended families are composed of multiple generations. These differences drive an inclusive leadership form rooted in the culture’s expansive diversity. Latino leadership is one of coalition building, bringing people together, working across sectors, and embracing a consciousness of partnership. Latino leaders leverage the power of inclusion.”

“The Power of Latino Leadership” – Juana Bordas

“Latinx” (pronounced “La-teen-ex”) is a gender-neutral term used in lieu of Latino or Latina. Latinxs are the fastest growing group of people in the United States. According to the United States Census Bureau, of the total 308.7 million people who resided in the United States on April 1, 2010, 50.5 million (or 16 %) were of Hispanic or Latino origin. In 2017, the Latinx population in the United States reached nearly 5.8 million, which is roughly about 18% of the nation’s population. By 2060, Latinxs are projected to represent more than one-third of all U.S. children.

Nationally, Latinx students compromise 25% of the student population in our school systems, yet have the most sluggish academic progress of all groups (Marrero, 2015). Data suggests no debate about the academic underperformance of Hispanic students; under-representation of minorities in higher education has been a national concern for decades (Marrero, 2007). According to the Census Statistics (2002), only 57% of Hispanic 16-24-year-olds had obtained a high school education or more by the year 2000 in contrast to 78.5% of Blacks, and 84.9% of Whites. The disproportion is greater for the attainment of higher education, where only 10.6% of Hispanics 25 years old and over held a bachelor’s degree or more, in contrast to 16.5% of Blacks and 26.1% of Whites. Only 3.3% of Hispanics held an advanced degree, in contrast to 5.1% of Blacks and 8.8% of Whites.

This pattern of declining levels of educational attainment over time among Hispanics as they move from secondary school to higher education has been characterized as the “academic pipeline problem” (Cooper, et al, 2002). The number of minority students in classrooms decreases as they move along the educational “pipeline.” (Yowell, 2002). Yowell (2002) reports that although there has been a recent decline in school dropouts for Blacks and Whites, the numbers have remained unchanged for Hispanics over the last 30 years.

Where is the Latinx Leadership? One can argue based on the aforementioned drop-out rate that Latinx Leadership is lacking because of the small pool of qualified Latinx leaders. Of the 3.3% of Hispanics who hold an advanced degree, how many of them are influencers of students of color? An influencer can be a professional at all levels, advocate, mentor, teacher, building administrator, and district administrator. Alas, there is an underrepresentation of Latinx at all levels.

This is a systemic issue of underrepresentation of educators of color (at all levels):
“Leadership that represents the cultural and ethnic groups that make up U.S. society is important for all students because the world students will join as adults is richly diverse,” said the 2009 piece in Educational Leadership, concluding that - as U.S. schools become more culturally and ethnically diverse, current leaders have a duty to tap the untapped potential of [similarly diverse] school leaders (Sanchez, et al. 2009).

Looking at the Superintendency

Latinx superintendents are significantly underrepresented given their ethnic pupil population both nationally and statewide. Only 2 percent of superintendents are categorized as Latinx in the over 14,000 school districts in the United States. The statistics are even lower in New York, as only 1.7% of superintendents are categorized as Latinx. New York’s educator workforce does not come close to representing the rich diversity of the state’s students.

In New York City, Chancellor Richard Carranza represents one of the thirteen superintendents who make up part of the 1.7% of Latinx Superintendents. In the world’s largest educational system, the New York City Department of Education (NYCDOE) educates over 1.2 million students. An insurmountable task for any one individual, as such, the NYC DOE has middle management superintendent positions. Although they are not recognized in the aforementioned New York State data, it is important to emphasize the disparity within the NYCDOE. Out of the more than 50 executive, community, and high school superintendents in NYCDOE, there are only 8 Latinx superintendents representing communities that serve over 600,000 Latinx students.

About 40% of NYCDOE students live in households where a language other than English is spoken; one-third of all New York City residents were born in another country.

What are we doing to address the disparity?

The Association of Latino Administrators and Superintendents (ALAS) prepares Latinx administrators for the superintendency on the national level. In 2011, ALAS established the Superintendents Leadership Academy to train and assist aspiring Latinx superintendents to learn how to lead a school district. The goal is to prepare Latinx school administrators to become superintendents of districts with an emphasis on locations that have a Latinx student population of 25 percent or higher. The New York State Association of Latino Administrators and Superintendents (NYSALAS), a state affiliate of the national organization, was formed in 2018 with the goal of establishing an organization committed to identifying and developing school leaders to improve the educational outcomes of Latinx students in New York. Board members that represent all regions of the state meet throughout the year to recruit support and develop current school leaders and aspiring leaders. Any educator interested in collaborating and engaging with NYSALAS is invited to connect to the organization via the ALAS national website (www.alasedu.org): or directly via media platforms, Twitter (@NYSALAS), and Facebook (@NewYorkALAS).
References

Dr. Alex Marrero is a respected educator who has received many honors in recent years. In 2016, he was honored as the outstanding administrator by the Latino Caucus of the Council of School Supervisors and Administrators (CSA) and inducted into the New York Academy of Public Education. In 2017, he was the recipient of the Leadership and Excellence in Education Award by the Association of Dominican-American Supervisors and Administrators. In 2018 he was recognized as the Latino Administrator of the Year by the Association for Latino Administrators and Superintendents (ALAS). Alex currently serves as an Assistant Superintendent at the East Ramapo Central School District. He also works as an adjunct for Manhattan College, Sage Colleges and facilitates for Harvard University.
The Opt-Out Movement and New York State Assessment Results: A Tale of Two Counties

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Abstract
This study compared the 2016 New York State English Language Arts and Mathematics assessment scores for grades 3 - 8 among two adjacent suburban counties with their respective opt-out rates from those assessments. Data reported from 109 school districts were included in this study. An independent samples t test showed that the schools in the county with the highest scores on the English Language Arts and Mathematics assessments had lower opt-out rates on the assessments. Conversely, schools in the county with the highest opt-out rates had lower scores on the state assessments. The differences on assessment scores could not be explained by the percent of students classified as economically disadvantaged, as there were no statistically significant differences among the schools in the two counties. The implications of this study suggest that education policymakers should develop meaningful assessments that have broad input and support from school leaders, teachers, parents, students and schools of education, as the Opt-Out Movement in New York State has had a negative impact on assessment score results. It is further suggested that school funding be decoupled from the percentage of students who participate in standardized testing and that testing be removed from teacher assessments.

I. Purpose
The purpose of this study was to compare the 2016 New York State English Language Arts and Mathematics assessment scores for grades 3 - 8 among two adjacent suburban counties with their respective opt-out rates from these assessments. The Opt-Out Movement in New York State has been defined as the percent of eligible students who declined to take the English Language Arts and Mathematics assessments for grades 3 - 8. New York State has been a solid base for much of this movement, as it made up approximately half of the half-million students who opted out of taking state assessments nationwide. In 2016, the Opt-Out Movement has been growing, even amid threats from federal and state education departments of financial sanctions (Strauss, 2016).

Proponents of the Opt-Out Movement argued that state assessments have not been properly designed and the results have been misused. Education policymakers argued that parents did not have the right to choose which assessments their children took and that those assessments were essential for accountability purposes (Strauss, 2016). The Opt-Out Movement appeared to have intensified from 2016 to 2017 (“Opt-outs on state English test top 50 percent on Long Island | Newsday,” 2017). Two adjacent counties in New York State, Nassau and Suffolk County, have had the highest opt-out rates in the State (Campbell, 2017). Educational researchers needed to focus on this phenomenon, and the impact it was having on state assessment results. Prior research by Forman and Markson (2015, 2016) showed that poverty had the greatest impact on the New York State assessment scores. As a result, the purpose of this study was to compare the New York State English Language Arts and Mathematics assessment scores for grades 3 - 8 among Nassau and Suffolk County with their respective opt-out rates from these assessments, to determine if the Opt-Out Movement was having a measurable impact on the assessment scores and their value for assessing the effectiveness of teaching. The economic disadvantage of the school districts in the two counties were also examined.

II. Background
Every Student Succeeds Act (ESSA): State and Federal Accountability Requirements
State accountability systems included a set of policies and practices used to measure how schools have been performing for students, providing recognition to those that served all of their students well, and prompting improvement in those that did not. Effective accountability systems created an expectation that schools make progress with all groups of students, not just some. Schools should focus attention and resources on the full range of student subgroups to ensure that accountability wasn’t limited. When any subgroup has been struggling, schools can’t simply sit by and watch; accountability regulations have prescribed that they have to act (“Education Trust”, 2016).

The Association for Supervision and Curriculum Development published Every Student Succeeds Act (ESSA) Implementation Resources for Educators (2016) in which the organization provided insight into accountability according to the new federal law, the Every Student Succeeds Act (ESSA), which reduced the federal role in education accountability by eliminating many prescriptive requirements set forth by the previous law, the No Child Left Behind Act (NCLB). ESSA
has allowed states greater leeway in designing their own accountability systems. However, the law has required that states establish student performance goals, hold schools accountable for student achievement, and has included a broader measure of student performance in its accountability beyond test scores. ESSA also eliminated NCLB’s specific list of corrective actions and required school improvement strategies (“Every Student Succeeds Act Updates - ASCD,” n.d.). Moreover, states have had to set goals for increasing the percentage of students who reach state standards in English language arts and mathematics and for raising graduation rates. These standards include all student subgroups, low-income students, students with disabilities and English language learners. The law stipulates that states rate schools based on how they perform on these standards as well as on other indicators, for all students and for each student subgroup (“Education Trust”, 2016). States must have determined exactly how much each indicator (academic achievement, other academic indicators, English language proficiency, and indicators of school quality) counted in school accountability ratings. However, the first three indicators carried substantial weight, and together, carried much more weight than the additional measure of school quality (“Education Trust”, 2016).

III. Literature Review

In a comprehensive national study entitled “High-Stakes Testing and Student Achievement” (2005), Nichols, Glass, Berliner and Arizona State University found that pressure created by high-stakes testing had almost no important influence on student academic performance. Since each state was responsible for constructing an accountability system, attaching consequences for student under performance, the theory of action implied by this accountability program was that the pressure of high-stakes testing would increase student achievement; but the opposite took place (Nichols, Glass, Berliner, & Arizona State University, 2005). Berliner (2009) further argued that “harsh social policies and the pernicious effects of poverty are more responsible for the problems we see in our schools than are teachers and administrators. That is, the problems of achievement among America’s poor are much more likely to be located outside the school than in it” (p. 4). Berliner supported the notion that food insecurity, even of a relatively short duration, impaired children’s ability to function and learn. (Berliner, 2009). Additionally, Berliner (2013) argued that the source of America’s educational problems have been outside the school, primarily a result of income inequality and food insecurity. He contended that 60% of variation in achievement scores have been due to out-of-school factors including food insecurity and poverty.

State Assessments and the Opt-Out Movement

In order to understand the origins of the Opt-Out Movement, it was important to be cognizant of its beginnings. The Opt-Out Movement gained significant momentum in Texas, the state where many high-stakes testing practices began. The catalyst was a January 2012 statement by Robert Scott, the former state superintendent of schools, who left the office in July 2012, and stated his belief that standardized testing was not the “end-all, be-all” of education. Scott labeled “the assessment and accountability regime” not only “a cottage industry but a military-industrial complex.” Thereafter local school boards began endorsing resolutions charging that over reliance on high stakes testing was strangling classrooms (Schaeffer, Neill, & Guisbond, 2012). Concomitantly in New York State, more than 1,400 principals from urban, suburban and rural schools signed a letter protesting the state’s test-centric teacher evaluation policy. Responding to the Texas resolution and educators’ statements, the National Center for Fair and Open Testing (FairTest) spearheaded an effort stating that testing should be used only to inform and not to impede classroom instruction. At the same time, the American Federation of Teachers (AFT) indicated that it was time to restore balance in schools so that teaching and learning, not testing, was at the center of education. The AFT asserted that test-driven education policies forced educators to sacrifice time needed to help students learn to critically analyze content and, instead, focused on teaching to the test (Schaeffer, Neill, & Guisbond, 2012).

In a national study examining the Opt-Out Movement conducted by Pizmony-Levy and Saraisky (2016), the researchers determined that the Opt-Out Movement included more than just parents who have opted their children out. About four-fifths of survey respondents (81.5 percent) were parents or guardians of school-aged children. The vast majority of them (92.9 percent) indicated that their children attended public schools. Moreover, approximately three-quarters of respondents who were parents or guardians of school-aged children (74.5 percent) opted their children out of testing. Nine out of ten (92.1 percent) respondents who were parents or guardians of school-aged children said they were likely to opt-out in the future. Parents refused standardized tests even in states where opting out was not permitted. The typical opt-out activist was a highly educated, white, married, politically liberal parent whose children attended public school and whose household median income was well above
Economically Disadvantaged Students

We know that childhood poverty posed serious problems for public education. Children raised in poverty generally achieved at lower levels than their more advantaged peers. Researchers found that income level was one of the most powerful predictors of students’ academic performance (Blazer & Miami-Dade County Public Schools, 2009). Most researchers concurred that schools with high concentrations of students living in poverty should be expected to increase the achievement of all of their students. However, Berliner stated that it was unreasonable to expect schools to completely eliminate large pre-existing inequalities (Blazer & Miami-Dade County Public Schools, 2009).

Burney and Beilke (2008) noted that the condition of poverty may be the most important of all student differences in relation to high achievement. The authors reviewed the literature on poverty, including its relationship with ethnicity and locale, searching for commonalities that showed the relationship between poverty and high achievement, and underscored the need to provide individual support and the development of resilience to low-income, high-ability students (Burney & Beilke, 2008).

Traditionally, schools blamed poverty as an impediment to student achievement on standardized test results. In a meta-analysis of the research literature on socioeconomic status and student achievement, Sirin (2005) found strong relationships among these variables across a large selection of empirical studies. Forman and Markson (2015, 2016) found low socioeconomic status or poverty, as measured by the percent of students receiving free or reduced lunch, was the major impediment to student achievement on New York State assessment results for English Language Arts and Mathematics proficiency.

Tienken (2012) reported that the results from several large studies, such as the one conducted in Baltimore by Borman and Dowling (2006), suggesting that students from poverty do learn as much during a school year as their middle class peers. They achieved, on average, at least one year’s worth of learning gains in one school year. But that was different from stating that all students ended in the same academic place in terms of achievement on a state-mandated standardized test each year. Tienken reaffirmed that they did not because they did not start in the same academic place (Tienken, 2012). The researcher suggested that a problem occurred when bureaucrats set a static finish line based on one standardized test to judge the quality of students, teachers, and administrators. A single static measure did not take into account growth of student learning that took place during a school year. For example, even basic pretest and post-test assessments at the classroom
and school levels were a better measure of annual achievement (Tienken, 2012). Additionally, achievement differences based on results from state-mandated high school tests of English Language Arts and Mathematics between economically disadvantaged and middle class and wealthy students ranged from 12 to 36 percentile points (Tienken, 2012).

Additional factors that were beyond schools’ control but had a negative influence on low income students’ academic performance included a higher incidence of illness and injury, nutritional problems, residential instability, and a lack of educational activities and materials in the home. Researchers agreed that completely eliminating the pervasive effects of poverty on student achievement has been outside of the reach of the public education system (Blazer & Miami-Dade County Public Schools, 2009).

IV. Data Sources

The New York State Education Department Data Site (2017) was the source for much of the data used in this study and the data analyzed were from the 2015/2016 school year. The school districts selected for the analyses were from Nassau and Suffolk County, New York. These were two large adjacent counties located in the Eastern suburbs of New York City. Suffolk was the fourth largest county by population in New York State and Nassau was the sixth largest out of 62 counties (“New York Counties by Population,” n.d.). State reporting on 109 school districts from these two counties were included; however there were 16 school districts that were excluded for having a population of less than 50 educators or having no state reporting on the ELA and Mathematics assessments. The New York State Education Department Data Site (2017) was used to compile the following data: (a) the percent of students by school district who were classified as “Economically Disadvantaged” (“Enrollment Glossary | NYSED Data Site,” n.d.); and (b) the percent of students by school district who obtained scores from Levels 3 and 4 on the grades 3 - 8 English Language Arts and Mathematics assessments. The source of the data for the opt-out rate by district was obtained from the Newsday website (“Long Islanders who skipped 2016 Common Core tests,” 2016). An independent-samples t test was performed comparing the opt-out rates among Nassau and Suffolk County school districts.

In the context of this study, the Opt-Out Movement was defined as the percent of eligible students who refused to take the New York State English Language Arts and Mathematics assessments for grades 3 - 8. Student opt-out rates were reported as a percentage by assessment and by school district (“Long Islanders who skipped 2016 Common Core tests,” 2016). The school districts were grouped by the county in which they were located. An independent-samples t test was performed to compare the opt-out rates on the English Language Arts and Mathematics assessments among Nassau and Suffolk County school districts.

The New York State Education Department defined “Economically Disadvantaged” students as the following: those [students] who participate in, or whose family participates in, economic assistance programs, such as the free or reduced-price lunch programs, Social Security Insurance (SSI), Food Stamps, Foster Care, Refugee Assistance (cash or medical assistance), Earned Income Tax Credit (EITC), Home Energy Assistance Program (HEAP), Safety Net Assistance (SNA), Bureau of Indian Affairs (BIA), or Family Assistance: Temporary Assistance for Needy Families (TANF). If one student in a family is identified as low income, all students from that household (economic unit) may be identified as low income (“Enrollment Glossary | NYSED Data Site,” n.d.). Economically disadvantaged students were reported as a percentage of students classified under this category by school district. An independent-samples t test was conducted to compare the percent of economically disadvantaged students in Nassau and Suffolk County school districts.

VI. Results

The results of the independent samples t test comparing grades 3 - 8 New York State ELA and Mathematics assessment scores among Nassau and Suffolk County school districts are displayed in Table 1 below.

Table 1

<table>
<thead>
<tr>
<th>County</th>
<th>ELA Scores</th>
<th>Math Scores</th>
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<tbody>
<tr>
<td>Nassau</td>
<td>56</td>
<td>56</td>
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<tr>
<td>Suffolk</td>
<td>53</td>
<td>53</td>
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<tr>
<td></td>
<td>53.43</td>
<td>57.48</td>
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<td></td>
<td>15.27</td>
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<td></td>
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<td></td>
<td>4.358</td>
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<td></td>
<td>107</td>
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<table>
<thead>
<tr>
<th>County</th>
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<tbody>
<tr>
<td>Egypt</td>
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<tr>
<td>Vietnam</td>
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</tbody>
</table>

N: number of students; M: mean score; SD: standard deviation; SEM: standard error of the mean; t: t statistic; df: degrees of freedom; p: significance level.
There was a statistically significant difference on the English Language Arts scores among the school districts in Nassau (M = 53.43, SD = 15.27) and Suffolk (M = 41.40, SD = 13.43) counties; t(107) = 4.358, p < .001. The mean scores showed Nassau County school districts scored higher on the English Language Arts assessments than Suffolk County schools. Furthermore, there was a statistically significant difference on the Mathematics scores among the school districts in Nassau (M = 57.48, SD = 17.80) and Suffolk (M = 44.53, SD = 15.25) counties; t(107) = 4.07, p < .001. The mean scores also showed Nassau County school districts scored higher on the Mathematics assessments than Suffolk County schools.

The results of the independent-samples t test comparing the opt-out rates on the English Language Arts and Mathematics assessments among Nassau and Suffolk County school districts are illustrated in Table 2 below.

### Table 2

**County Differences on Opt-Out Rates for English Language Arts and Mathematics Assessments**

<table>
<thead>
<tr>
<th>County</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SEM</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opt-Out ELA Nassau</td>
<td>56</td>
<td>44.68</td>
<td>18.45</td>
<td>2.46</td>
<td>-2.562</td>
<td>107</td>
<td>.012</td>
</tr>
<tr>
<td>Suffolk</td>
<td>53</td>
<td>53.91</td>
<td>19.15</td>
<td>2.63</td>
<td>-2.56</td>
<td>106.084</td>
<td>.012</td>
</tr>
<tr>
<td>Opt-Out Math Nassau</td>
<td>56</td>
<td>45.55</td>
<td>17.95</td>
<td>2.40</td>
<td>-2.187</td>
<td>107</td>
<td>.031</td>
</tr>
<tr>
<td>Suffolk</td>
<td>53</td>
<td>53.15</td>
<td>18.32</td>
<td>2.52</td>
<td>-2.186</td>
<td>106.381</td>
<td>.031</td>
</tr>
</tbody>
</table>

There was a statistically significant difference on the English Language Arts assessment opt-out rates among Nassau (M = 44.68, SD = 18.45) and Suffolk County (M = 45.55, SD = 17.95) school districts; t(107) = -2.562, p = .012. The mean score showed Nassau County had a lower opt-out rate than Suffolk County on the English Language Arts assessments. Furthermore, there was a statistically significant difference on the Mathematics assessments opt-out rates among Nassau (M = 45.55, SD = 17.95) and Suffolk County (M = 53.15, SD = 18.32) school districts; t(107) = -2.187, p = .031. The mean score showed Nassau County had a lower opt-out rate than Suffolk County on the Mathematics assessments.

The independent samples t test comparing the percent of economically disadvantaged students in Nassau and Suffolk County school districts are shown in Table 3 below.

### Table 3

**County Differences on Economically Disadvantaged Students**

<table>
<thead>
<tr>
<th>County</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SEM</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economically Disadvantaged Students Nassau</td>
<td>56</td>
<td>27.11</td>
<td>22.10</td>
<td>2.95</td>
<td>-1.414</td>
<td>107</td>
<td>.16</td>
</tr>
<tr>
<td>Suffolk</td>
<td>53</td>
<td>33.32</td>
<td>23.77</td>
<td>3.26</td>
<td>-1.412</td>
<td>105.271</td>
<td>.161</td>
</tr>
</tbody>
</table>

The results showed that there was no statistically significant difference between Nassau and Suffolk County school districts on the percent of its students classified as economically disadvantaged, p > .05.

### VII. Conclusion

Nassau County schools had higher mean scores than Suffolk County schools on both the English Language Arts and Mathematics assessments for grades 3 - 8. However, Nassau County schools had a lower percent of its students opting out of the English Language Arts and Mathematics assessments. The results of prior studies by Forman and Markson (2015, 2016) found that poverty had the strongest correlation with results on the English Language Arts and Mathematics assessments, accounting for over 60 percent of the variance on scores. This relationship was inverse. As poverty went up, scores on the assessments went down.

In the current study, the schools in the county with the higher opt-out rates had lower scores on the state assessments. The differences on scores between the counties could not be explained by the percent of students classified as economically disadvantaged, as there were no statistically significant differences among the two counties. In the final analysis, when comparing the two counties, the higher opt-out county had lower scores among both state assessments. As a result, it is reasonable to conclude that the Opt-Out Movement has had a negative effect on the New York State English Language Arts and Mathematics assessment scores for grades 3 - 8.

### VIII. Implications of the Research

Future studies should focus on the development of meaningful assessments that facilitate opting in. Additionally, other research should investigate the characteristics of the students, and their families, who opted out in comparison with those who opted in. Moreover, other variables such as school district per pupil spending and its relationship to the Opt-Out Movement should be included in further studies as well. This study also suggests recommendations for policy makers, and district and building leaders, as described below.

It is reasonable to assume that NYSED leaders implemented new standardized exams and created policies to accurately assess student growth and to encourage districts, leaders, and teachers to raise test scores. Because the Opt-Out movement—as this study shows—has had a negative impact on student scores, it is clear NYSED’s rationale for the standardized exams is not being realized. State education policy makers should develop assessments that have broad support from all stakeholders to reduce or even eliminate the re-
sistance of stakeholders such as the Opt-Out Movement. Additionally, because the Opt-Out Movement increased in numbers amid threats of financial sanctions from federal and state education departments for opting out, it is recommended that funding be decoupled from student participation in state assessments. Threatening school funding has not worked.

It is further recommended that school boards, district leaders, and building leaders examine with stakeholders from the community (including students, parents, and local business leaders) the effects of standardized testing on school atmosphere and its implications for teaching and learning. The Opt-Out Movement expresses that too much instructional time is devoted to test preparation when students could be further engaged in learning. NYSED leaders must also engage with all stakeholders to consider further modifications to and revisions of these assessments. Finally, it is recommended that state policy makers look to further disentangle student assessment from teacher accountability so that teachers, parents, and students can benefit from enhanced instruction without onerous testing. A less tedious, less time-consuming, and less punitive set of assessments will result in better and more accurate student scores.

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How can private and public schools enhance effective teaching and student learning? Insights from cognitive psychology research, improvement science and the bright spots from teaching practices

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ABSTRACT

This article is a qualitative analysis of the insights from correlational and experimental research about improving teaching and student learning. Private and public schools need to re-frame their educational practices in the light of what we know works from experimental research in cognitive psychology and from actual effective teaching practices. Research in cognitive psychology demonstrates that there are six effective learning strategies proven to increase deeper understanding and long-term knowledge and skills. These six strategies are retrieval practice, spaced practice, interleaving, dual coding, elaborative questioning, and concrete examples. Schools should consider how these strategies could be integrated into teachers’ daily practices, their professional development and teaching strategies as well as into student support programs, schools’ schedules, structures and policies for student placement and promotion. Bright spots within actual teaching practices and improvement science methods with teams led by teaching professionals will help schools in their continuous process of adaptation for improving learning.

I. Introduction

Many parents and students in the United States are concerned about the high differential in educational outcomes between schools, and within schools, between the top achieving versus the mid and lower performing students. There is an achievement gap and this differential seems correlated with the ethnic, linguistic and socio-economic background and status of the students’ families. The achievement gap brings into question some of the key principles and values of education as an equalizing and meritocratic social institution.

Most public schools can do little about the underprivileged backgrounds of their students except to provide extra academic support programs for those that need it but lack of resources limit that option. The US funding system for public schools based on local taxes contributes to maintaining a high differential in resources between schools and districts. This funding differential perpetuates the achievement gap since schools in low income and poverty areas can hardly get additional funding to provide support for students that need it the most while affluent public schools in wealthy areas have a high level of resources. Independent schools typically have more resources and smaller class sizes than affluent public schools. Most independent schools provide financial aid for underprivileged students and may provide additional academic support for their students who need it. Despite the inequality and differential of resources between schools, the critical question is the same for all of them: What can private and public schools do in their actual and daily practice to improve deeper student learning for all, especially those students from disadvantaged backgrounds? Schools could focus on re-framing teaching and learning with the insights of cognitive psychology research and bright spots of actual teaching practices through the improvement science methods for achieving better learning outcomes. These insights and bright spots for improving learning can be incorporated into teachers’ daily and curricular planning, professional development, teaching strategies, schools’ scheduling as well as the schools’ structures and policies for student placement and promotion. This pragmatic approach can empower schools, within their limited areas of influence and resources, to improve teaching and student learning while addressing the values of equal opportunity and meritocracy in education.

II. Insights from cognitive psychology research

There are six effective strategies for improving learning: retrieval practice, spaced practice, interleaving, dual coding, elaboration and concrete examples. Each of these six proven learning strategies provides insights and clues about what teachers and students could do to increase deeper understanding and long-term knowledge while expanding their meta-cognitive skills and growth mindset. Some leading cognitive psychologists have outlined the insights and implications from this research for teaching and learning (Agarwal & Bain, 2019; Brown, Roediger III, & McDaniel, 2014; Pashler, Bain, Bottge, Graesser, Koedinger, McDaniel, & Metcalfe, 2007; Weinstein, Sumeracki, & Caviglioli, 2018). Exploring the insights from each of the six proven learning strategies can be a fruitful approach to build upon what we know works, test promising practices, modify what can be improved and discard ineffective ones.

Some leading cognitive scholars are also collaborating with teaching practitioners to provide professional development and resources for any school, teacher or
student interested in applying effective learning strategies in their practices (see links to resources in the reference section). The collaborative efforts between scholars and teaching practitioners are critical since most teachers’ training programs, textbooks and Professional Development programs do not typically include practicing these effective strategies for student learning (Pomerance, Greenberg, & Walsh, 2016; Weinstein, Madan, & Sumeracki, 2018). There is also a need for introducing these collaborative insights into the training of student support professionals since current practices are often based on neuro-myths, such as learning styles and other unproven teaching strategies (Dunlosky, Rawson, Marsh, Nathan & Willingham, 2013; Willingham, 2018). Before exploring how the insights from cognitive psychology can be applied to enhance the bright spots of teaching and learning in schools, it is necessary to understand the details, evidence and caveats of every one of these six proven learning strategies.

**Retrieval practice**
The most effective learning strategy documented by experimental research is retrieval practice. Recalling information and concepts that learners read in articles or in a textbook or hear in a lecture or watch through online learning helps learners at assimilating new knowledge. One of the most effective retrieval practices is formal and informal low stakes practice tests, whether multiple choice or short questions and answers. Other forms of effective retrieval practices are writing or drawing what learners remember on a blank page, reviewing the material for the areas not recalled or creating concept maps and drawing the connections between the various concepts. There is evidence of learning in the retrieval process even without feedback, despite unsuccessful recalling or generating errors in the process. However, adding feedback and scaffolding with prompts helps at enhancing and solidifying learning further, correcting errors, completing areas that were not recalled and establishing more connections to previous knowledge or concepts. The new material becomes more meaningful, which further reinforces clue-based learning, metacognition and application of the learned knowledge or skills to new contexts (Agarwal, Roediger, McDaniel & McDemont, 2018; Wissman, Zamary, & Rawson, 2018).

**Spaced practice**
The second most effective learning strategy is spaced practice even if, paradoxically, adults and students tend to favor the contrary strategy: massed learning, which is the technical term within cognitive psychology for cramming. Massed learning consists of studying for many hours, typically by reading and re-reading the material the day or night before an immediate assessment. Massed learning is probably the most widely used strategy by learners, in part, because it works to a certain extent. Cramming to short term memory all the information and concepts before an exam has a short term pay-off: doing good enough to pass the assessment. However, cramming has unintended consequences: all that learning will be forgotten shortly thereafter (Weinstein, Sumeracki, & Caviglioli, 2018).

In contrast to cramming, spaced practice, sometimes called distributed practice, has been broadly demonstrated as one of the most effective for long term learning strategies and enhances deeper understanding of the material learned. Spaced practice requires teaching, practicing or studying the material through shorter segments of time but doing so more frequently and across several weeks or months. It also involves going back to that material weeks and months after the initial learning. Spaced practice may require less overall time to acquire and learn new knowledge than cramming but requires a lot of discipline, planning and grit. Distributed practice will greatly improve learning new knowledge and skills, long-term recalling and assessment performance (Carpenter, Cepeda, Rohrer, Kang, & Pashler, 2012; Kang, 2016).

**Interleaving**
Interleaving consists of switching concepts and topics being studied within a course or subject. Most learners tend to focus on a single topic for a long block of time but this strategy, technically called blocked practice, only works if there is an immediate test thereafter, in a similar way that cramming does. It is more effective switching between topics within a subject and do so in a different order every time to achieve deeper and longer-term learning and skills. This increases the awareness and contributes to a deeper understanding of the material and skills learned. Interleaving facilitates the connection between ideas, the integration of new with previous knowledge and comprehending the underlying principles, resulting in better problem solving and deeper understanding of the material (Sana, Yan, Kim, & Joseph, 2017).

There is a caveat about the different conditions under which interleaving may or may not be beneficial for learning. For instance, research shows that there are no learning benefits when switching between unrelated subjects, such as switching between Physics and World Languages (Hausman & Kornell, 2014). By contrast, there are no experimental studies regarding the potential
benefits of switching between related subjects such as between Math and Physics or between English or other World Languages. Further research in this area can be helpful to inform schools’ decisions on sequencing of courses within their daily and weekly schedules or guide students about the best strategies at completing homework or studying various subjects in a more effective way.

**Dual coding**

Another effective learning strategy is dual coding, which is pairing images or graphics with verbal expressions (written words or speech). Because the learner is assimilating information and concepts through two different processing paths it is also easier to remember them and retrieve the concepts and information through either of these two pathways. When learners are exposed to dual coding stimuli ALL students improve their learning, regardless of their preferred learning style (Weinstein, Sumeracki, & Caviglioli, 2018).

There are some caveats about dual coding since it is only effective under certain conditions. For instance, dual coding is not effective for learning when it does not include relevant images of what the verbal or word expressions are trying to convey. Similarly, if the images are too appealing, they can become distracting. Finally, if the graphic representation includes too much verbal information or if it is too detailed and confusing, dual coding can result in cognitive overloading and thus becomes ineffective (Mayer & Moreno, 2003). Although many teachers use some form of dual coding in their daily classroom tasks, training programs for new teachers and schools’ Professional Development workshops should model effective dual coding in its contents’ delivery, illustrating what works and what are some of its pitfalls.

**Elaboration**

Elaboration encourages the connection, integration and organization of ideas based on the material learned and is another proven effective teaching and learning strategy. This process helps learners to think at a deeper level, connecting and enhancing knowledge while increasing retrieval cues and providing meaning to the newly acquired knowledge and skills.

The most effective technique within this strategy is elaborative questioning; probing relevant questions that require clarifying and linking various aspects of the concepts and information learned. This strategy uses open, high-level questions and it is very flexible about how it could be applied. Several alternative techniques are self-explanation, collaborative questioning with peers or elaborating an explanation as if the students were going to teach the material to other students (Pashler, Bain, Bottege, Graesser, Koedinger, McDaniel, & Metcalfe, 2007; Weinstein, Sumeracki & Caviglioli, 2018).

There is also a caveat for this strategy since poor quality in the questioning could interfere with learning (Clinton, Alibali & Nathan, 2016). Elaborative questioning is more effective with the help of the teacher and after having learned the material. The inquiring process targets the description or explanations of the concepts learned, the rationale behind those concepts and their connection to previous knowledge. There are practical examples of effective elaborative questioning within current teaching practices such as the AVID program within some public schools and the Harkness method within some of the top independent schools.

**Concrete examples**

Linking abstract concepts to several different concrete examples that share the underlying abstract idea is another effective learning and teaching strategy. This approach helps teachers to add clarity to their explanations and help learners to assimilate the concept more effectively while increasing their capacity to transfer it to new situations. However, this seems to hold true only if the teacher or the instructional materials used provide dissimilar examples that help at understanding the underlying abstract concept and if there are explicit clues for helping learners with the transfer of that understanding to new examples or situations (Rawson, Thomas, & Jacoby, 2014).

There are also some caveats about the conditions under which this strategy is effective. Experiments have shown that most learners ignore the underlying deeper connections between the abstract idea and the concrete examples and tend to focus on the surface details of the examples. Research has also shown difficulties of the learners at transferring the solution from one example to the next when clues are not provided, especially regarding far transfer, thus missing the point of the abstract concept (Carbonneau, Marley, & Selig, 2013). Teachers’ training and Professional Development should focus on the conditions under which concrete examples are helpful for learning and how to avoid some of its pitfalls.

**III. Insights from improvement science practice**

The experimental research from cognitive psychology can help at reframing how to improve teaching and student learning through the most effective strategies. The critical question is how can private and public schools tackle the ambitious goal of incorporating these insights into their own teaching and learning practices and into
their own organizational and decision-making patterns, policies and structures? A fruitful way to incorporate these insights into schools’ practices is by using the processes of design thinking epitomized by improvement science. These processes must involve all stakeholders at defining and diagnosing areas of improvement in students’ learning and must include and be led by the teaching practitioners through sets of rapid testing cycles of plausible hypotheses under the particular conditions of each school (Bryk, Gomez, Grunow & LeMahieu, 2017). Many of the pedagogical and teaching traditions at some of the top independent schools and top public magnet and charter schools already incorporate some of the insights and strategies outlined by cognitive psychology. These effective teaching practices are the bright spots that can generate plausible hypotheses for further testing. From organizational research we know that improvement is more effectively achieved when building upon these bright spots (Heath & Heath, 2011). Improvement science provides some of the key tools for adapting, exploring, testing and scaling up these bright spots to the particular conditions of districts and schools engaged in improvement projects. What are those bright spots within our current schools?

The bright spots in daily teaching tasks and routine schools’ practices

The most effective approach by teaching practitioners to retrieval and spaced practices is already in place through spiral curriculum and its related lesson planning for daily classroom tasks. The concepts and materials are explained, practiced, reviewed and re-practiced across days and weeks, and more importantly, across different units and throughout several months, going back to concepts learned in earlier units (Johnston, 2012; Wong, Lam, Sun & Chan, 2009). More experimental research applied to actual teaching is necessary to elucidate the conditions for the positive learning effects of the spiral curriculum planning and implementation within a specific course or across courses in a curricular sequence. There is some limited evidence that spiral curriculum seems more powerful when combined with a purposeful sequence of courses within a broader strand curriculum along an overall program, such as a degree program (Neumann, Neumann & Lewis, 2017). The combination of strand and spiral curriculum is another form of incorporating spacing and interleaving practices: many critical concepts and tasks are revisited in different contexts and domains through the sequence of courses taken along a degree or K-12 program.

There are several other bright spots of effective retrieval and spaced practices within schools and teachers’ daily procedures: higher quality and meaningful homework and low stake practice tests. Homework should include procedures students have learned, retrieval practice of factual information or skills learned in class. It must also expand and connect the knowledge of concepts explicitly taught in class with previous knowledge. It is more effective when homework is spaced through shorter but more frequent practice or studying sessions (Carpenter & Agarwal, 2019). A recommended strategy by some teaching practitioners is to have the students write concepts discussed on a blank piece of paper, and for homework, write as much as they remember about the concepts and how they relate to previous class materials. The other key element for homework as an effective retrieval practice is designing high quality assignments while reducing the quantity (Challenge Success, 2012).

Research has also demonstrated that self-testing and testing enhances long-term knowledge, retrieval clues and deeper understanding, known as the testing effect. There are different ways of making testing more effective and geared towards retrieval and spaced practice instead of only using it for assessments. As a retrieval tool, tests should to be low stake and designed to help students to figure out what they do and do not understand. Effective practice tests also require effortful interaction with the material. These two principles allow students to correct their misunderstandings, develop their meta-cognitive skills to assess their own learning and lead to more effective study and learning strategies while helping students to cope more effectively with test anxiety (Metcalfe, 2017; Weinstein, Sumeracki, & Caviglioli, 2018). The paradox is why these three bright spots of spiral and strand curriculum, high quality homework and low stake test practices within schools have not been scaled up yet? Part of the answer resides in the ineffective design of schools’ Professional Development programs and the amount of time dedicated to unproductive bureaucratic faculty or school meetings. A key element for schools to become learning organizations is to incorporate the six strategies of effective learning into the articulation and structure of Professional Development and teachers’ training. There are bright spots within education practice that provide clues about the needed changes. Effective Professional Development engages teachers in learning opportunities that are supportive, job-embedded, instructionally-focused, collaborative, and ongoing according to research (Darling-Hammond, Hyler, Garner & Espinoza, 2017).

From the insights of cognitive psychology, it is apparent that the current schools’ practice of crammed Professional Development into one or two-days or even a week workshop is not an effective teaching and learning strat-
egy. Instead of this ineffective PD practice, schools should consider substituting faculty and department meetings for shorter and more focused Professional Development workshops among teaching teams throughout the quarter, trimester, semester or the whole academic year.

The bright spots of elaborative questioning and the caveats of concrete examples

Most teachers intuitively or purposefully also use other learning strategies in their teaching through dual coding, adding examples of concrete and abstract concepts and guiding students in the process of elaboration of what they are learning. The most effective way to use these strategies is combining and focusing them through elaborative questioning. This approach can also include retrieval, spaced and interleaving practices when purposefully embedded in the lesson plans. Teaching practitioners at public and private schools have used for years, methods and programs built upon elaborative questioning by incorporating high level questions into their daily practices as a critical thinking, explaining, reviewing and understanding tool (Rothstein & Santana, 2011).

One of the prevailing methods of elaborative questioning within the top independent schools is the Harkness method. Harkness learning is feasible only in small class settings and it is the hallmark of Phillips Andover and Phillips Exeter Academies, where it was created and devised through a generous philanthropic contribution by Edward S. Harkness to improve teaching and learning. This method has been emulated and has expanded to many other top private schools. Phillips Exeter offers professional development training to faculty from other independent schools and it is still at the epicenter of the diffusion of this method. The Harkness method of elaborative questioning typically involves about 12 students and a teacher around an oval table and requires that all have done the assigned readings and tasks before each class. The teacher takes the role of a facilitator and helps students at focused, evidence based and high-level questions while the questioning is led by the students as an on-going conversation between themselves (Hassan, 2015; William, 2014).

The benefits of this method are consistent with the findings from cognitive psychology and the actual learning outcomes of the graduates from these top ranked independent schools.

The other prevailing method of elaborative questioning, used mainly within some public schools and districts, is articulated through the approach and practices of the Advancement Via Individual Determination (AVID) program. The AVID program uses the Socratic questioning technique which is probably the oldest form of elaborative questioning. The AVID Professional Development trains teachers and tutors at effectively using high level questioning through the Socratic method to improve student learning through their classroom teaching practices. The other key element of the AVID program is the Cornell notes system, which also incorporates elaborative questioning. Additionally, the Cornell notes system uses retrieval, spaced, and interleaving practices as well as encourages dual coding and concrete examples in the note taking and studying process. This powerful combination makes AVID one of the most effective teaching and student learning programs within public schools. It is also one of the most effective equalizing programs for underprivileged students, since it offers them a chance at being successful when tackling a rigorous curriculum by training them with the most effective proven learning strategies.

For a more detailed description of the AVID program see their website or the book by Jay Matthews (2015). There are also other resources focused at providing help and training for students and teachers willing to use elaborative questioning such as The Right Question Institute, RQI, regardless of a school or district using or not using the AVID program.

Of the six effective learning strategies proven through experimental research and teaching practices, the one that is more ambiguous in its positive impact is the strategy of concrete versus abstract examples. Recent experimental research in real school situations qualifies the learning advantages of using concrete versus abstract examples for learning and creates new caveats about their relative effectiveness in the context of different teaching sequence strategies. When abstract ideas and concrete examples are used through either a teach and practice sequence (teach-practice) versus the problem-solving and instruction sequence (practice-teach-practice), there are unexpected outcomes. The live experiment showed that the problem-solving followed by instruction teaching sequence is more effective than the traditional teaching and practicing sequence only when the lesson design includes abstract cases with an invention prompt (Schalk, Schumacher, Barth, & Stern, 2018).

We don’t know if the paradoxical findings from this live experiment were due to the apparent advantage of the teaching sequence itself or because it was coupled with the idealized/abstract examples and invention prompt to illustrate a more abstract concept. The control group used the traditional teaching and practicing sequence, but it also used concrete examples instead of the idealized or abstract ones with invention prompts.
Moreover, we don’t know if the concrete examples used were or were not differentiated enough to help students elucidate the underlying abstract idea. Using improvement teams for designing and piloting these two teaching approaches at different schools with randomized controlled groups using both concrete and abstract examples could shed some light regarding the relative effectiveness of each teaching sequence. Similarly, this approach could also help at clarifying the conditions under which abstract versus concrete examples are more effective for learning.

The bright spots for scheduling and the unresolved question of daily sequencing

From cognitive psychology research we know that interleaving concepts and topics within a specific subject improves learning. Switching between unrelated subjects does not help at improving learning. Yet, we don’t know if interleaving between more closely related subjects, let’s say between STEM related subjects (Math, Science and Technology) or between humanities or liberal arts subjects (English, History, World Languages) might show learning benefits. Further research on this area can be helpful to inform schools’ policies on scheduling and daily subjects sequences.

Many public schools, and more recently some private schools have decided that block scheduling is more effective for learning even if the evidence about spaced practice would question that assumption. In fact, block scheduling has not delivered on its promises of higher learning and improved educational outcomes since it began to be implemented in the 1990’s (Evans, Tokarczyk, Rice & McCray, 2002; Maltese, Dexter, Tai & Sadler, 2007). Research in England found that block scheduling did not improve course grades and GPAs. More importantly, this research found that block scheduling negatively affected the educational outcomes in the standardized British tests (GHSGT) while students under the traditional schedule performed better (Gruber & Onwuegbuzie, 2001). Research within the United States also shows improved educational outcomes, better attendance and less disciplinary issues for students under the traditional schedule versus those under a block schedule (Harris, 2014).

The superior learning results of students under a traditional schedule seems related to the structural use of spaced practice under this type of scheduling since every class gets to meet and practice for shorter periods during more days per week.

From the perspective of improvement science practice, any change idea, including block scheduling, must give careful and thoughtful consideration to the evidence, the feasibility of delivering improvement and the costs of implementing a new scheduling system with a history of questionable actual results. Yet, block scheduling continues to be implemented at various levels of K-12 education in public schools and more recently being adopted by some independent schools.

The question is why block scheduling continues to be presented as an effective strategy despite the evidence to the contrary?

The adoption of block scheduling is related to its convenience but more importantly, block scheduling has been a long-standing practice within colleges and one reasonable claim is the need to help prospective high school graduates to adapt to it. There is some ambivalence in the research regarding its effectiveness within colleges.

A potentially promising spot to devise an effective scheduling system can be found in the evidence from a study on this topic carried out at Duke University. Duke was exploring how to modify its schedule while simultaneously implementing a late morning start, with classes to begin at 8:30 am instead of 8:00 am. The Duke’s research study provides some initial evidence of the advantages of a mixed or hybrid scheduling system, combining blocks twice a week (for 75 to 90 minutes each time) with more traditional scheduling involving shorter courses meeting three to five times a week (for 50 to 60 minutes each), especially for world languages and math courses.

The results of the Duke University study by Dills & Rey-Hernández (2008), supports the idea that courses under block scheduling are more effective at improving student outcomes if held during early afternoon whereas courses under the traditional schedule seem more effective at improving educational results when held in the morning. There are other hybrid scheduling systems trying to capture the benefits of both models, like the double period within a traditional schedule used in some top leading independent schools, modified block schedules used in other public and private schools or alternating cycles of traditional and block scheduling used by other schools.

The bright spot of student grouping by content and skill levels and its impact on school policies for student placement and promotion

There are some implications from cognitive psychology research on the issue of student grouping. The fact that learning new knowledge and skills is associated with the connection to previous learned knowledge in new contexts seems consistent with the effectiveness of student placement by content and skills mastery instead of placement by age. An important issue related to student placement is the debate about ability grouping and
acceleration within education research since this affects decisions on curricular structure and students’ placement and promotion policies. There are many case studies and correlational research on the effectiveness of ability groups but very few cognitive psychology or education randomized controlled experiments on the issue. This issue has been a part of the broader educational debate for several decades within the United States as well as within other developed and developing countries. A comprehensive meta-analysis of over one hundred years of studies on ability grouping and acceleration concluded that these practices are effective at improving students’ learning and outcomes (Steenbergen-Hu, Makel, and Olszewski-Kubilius, 2016). Yet, the impact of ability grouping on lower tracks seems to be negative and has brought up issues about discrimination and inequality of opportunities (Oakes, 2008). The scholars arguing against ability grouping see it as perpetuating the achievement gap and the underpinning of this debate has become very ideological, polarized and even racially charged within the United States.

Several meta-analyses within the international and comparative education research in developed countries seems to support both arguments. On one hand, they show that there is a positive impact of ability grouping with differentiated curriculum on student achievement of higher level tracks or schools. By the same token, these studies also support the idea that the impact on student outcomes in the lower level tracks is negative and in fact, increases the achievement gap. In these international studies emerges a couple of additional variables influencing student learning, achievement and outcomes: the socio-economic background and the migrant status of the student population (Schofield, 2010; Woessmann, 2009). These findings support similar arguments to those that have emerged and evolved within the United States but without the politically divisive and racial overtones of the American debate on tracking.

The fact that most of these meta-analyses examine case studies or correlational research poses some cautionary skepticism regarding any conclusion about the causality of ability grouping on student learning and outcomes. To assess the plausibility of competing theoretical approaches and to falsify hypotheses through causality analysis would require Randomized Controlled Trials, RCT. Fortunately, there are a couple of meta-analyses within international education research that include several RCT studies regarding the effectiveness of ability grouping and acceleration strategies in developing countries (Evans and Popova, 2015; McEwen, 2015). One of the most relevant RCT studies on the effects of ability grouping on student outcomes has been carried out in Kenya by Duflo, Dupas and Kremer (2009). The fact that this study was undertaken in an African nation dispels any notion of intended or unintended bias against people of African origin, which is one of the main objections against ability grouping in the US given the historical context of discrimination and the subverted racial use of tracking in certain districts and schools. The RCT study on Kenya’s elementary schools do establish a causal relationship between ability grouping and student achievement in a primary education environment. This first finding is important since it is consistent with the findings from correlational research in the US while simultaneously qualifies the findings of studies from developed countries, which did not find a significant positive impact at elementary level but only at a high school level. The second finding from the Kenya RCT is that the positive and significant effects of ability grouping was not limited to students in the higher-level classrooms but there was also a similar positive impact on students in the lower track classrooms. This finding contrasts with the correlational studies in the developed world and the US, where the agreed conclusion was the existence of a positive and significant impact on the students in the higher tracks but a negative impact on the lower tracks. There is a caveat in the Kenya RCT study. The positive impact on student outcomes in the lower track classrooms is true only in the classrooms assigned randomly to new contracted teachers. In the other lower track classrooms randomly assigned to civil servant tenured teachers, there was a negative impact in student performance. What makes this finding even more puzzling is that in the higher tracks, the positive and significant impact occurred regardless of whether the randomly assigned teacher was a contracted or a civil-servant tenured teacher. The authors conjectured that contracted teachers (all in a conditional contract for renewal based on performance) were highly motivated to develop more focused teaching strategies for student learning, regardless of the higher or lower tracked classrooms assigned to them. By contrast, civil-servant tenured teachers were only motivated to improve teaching strategies with higher tracked classrooms but were not motivated to improve student performance in lower tracked classrooms (Duflo, Dupas and Kremer, 2009).

The Kenya’s RCT study findings are consistent with a broad set of case and correlational studies in the US and developed countries in several aspects. However, regarding the issue of the negative impact of the lower tracks on student performance the Kenya’s RCT shows that under the correct conditions, ability grouping also
improves performance of students in lower tracks. This is a bright spot that begs further exploration and seems to point out to the need for more effective teaching strategies for lower performing students. There is anecdotal and comparative evidence of what those bright spots may look like when we consider the insights from cognitive psychology research on effective teaching and learning and examine some of the bright spots of the top performing public charter and magnet schools and some of the top leading private schools in the United States. All the top US private and public charter and magnet schools have strong and yet balanced requirements for graduation, including the expectation that students need to complete at least 6 or more AP, IB or other advanced courses. In fact, their graduates typically go beyond the minimum requirements. These schools also offer placement by curricular knowledge and skills (instead of only placement by age) and more importantly, they provide either accelerated paths or multiple flexible paths for advancements into higher level courses. This approach is supplemented by strong support programs, either through well-established public programs like AVID or specific school developed support programs within most of the top private schools (Fernández-Castro, 2018). These strategies, structures and policies result in better student learning when compared to the rest of the US educational system.

IV. Conclusion and some conjectures for improving learning
Improving student learning and outcomes at private and public schools must include the incorporation of the six effective learning strategies uncovered by cognitive psychology experimental research into their actual daily teaching practices. These strategies, together with the existing bright spots that have demonstrated their effectiveness in various school settings or through teachers’ pedagogical practices should be the starting point for testing and scaling up improvement projects. Designing and implementing the necessary changes based on these insights are the keys to unlocking the true potential and existing resources within our current educational system. Schools’ improvement must and should begin by experimenting and testing the initial plausible hypotheses derived from teaching practices’ bright spots that are consistent with cognitive psychology findings. This can and must be done by incorporating all stakeholders in the process and improvement teams should be led by teaching practitioners. The action plan should be developed through the practices and tools outlined by improvement science such as the creation of driver diagrams and through the Plan, Do, Study, Act (PSDA) cycles of testing and changes. What are those bright spots that need adapting and testing under the particular conditions of each school and district that eventually can be scaled up if they demonstrate their effectiveness?

The first of the bright spots is already embedded in the daily teaching tasks of many schools and practitioners, such as spiral and strand curriculum planning, high quality homework, low stake test practices and meaningful Professional Development. Instead of the current ineffective crammed PD workshops, teachers can use focused and spaced teaching team meetings for improving the strand sequence and the spiral curriculum of their department or disciplines. Incorporating strand and spiral curriculum into their lesson planning and actual classroom tasks can assure students’ learning through retrieval and spaced practices in class. These PD sessions can also include the development of meaningful homework assignments and low stake test practice examples embedded within each specific subject, unit and between units throughout the academic year. This will make Professional Development meaningful and relevant for actual teaching practices while becoming more engaging and effective at modeling how teachers can enhance student learning. Similarly, student support programs should adopt the same approach at helping students to use homework, self-tests and other retrieval and space practices for learning. This will help at both improving deeper and longer-term learning for students, reduce their anxiety and stress regarding standardized tests while improving both their engagement and achievement. Using alternative assessments as practice, if consistent with what we know from research, can also help student learning.

The second bright spot is provided by the AVID program’s Socratic questioning and the Harkness method of elaborative questioning. It is unclear to what extent the positive learning impact of these methods is due to the elaborative questioning itself or to what extent both methods are effective because they also incorporate retrieval, spaced, interleaving, dual coding and concrete examples. Regardless, these two effective pedagogical practices in various schools are used by many teachers and highlight another promising area where improvement teams could begin testing and scaling-up these methods under the particular conditions of their districts or schools.

The third bright spot to be explored further is the relative effectiveness of traditional schedules and modified traditional or hybrid schedules. The most productive way of moving forward with the debate of block versus
traditional scheduling within K-12 education will be by having improvement teams in various schools and districts experimenting through randomized controlled trials with alternative modified traditional and hybrid scheduling models that have already demonstrated some promising outcomes. Yet, unless there is a good reason for adopting a modified block scheduling, the evidence supports the idea that traditional schedules are more effective for student learning. This is consistent with a well-established critical finding from experimental research: that spaced practice is one of the most effective strategies for learning and it relies on shorter and more frequent sessions.

The fourth bright spot is in the structures and policies for content knowledge and skills-based student placement and promotion. There are some promising international experimental studies and bright spots within the United States’ educational system that provide clues for re-framing the ideologically charged debate around ability grouping in a more fruitful and productive manner. We can conjecture that Professional Development for teachers focusing on the effective teaching and learning strategies uncovered by cognitive psychology and the bright spots within teaching practices would result in improved student learning and outcomes. This approach will need to be enhanced through support programs helping disadvantaged students to acquire the needed content knowledge and skills while practicing effective learning strategies.

Instead of the rigid student placement that still predominates in most schools based on Piaget’s classical work on children development, cognitive psychologists and the bright spots from the top performing schools point out to the need of student placement by content knowledge and skill level. Reducing class-size in public schools will contribute further but there are additional benefits of organizing student grouping and placement based on content knowledge and skills and creating opportunities for acceleration. This simple but profound change in student grouping would encourage a growth mindset instead of the fixed connotations associated with concepts such as grouping by “ability.” A growth mindset is essential to promote an open and positive inclination for learning and developing a drive to persist through failure (Dweck, 2006).

These effective learning strategies and bright spots may equip students to better manage their choices, help them with their meta-cognitive skills, and develop life-long learning, character and a growth mindset. By the same token, teachers would have the pedagogical tools and meaningful Professional Development to improve their craft. To grow as professionals, teaching practitioners need both the opportunities and autonomy to lead and contribute to the improvement teams and schools’ decision-making processes. Improvement science methods and tools can help teachers to be part of the solution while enhancing their commitment to their respective school’s mission, education excellence and their own professional growth, which in turn, helps to improve student learning.

Resources for schools and teachers on cognitive psychology applications to teaching and learning practices:
Efrat Furst’s Bridging (neuro)Science & Education: https://sites.google.com/view/efratfurst/home
Memorize Academy: https://www.memorize.academy/
Retrieval Practice: https://www.retrievalpractice.org/
The Effortful Educator: https://theeffortfuleducator.com/
The Learning Scientists: http://www.learningscientists.org/
The Right Question Institute, RQI: http://rightquestion.org/

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Advancement Via Individual Determination (AVID) https://www.avid.org/


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The U.S. has been facing a continuous and growing teacher shortage. Although teacher attrition has been an ongoing problem, these high rates of attrition have doubled since 2009 and are becoming a more serious problem forcing states to open teaching positions to people with no official training. Those same factors have been impacting enrollment in teacher preparation programs. There are several critical factors which impact teacher attrition including but not limited to: low compensation, working conditions, lack of support, lack of preparedness, per pupil spending, interference from policy makers and administrative styles. These factors often lead to teacher job dissatisfaction which ultimately leads to teachers leaving their present positions usually looking for other opportunities in other schools or in other better paying professions.

The research is clear that two most important factors that impact student achievement, engagement and success are the quality of teaching and the administrative support and nurturing that is provided. So, this article will explore what school leaders and policy makers can do to ensure student success by retaining and supporting highly trained and effective teachers.

Teacher Attrition:
Teacher attrition is a serious problem that our nation is facing. Both novice and veteran teachers are leaving the field at extremely high rates. U.S. attrition is around 8%, (approximately 500,000 teachers), about double that of other countries. Annually, approximately 157,000 teachers leave the field, and around 232,000 teachers change schools. (Alliance for Excellent Education, 2008). Furthermore, approximately 33% of new teachers exit the teaching profession within their first five years. Therefore, over half the teachers in the teaching force have fewer than ten years experience.

One reason for this teacher shortage is due to the increase in students in our schools. At the beginning of the 2015-2016 school year, there were about 3.6 million full-time elementary and secondary school teachers in both the public and private sectors. This number is not too different from the number of teachers in 2005, which was around 3.25 million (Digest of Educational Statistics, NCES, 2015). Despite the similarity in these numbers, there has been an increase in the number of students attending U.S. schools from about 39 million in 1985 to about 50.4 million at the beginning of the 2016 school year. Due to this steady increase, it is estimated that by 2020, there will be a need for approximately 3.3 million public school teachers (Digest of Educational Statistics, NCES, 2015).

Another reason for this teacher shortage is reduced enrollment in teacher preparation programs which has fallen 35% nationwide in the past five years, resulting in a decrease of close to 240,000 teachers (Learning Policy Institute, 2016). This decline can partially be attributed to the 2008 U.S. recession. When the economy is poor, college students choose to follow a path where there will be several job options paired with a higher salary. Despite the declining numbers in teacher preparation programs, the solution to the problem is not getting new teachers to enter the field, but instead being able to retain those who do choose to enter the profession (Behrstock & Clifford, 2009).

In addition to increasing student populations and under-enrollment in teacher preparation programs, the challenges faced by teachers leads to teacher attrition which also contributes to the teacher shortage. The departure of teachers from the education field can be attributed to the following factors: feelings of isolation, poor working conditions, lack of preparedness, dissatisfaction with salary, lack of support, and the misalignment between personal views and those of the leadership. These factors contribute to feelings of stress and burnout (McCarthy, Lambert, O'Donnell, & Melendres, 2009). “Teacher Burnout” is associated with feelings of mistrust, lack of support, negative school culture, and stress (Behrstock & Clifford, 2009; Lortie, 2002). The level of burnout between novice and veteran teachers varies significantly. Novice teachers have a higher burnout rate in comparison to their veteran counterparts (Howe, 2006). Knowing the impact of these factors, failure to mediate the experience of teachers can have negative consequences for the teacher shortage (Darling-Hammond, 2003).

One consequence of teacher attrition is a continuous
need to hire novice teachers. Having a teaching force comprised mostly of novice teachers impacts students since the instruction provided by these inexperienced teachers is not optimal as they have just transitioned as a student of teaching to a professional in the field. Despite participation in teacher preparation programs, teachers find that they are ill prepared to meet the demands of their profession (Gray & Gray, 1985). New teachers are met with situations and experiences that they have not been prepared for. Soon after entering the world of education, teachers realize the reality of the field which expands beyond just teaching a lesson and covering the curriculum. Their collective lack of expertise creates conditions of instability as new teachers familiarize themselves with their responsibilities and apply theoretical knowledge to their teaching. Despite their inexperience, these teachers are often placed with the most difficult students, in the poorest working conditions, and in high poverty areas which creates feelings of job dissatisfaction thus increasing the likelihood of their departure from the teaching profession (Ingersoll, 2001).

Job Satisfaction:
Individuals who decide to go into the teaching profession usually enter with the goal of positively impacting the lives of students. Those who choose to become teachers have most likely had positive educational experiences and want to share their love of learning with others (Lortie, 2002). Upon entering the profession, the realities associated with teaching are in contrast to their expectations. These new teachers oftentimes feel unsupported in their organizations (Ingersoll, 2001; National Commission on Teaching and America’s Future, 2003) as well as overwhelmed and underprepared (National Education Association, 2004; O’Neill, 2004). This misalignment between teachers’ expectations and the reality of their responsibilities influences job satisfaction and intention to remain in the field. If a teacher is not satisfied with his/her job, he/she usually chooses to leave the education profession (Kirby & Grissmer, 1993). Job satisfaction refers to how employees feel about their job (Odon, Boxx, & Dunn 1990). It is defined as “an employee’s affective reactions to a job based on comparing desired outcomes with actual outcomes” (Egan, Yang, & Bartlett 2004, p. 5). In 2015, 88% of all those employed in the United States reported satisfaction with their jobs (SHRM, n.d.). However, only 39% of teachers reported being satisfied with their jobs, which was the lowest rating over the course of than twenty-five years (MetLife Survey, 2013).

Fredrick Herzberg (1987) has identified general factors that cause both satisfaction and dissatisfaction within the workplace. He identified achievement, recognition, the work itself, responsibility, advancement and growth as the six most important factors, also known as satisfiers, which promote job satisfaction. However, policies, supervision, relationships with peers and supervisors, work conditions, salary, status and security have all been identified as the top six factors, or dissatisfiers, which create dissatisfaction with one’s job (Herzberg, 2011). All of these factors have the ability to influence an employee’s motivation as well as one’s attitude towards his/her job thus impacting job satisfaction. Although Herzberg identified both satisfiers and dissatisfiers, he believed that they were separate and independent from one another. Therefore, school leaders cannot just eliminate the dissatisfiers in order to create job satisfaction. Instead, they must incorporate the satisfiers into their practices in order to increase employee motivation thus prompting job satisfaction.

Among the teachers who specifically leave the field of education, 29% of them cite job dissatisfaction as their reason for leaving the field. This dissatisfaction stems from: student discipline problems, lack of support from the school administration, poor student motivation, and lack of teacher influence over decision making (Ingersoll & Smith 2003). In addition, job dissatisfaction stems from inadequate compensation, poor preservice preparation, external forces, weak school culture, insufficient professional development, and emotional exhaustion (Bobbitt, Leich, Whitener, & Lynch, 1994; Choy, Bobbitt, Henke, Medrich, Horn, & Lieberman, 1993; Evans & Johnson, 1990; Faupel, 1992; Gaede, 1978; Harris & Associates, 1992, 2001; Luekens et al., 2004; Mantle-Bromley, Gould, McWhorter & Whaley, 2000; Mitchell et al., 1998; National Education Association, 1963; Perie & Baker, 1997). All of these factors are discouraging to teachers and have an impact on their emotional well-being eventually leading to job dissatisfaction which results in teacher attrition; job dissatisfaction is a precursor to attrition.

Looking more closely at some of these dissatisfiers, one
sees compensation is an important factor extending way beyond one’s salary to include: benefits, retirement plans, scholarships, tuition reimbursement, relocation costs, and bonuses. Furthermore, there seems to be a substantial gap in the wage differential between teaching and other professions thus causing teachers to consider leaving the teaching field in order to pursue other professions with better compensation packages (Darling-Hammond & Sclan, 1996; Rickman & Parker, 1990).

Another factor which impacts job satisfaction is teacher preparation or lack thereof. Although certified teachers have experienced teacher preparation courses and practicums, the effectiveness of these preparation programs varies greatly ultimately impacting each individual’s level of preparedness. Without a strong foundation in teaching theory and practice, it is difficult for teachers to assimilate into the profession and become successful. Preparation is necessary for one to feel comfortable, satisfied, respected, and successful within a particular organization. By adequately preparing teachers to enter the education field and setting them up for success, teacher preparation programs allow for a natural retention of teachers (Darling-Hammond, Berry, Haselkorn & Fideler, 1999; Grissmer & Kirby, 1997).

External forces are another factor that impact job satisfaction. External forces are aspects of the job that are beyond the teacher’s individual control. Parental involvement, social issues, student attitudes, allocation of funds, respect for the profession and job availability are all examples of external forces (Gritz & Theobald, 1996). These external forces all have the ability to impact teacher job satisfaction which in turn affects teacher retention.

School culture and motivation are two other factors which also influence one’s job satisfaction. These factors have a great effect on a teacher’s decision to either remain in or leave the field of teaching. School culture, as defined by Darling-Hammond and Sclan (1996), means “the dominant ethos of the organization, its values and visions, and the everyday experiences of the school community members” (p. 86). Administrators are the ones who establish the school culture and set the expectations for the working environment. While doing so, the leadership style of the administration can influence a teacher’s motivation and decision to either leave or stay in a particular organization.

Another factor which impacts job satisfaction is professional development. Professional development is crucial for teachers, especially at the beginning of their careers, since new teachers need guidance in respect to pedagogy, balancing responsibilities, time management and classroom management (Lortie, 2002). However, even after their beginning years of teaching, it is important for teachers to participate in ongoing professional development in order to stay current with pedagogy and teaching practices as well as improve and sharpen their teaching. If teachers do not receive the necessary professional development in order to grow within and feel comfortable in the field, their discomfort and lack of preparedness can lead to job dissatisfaction.

One last factor that impacts teacher job satisfaction is emotional exhaustion. ‘Emotional exhaustion’ is what a person experiences when they are fatigued and frustrated. In turn, these feelings cause a teacher to experience burnout. Burnout is composed of three different variables: emotional exhaustion, personal accomplishment, and depersonalization which impacts job satisfaction and can ultimately lead to teacher attrition (Maslach & Jackson 1996).

Despite these various factors which impact job satisfaction, the significance of each element depends on the individual’s age, gender, education, income, and longevity of employment. Of all of these factors, age is the highest predictor for job satisfaction. Older employees tend to report higher rates of job satisfaction compared to their younger counterparts (Warr, 1992). This is especially important to note in the field of education since the teaching force is comprised of such a large number of young teachers. In regards to the other factors, generally, women tend to report that they are more satisfied with their jobs than men (Clark, 1997). Longevity is also positively correlated to job satisfaction (Oshagbemi, 2000) as is income (Groot & Maesen van den Brink, 1999). Despite the many factors detracting from satisfaction in the teaching profession, it is the role of the school leader to ensure that employees are achieving their desired outcomes in order to promote employee job satisfaction (Egan et al., 2004). Oftentimes, teachers cite reasons related to the administration as the reason for their job satisfaction or dissatisfaction (Darling-Hammond, 2003).
A recent survey found 35% of new secondary school teachers and 21% of teachers at the elementary level are not satisfied with their school administration’s leadership (Behrstock & Clifford, 2009). There are several reasons why teachers associate the administration with their job dissatisfaction, including, but not limited to, mistrust, a lack of support, negative school culture, and stress due to administrative decisions and practices. “Administrators have a great deal of influence over school climate and teacher efficacy, and the most effective administrators are supportive” (Ferriter & Norton, 2004). Offering teachers a supportive working environment can not only strengthen teacher quality, but can also increase retention (Johnson, 2006). Teachers search for and stay in the schools where they feel that they are most supported because there are going to be several instances when teachers are going to need support from administrators in various capacities (Darling-Hammond, 2003). Teachers need administrator support in the following areas: wisdom, assistance with parents, observations and feedback (Anhorn, 2008). Despite this necessary exchange, there are times when teachers feel unheard, unappreciated, and undervalued. For example, when teachers are given “non-teaching” tasks by administrators, teachers oftentimes feel that the importance of teaching is being devalued. Thus, this builds resentment between the teachers and the administration (Lortie, 2002). Teachers claim that when they feel respected, valued, and empowered, they are more committed and less likely to leave their jobs (Richards, 2007).

Teachers feeling unsupported exacerbates strained teacher-administrator relationships. When teachers experience strained administrator relationships, they attribute them to: micromanagement, lack of support, lack of teacher empowerment, lack of mentoring, lack of administrator accessibility, lack of attention to teacher growth, and the most recent phenomenon of high stakes testing as a measurement of teacher success. It is the responsibility of the school’s administrators to create a “culture of collaboration” in order for teachers to feel less isolated, less stressed, and more supported. School leaders should be instilling the following within their organizations: professional learning opportunities, instructional leadership, time for collaboration and planning, collegial relationships, and allowing teachers to be a part of the decision-making process. Furthermore, they should provide quality coaching, offer choice, value teachers’ voices, use effective teaching practices, and create an atmosphere of professional learning. They should promote effective induction programs, strong and meaningful professional development opportunities, incentives for performance, and rewards for accomplishments (Knight, 2009).

All of these practices are important for administrators to keep in mind and enact since low job satisfaction creates dissatisfied employees thus impacting their intention to remain in their current job (Egan et al., 2004). Effective ways to promote job satisfaction are well documented in research, clearly indicating ways administrators can incorporate practices into their organizations that promote positive experiences in the teaching field, thereby increasing the likelihood that teachers will choose to remain in the profession.

Relationships are Key

It is known that leaders impact not only organizations, but also individuals through direct interaction and indirect influence (Gerstner & Day, 1997; Judge Piccolo, & Ilies, 2004; Lowe, Kroexk & Sivasubramaniam, 1996). It is also known that effective leadership is achieved through the development and maintenance of relationships (Graen & Uhl-Bien, 1991). Thus, Leader-Member Exchange Theory (LMX) varies from other leadership theories due to the fact that it focuses on relationships formed between leaders and other members of the organization (Northouse, 2007). Leader-Member Exchange Theory is based on the idea that leaders and group members have the ability to form various types of relationships in which different exchanges occur. One direct impact of these relationships oftentimes is behavior (Gerstner & Day, 1997; Liden et al., 1997; Sparrowe & Liden, 1997). LMX is used to explain the dyadic relationships that are formed between leaders and individuals within an organization. The importance of any type of formed relationship is also a common understanding. Thus, the importance of a strong relationship between leaders and followers is logical. These relationships are developed over the course of time, and are built upon the various exchanges that occur between leaders and their members (Dienesch & Liden, 1986).

Relationships can result in both short and long term gains. Relationships have the potential to create a personal attachment and connection, amongst group members and to the organization itself. When personal connectedness is present, the situation is altered thus causing
relationships to affect job outcomes. LMX impacts performance outcomes, job satisfaction, retention, and commitment (Gerstner & Day, 1997). Thus, engaging in these personal relationships has the potential to not only maximize productivity, but also to provide stability and effectiveness within organizations. Keeping the desired outcomes in mind, it is important, when focusing on the relationship between the leader and follower, to ask the following question: “What is the proper mix of relational characteristics to promote desired outcomes?” (Graen & Uhl-Bien, 1991).

All relationships are not the same. Therefore, although a leader and follower have formed a certain relationship, the type of relationship varies from situation to situation. The quality of the relationship not only influences the individuals involved, but also impacts the gains of the organization. Consequently, it is evident that these leader-member relationships have varying impacts including various performance outcomes. Various researchers have found that the results of these relationships can impact organizational citizenship behavior, prosocial organizational behavior, organizational spontaneity, contextual performance and extrarole behavior. Organizational citizen behavior (OCB) can be defined as voluntary behavior that individuals exhibit within their organization that are not rewarded, however positively promotes the productivity of the organization (Organ, 1988).

Prosocial organizational behavior can be defined as a behavior exhibited by a member of an organization which positively impacts other members of the organization or the organization as a whole either positively or negatively. Personal and social factors both impact this behavior. Organizational spontaneity deals with protecting the organization. This type of citizenship behavior can be further broken down into five different parts: helping coworkers, protecting the organization, making constructive suggestions, developing oneself, and spreading goodwill. These five parts all positively impact both the individual and the organization (George & Jones, 1997).

Contextual performance refers to anything that individuals do that positively impacts the social or psychological side of a particular organization (Borman & Motowildio, 1997). These behaviors include volunteering to take on more work and assisting another member of the organization.

Extrarole behaviors are behaviors exhibited by employees that are not official requirements for their job since they are not required in order to be hired, however, they positively impact the organization (Bateman & Organ, 1983). Such behaviors include, but are not limited to: acceptance, tolerance and organization. The type of relationship formed is what impacts the type of citizenship behavior that is achieved. Thus, the citizenship behavior that is present correlates with the quality of the relationship between the leader and the subordinate. However, the type of citizenship behavior targeted varies from organization to organization based on the organization’s needs and values. Therefore, the role of the leader is to define what citizenship behavior he/she wants from the subordinate and then take the necessary steps in order to achieve those outcomes.

Relationships of high quality are due to factors such as trust and support (Dienesch & Liden, 1986). When feelings of trust and/or support are present, members then react in a way that causes the exchange to benefit not only the leader but also the organization. However, this will not be the only positive outcome that results from feelings of trust.

Although trust is important, there are four contributors to LMX: affect, loyalty, contribution, and professional respect (Liden and Maslyn, 1998). Although somehow connected, the impact of each of these factors differs. Furthermore, these four aspects are highly correlated with the citizenship behavior that is exhibited. Thus, when forming relationships, leaders should be able to use these four factors in order to predict the citizenship behavior, which will be a result of the relationship formed. It is important to keep in mind that subordinates act and perform in a way that is consistent with a leader’s values (Ilies, Nahrgang, & Moregeson, 2007). Therefore, the leaders are the ones that can impact the type of relationship formed with members within their organizations thus impacting job satisfaction/dissatisfaction and ultimately influencing teacher’s desire to remain within the organization.

Conclusion:
People change schools. Today, school principals and other school leaders face mounting accountability demands in a climate of urgency; therefore, some may end up simply replacing structures and strategies with others
instead of planning carefully to accomplish goals and ensure actual progress for all students. This article recommends some strategies that school leaders may use based on research that may be effective in all schools. When school leaders articulate and implement a Theory of Action to support and develop each professional in the school, everyone feels that they are connected to the school’s mission and assisted in their jobs of making each student successful. At the same time, they build those relationships around the work of making students successful that bond them to their work in that particular school and community. This bond and relationships that adept school leaders build will reduce teacher attrition, increase job satisfaction and foster more effective, committed teachers.

The alignment of priorities and strategies is more likely to raise student achievement and increase teacher retention than is a disjointed, piecemeal approach. Further, schools can provide better opportunities for student and adult learning and support when their efforts are supported by school leaders, other teachers, students, families and district policymakers.

Research on the characteristics of effective schools, and testimony from educators across the nation makes evident the importance of school leadership as the catalyst for school success as the engine that drives student achievement gains (Marzano, Waters, & McNulty, 2005). These gains are not automatic and require the commitment of dedicated teachers who do not leave the profession and remain with a group of educators who are form bonds and relationships around the work of making each student achieve at high levels.

References


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Teachers’ Attitudes about Bilingual Education and Multimodal Implications
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Abstract

Bilingual education programs in the United States have been at the forefront of educational debate for decades. The ongoing debate has been fueled by a myriad of perspectives espoused by varied groups of constituents and stakeholders, including educators. Accordingly, this study is built upon previous research to identify K-12 teacher attitudes and beliefs toward bilingual education that influence that debate and pedagogy executed in the classroom. This study looked at one representative community in the suburbs of a northeastern state in the United States. The research utilized a non-experimental, cross-sectional quantitative approach. An attitudinal survey, consisting of 25-Likert items, was distributed to participants in order to collect quantitative data. An Analysis of Variance (ANOVA) was employed to establish an inventory of teacher attitudes and beliefs toward bilingual education from 200 participants and how it influences their teachings. Subsequently, implications for multimodal learning for educators to introduce in their classroom in order to meet English language learners needs will be discussed.

Teachers’ Attitudes about Bilingual Education and Multimodal Implications

Views on how to best educate English Language Learners (ELL) is part of an ongoing discussion many schools undergo as they attempt to address the increase in the ELL population in suburban communities. The pedagogical approaches employed by teachers and their perspectives on the value and justification for bilingual education programs are a contributing factor that impact effective instructional practices and student learning. According to Organization for Economic Cooperation and Development (OECD) (2013), migration to developed countries has increased in over the last 50 years. Notably, Latinos are currently the fastest growing minority group in the United States. Current demographics indicate that Latinos will become the largest minority group within the next 10 years (Houvouras, 2001). Houvouras (2001) suggests that by the year 2050, Latinos, specifically, Mexican Americans, will constitute 25% of the U.S. population. Hence, the need for bilingual education in schools can serve as a platform to support the academic and linguistic needs of English Language Learners. The need to adequately train and prepare pre-service teachers in bilingual education methodologies is critical to the success of the ELL student population. Furthermore, it is equally imperative to model for educators how to deliver instruction to English language learners using multimodal ways to address their academic, social, and linguistic needs (Cohen & Uhry, 2011).

Statement of the Problem

Effective policy-making decisions are difficult to make regarding the value, justification, and nature of bilingual education because of the diversity and complexity of attitudes held about this form of education, often used to educate limited English proficient students in public schools. While teachers may describe bilingual education as being the most appropriate or inappropriate approach to educate limited or non-English proficient students; no systematic studies have identified empirical data or provided an inventory of attitudes held by teachers about bilingual education located in a community in the suburbs of a northeastern state in the United States.

Understanding why teachers possess varied attitudes about bilingual education from diverse regions is imperative to student achievement. Specifically, in the suburbs of a northeastern state in the United States; and how bilingual education affects the pedagogical approaches utilized in the classroom setting, may inform both the direction and implementation of education policy and practice. There is strong evidence that supports the argument that teacher beliefs have an impact on pedagogy. Exploring teacher attitudes about bilingual education highlights the necessity for a global approach to improving educational policy and developing effective multimodal instructional practices to address the needs of all English language learners as they compete and thrive in the global community.
In discussions related to bilingual education, some teachers may exhibit a positive attitude toward bilingual education based on their previous experiences working with English language learners, finding it to be beneficial to children. However, other teachers may demonstrate negative attitudes toward bilingual education, conveying their displeasure with the model and expressing concerns regarding negative implications for instruction. As a result, this fuels the discussion on how attitudes and how they can influence pedagogy. Attitudes that can hinder or support the implementation of multimodal approaches and how teachers’ beliefs can influence the support of a multimodal classroom for the ELL student.

Theoretical Framework
Language Belief Theory (LBT) (Spolsky, 2005; Spolsky, 2009) is the theoretical framework for this study and is germane to the topic of bilingual education (Byrnes & Kiger, 1994; Crawford, 1998; Crawford, 2000; Shin & Krashen, 1996). Language Belief Theory examines beliefs held by individuals vis-à-vis language and policies in various communities. Language beliefs have an impact on linguistic and educational policies. The influence and impact language beliefs have on linguistic and educational policies are evident in the English-Only debate, the implementation of bilingual education in schools, and the use of language in various government agencies.

The manner in which various communities and cultural groups view and use language can potentially impact the educational policies and effective instructional practices employed in schools. For example, under the Common Core State Standards, students are expected to read more rigorous literature. English language learners already endure linguistic difficulties reading and writing in English. If state mandates require them (English Language Learners) to be proficient on standardized state assessments within a year, then teachers may impose their own language beliefs on students and amend instruction and pedagogical approaches to address those needs. The changes may have a negative impact on students and do not necessarily align with the language beliefs of the students or community. Hence, identifying and analyzing teacher attitudes and beliefs about bilingual education will aid in decision making at the local and federal government levels.

Moreover, the research design revealed the attitudes and beliefs held by K-12 classroom educators in a suburb in a northeastern state in the United States, an under-researched region.

Multimodal Learning
Children who receive input in a variety of senses can retain and recall information better than those exposed to one modality (Newell, Bulthoff, & Ernst 2003). Those students who have a multimodal classroom are more creative and better at problem solving by 50% to 75% when compared to those not in a multimodal classroom (Newell, Bulthoff, & Ernst 2003). Multimodal learning can allow children to experiment with hands-on materials and make meaning of the academic language and concepts in the classroom. For the ELL student, the myriad of learning opportunities multimodal teaching offers, can allow those struggling to better understand and make content and practical connections.

Multimodal practices consist of visual, auditory, kinesthetic, and tactical approaches. Within these four modalities, there are key pedagogical strategies, that can develop comprehension such as interactive presentations, technology, hands-on approaches, storytelling, and role-play. Having a multimodal classroom is important in today’s changing cultural and technological times. According to Yelland (2007), technology is an imperative tool when teaching literacy and language to ELLs. A multimodal pedagogy can provide ELL students with a deeper and meaningful perspective of abstract and mental representations/academic concepts (Ajayi, 2009). This is important because ELLs come from different backgrounds and come into the classroom with different perspectives and foundations of learning (Ajayi, 2009). Consequently, making learning for ELL students more comfortable and accessible. Hence, supporting an equitable approach allows students who are falling behind to receive the resources needed at an individual level. It important for policy makers to ensure that ELLs and that their schools have the means to provide them with a high-quality education.

Purpose of the Study
The purpose of study was to identify, inventory, and analyze teacher attitudes about bilingual education of teachers in a suburb northeastern state in the United States. This region was chosen as the rise of migrant students with diverse linguistic backgrounds is rapidly rising. This study allowed the collection of evidence of
attitudes that can potentially impacted bilingual education. In order to identify teacher attitudes about bilingual education, an online attitudinal survey was conducted to solicit teachers’ attitudes. An attitudinal survey (Dickinson & Painter, 2009; McGahuey, 2008; Popuri, Proussaloglou, Ayyalik, Koppelman, & Lee, 2011) consisting of a 5-point Likert scale was used to report demographic data including information from educators and demographic questions that were collected and analyzed.

Spolsky (2005) further defined language policy and provided the following descriptions,

(a) “language practices, language beliefs and ideology, and the explicit policies and plans resulting from language management or planning activities that attempt to modify the practices and ideologies of a community” (b) “language policy is concerned not just with names varieties of language, but with all the individual elements at all levels that make up language” (c) “language operates within a speech community, of whatever size” and (d) “language policy functions in a complex ecological relationship among a wide range of linguistic and non-linguistic elements, variables, and factors” (pp. 2154-2155).

Language education for children continues to be a topic of debate, in which language beliefs play an important role towards the pedagogical approaches introduced in the classroom.

Research Questions
RQ1: What characteristics influence teacher attitudes about bilingual education in the suburb of a northeastern state in the United States?
RQ2: What are three key instructional practices that can be implemented in the classroom with ELL students?

Methods
The study and approach described here reflects a non-experimental, cross-sectional quantitative research design. The first step in the process was to identify an area of interest, which in this case was bilingual education in the suburbs of a northeastern state in the United States. Currently, there is a paucity in the research regarding teachers’ attitude towards bilingual education for this area in grades K-12. The sample of participants in the study was randomly selected from online listservs who consented to participation in the study. Principally, teachers representing K-12 schools across the two counties in a suburban setting comprised the sample. Each characteristic was analyzed utilizing a one-way ANOVA.

Participants
The sample consisted of 297 participants. The participants in the study consisted of randomly selected K-12 teachers from a suburb of a northeastern state in the United States. During an eight-week period, 297 responses were collected, but subsequently, only 200 responses were complete and utilized in the overall analysis. The other 97 surveys were incomplete or had partial responses, thus were not used in the analysis. Demographic variables were analyzed and examined using one-way ANOVAs with independent variables. The first independent variable analyzed was highest level of education. The level of education a teacher reported did not have a significant impact on teacher attitudes and beliefs about bilingual education. Teachers in this sample had a strong educational background with 96% of teachers holding a masters or doctoral degree. The most common educational level was a masters degree (with various credits above the degree), at 93.5%. Based on the data, 1.5% (N=3) of teachers held a bachelors degree, 24.5% (N=49) held a masters, 14% (N=28) held master’s +30, and 26.5% (N=53) of teachers possessed a master’s +75. While this was compared with a number of dependent variables, there were no significant correlations between the level of education and teacher attitudes about bilingual education.

The second independent variable examined was New York State teacher certifications held at the time of the survey. General education, secondary education, special education, bilingual education, and ESL/TESOL certifications were assessed. Respondents reported holding several New York State certification. Consistent with the skewness of this
sample towards elementary school, 58% (N=116) of teachers reported having a general education (K-6/1-6) certification, 20.5% (N=41) reported possessing a special education (K-6/1-6) certification, 27% (N=54) held a secondary education (7-12) certification, 8% (N=16) held a secondary special education (7-12) certification, 12% (N=24) held a bilingual education certification, 13% (N=26) had an ESL or TESOL certificate, and 30% (N=60) reported possessing another certification they identified as “other.” There were some significant findings among respondents who held either a bilingual education certificate or an ESL/TESOL certificate and their attitudes about bilingual education.

With regard to years of experience, there was also a wide dispersion in years taught by teachers in this sample, ranging from 1 to 45 years of teaching experience. The number of years taught was approximately 15 years (M=15.7, SD = 8.5).

Instrumentation
Data collection and the distribution of the attitudinal survey occurred via the use of an online-internet based survey tool known as surveygizmo.com. The data collection tool is a free web-based survey tool and allowed participants to select their level of agreement with a statement on a 5-point Likert scale. Moreover, it enabled participants the ability to respond to the survey from the convenience of any internet-connected computer or device available to them at any time.

The instrument for this study consisted of survey items from two attitudinal surveys and demographic questions. The first survey included is the Attitudes Toward Bilingual Education Scale (ATBE) by Shin and Krashen (1996) and the second attitudinal survey is the Language Attitudes of Teachers Scale (LATS) by Byrnes and Kiger (1994). Both surveys were adapted and used in this study to extrapolate information regarding teacher attitudes and beliefs toward bilingual education.

Results
RQ1: What characteristics influence teacher attitudes about bilingual education in the suburb of a northeastern state in the United States?
This study identified several attitudes teachers possessed regarding bilingual education. In order to compare attitudes towards bilingual education across differing teacher characteristics, a series of mean significance tests were performed using independent samples, t-tests, and ANOVAs. Overall, the strongest attitude differences were found across five teacher characteristics: English language learner training, bilingual education model, certification type, multi-lingual ability, and bilingual teaching experience. Higher scores on the Language Attitudes of Teachers Scale indicate negative attitudes about bilingual education and linguistic differences. A lower score on the scale reflect positive attitudes about bilingual education and linguistic differences. Higher scores on the Attitudes Towards Bilingual Education Scale indicate more positive attitudes about bilingual education as opposed to lower scores, which indicate negative attitudes about bilingual education.

ELL Training
Teachers who reported they received professional training to teach English Language Learners or limited English proficient students had significantly lower LATS scores (M = 2.17, SD = 0.58) than teachers reported they had not (M = 2.74, SD = 0.68), t (198) = 5.92, p <.001, Cohen’s d = .84 (mean difference = .58, 95% CI: .38 to .77). Teachers who reported having ELL training also had significantly higher ATBE scores (M = 4.05, SD = 0.68) than teachers who reported not having training (M = 3.59, SD = 0.63), t (198) = -4.45, p <.001, Cohen’s d = -.63 (mean difference = -.46, 95% CI: -.67 to -.26). The large effect size indicated the mean differences in attitudes between teachers who reported having training to work with English language learners, which was large, in comparison to those who reported not having training (Cohen, 1988).

ELL District Model
Bilingual education models were analyzed. There were significant differences between the attitudes of teachers whose school districts had different models for teaching ELL students (either Transitional Bilingual Education, Dual Language, or ESL only), LATS scores, F (2,184) = 9.97, p < .001, partial eta2 = .10, and ATBE scores F (2,184) = 8.22, p < .001, partial eta2 = .08 (both mean differences are in the medium to large range). Specifically, for LATS scores, post-hoc Tukey tests revealed only teachers with transitional bilingual education models (M = 2.32, SD = 0.59) had significantly lower scores than teachers from ESL only models (M = 2.77,
SD = 0.63). There were no significant differences between teachers with either of these two models compared to teachers with dual language models (M = 2.55, SD = 0.61). For ATBE scores, post-hoc Tukey tests revealed teachers with transitional bilingual education models (M= 3.97, SD = 0.59) had significantly higher scores than both teachers from ESL only models (M= 3.55, SD = 0.70) and Dual Language models (M = 3.59, SD = 0.70).

**Bilingual Teaching Experience**

In addition to bilingual education models employed in school districts, bilingual teaching experience was analyzed. There were significant differences in attitudes across teachers with different bilingual teaching experience. Teachers who reported presently teaching in bilingual education setting had significantly lower LATS scores (M = 2.34, SD = 0.73) than teachers who reported they did not (M = 2.64, SD = 0.63), t (198) = 2.36, p < .05, Cohen’s d = .34 (mean difference = .30, 95% CI: .05 to .54). Conversely, teachers who reported currently teaching in a bilingual education setting had significantly higher ATBE scores (M = 4.06, SD = 0.72) than teachers who reported they did not teach in a bilingual education setting (M = 3.64, SD = 0.65), t (198) = -3.30, p < .01, Cohen’s d = -.47 (mean difference = -.42, 95% CI: -.67 to -.17). According to effect size revised interpretation standards (Cohen, 1988), both mean differences were in the small to medium range. Teachers Proficient in Languages Other Than English

Somewhat related to bilingual teaching, there were significant differences in attitudes of teachers with differential linguistic proficiency. Teachers who reported proficiency (i.e., the ability to read, write, and speak) in a second language (other than English) had significantly lower LATS scores (M = 2.40, SD = 0.72) than teachers who reported they were not proficient in a second language (M = 2.69, SD = 0.60), t (198) = 3.00, p < .01, Cohen’s d = .43 (mean difference = .29, 95% CI: .10 to .48). Teachers who reported proficiency in a second language also had significantly higher ATBE scores (M = 3.93, SD = 0.71) than teachers who reported they were not proficient in a second language (M = 3.60, SD = 0.63), t (198) = -3.39, p < .01, Cohen’s d = -.48 (mean difference = -.33, 95% CI: -.53 to -.14). According to effect size revised interpretation standards, both mean differences were close to the medium range.

**Teacher Certification**

Given the previous results, there were unsurprising significant differences in attitudes across teachers with different state certifications. Teachers who reported having Bilingual Education certification had significantly lower LATS scores (M = 1.90, SD = 0.57) than teachers who reported they did not (M = 2.69, SD = 0.61), t (198) = 5.91, p < .001, Cohen’s d = .84 (mean difference = .78, 95% CI: .52 to 1.04). Teachers who reported having Bilingual Education Certification had significantly higher ATBE scores (M = 4.41, SD = 0.39) than teachers who reported they did not (M = 3.61, SD = 0.65), t (198) = -8.46, p < .001, Cohen’s d = -.83 (mean difference = -.80, 95% CI: -.98 to -.61). Similar to ELL training differences, both of these mean differences were large. The same differences were found for English as a Second Language or TESOL Certification. Teachers with ESL or TESOL certification had significantly lower LATS scores (M = 2.20, SD = 0.56) than teachers who did not (M = 2.65, SD = 0.65), t (198) = 3.33, p < .01, Cohen’s d = .47 (mean difference = .45, 95% CI: .18 to .72). Teachers with ESL or TESOL certification also had significantly higher ATBE scores (M = 4.06, SD = 0.74) than teachers who did not (M = 3.66, SD = 0.65), t (198) = -2.92, p < .01, Cohen’s d = -.42 (mean difference = -.41, 95% CI: -.68 to -.13). Both mean differences indicated a small to medium range. Finally, teachers who reported having General Education (K-6) Certification had significantly lower LATS scores (M = 2.50, SD = 0.63) than teachers who having another type of certification (M = 2.71, SD = 0.68), t (198) = 2.23, p < .05, Cohen’s d = .32 (mean difference .21, 95% CI: .02 to .39). The mean difference fell within small to medium effect size. The effect size indicated the mean differences in attitudes between teachers who held general education certification, in comparison to those who held a different type of degree were small to medium. Interestingly, there were no significant differences across teachers with or without General Education (K-6) Certification for ATBE scores. Furthermore, teachers who reported having Secondary Special Education (7-12) Certification had significantly higher LATS scores (M = 2.98, SD = 0.63) than teachers who reported they did not (M = 2.56, SD
More than 80% of respondents in the study believed that general education classroom teachers should be required to receive pre-service or in-service training to be prepared to meet the needs of linguistic minorities. These reported attitudes of the teacher participants are consistent with the outlooks and sentiments held by thousands of teachers across the United States and potentially around the world. Varghese, Morgan, Johnston, and Johnson (2005) affirmed, that in order to understand language teaching and learning educators need to understand the professional, cultural, political, and individual identities of their ELL students. Finally, while 82% of educators support having hands on activities, 22% believe that the responsibility of creating hands practices should come directly from the bilingual educator. Three core instructional strategies were suggested for teaching and learning. Of the highly suggested practices, many were coded into three main categories. Multimodal teaching at 41%, differentiated instruction at 34%, technology at 12%, and other recommendations that were not coded into these main categories composed 13% of respondents’ suggestions.

Implications for Teachers
Overwhelmingly, the responses in those studies were similar to the ones discovered in this study, therefore, supporting the argument that teachers’ attitudes towards bilingual education need to be accounted for in educational policies and practice. Immigrant students are entering schools speaking many languages. In some northeastern states, students speak more than 100 languages in schools, including Spanish, Chinese, Russian, Italian, French, Creole, Yiddish, Polish, Tagalog, Arabic, German, Hindi, Urdu, and many others (United States Census Bureau, 2010). Teachers who support bilingual education are open to different approaches in the classroom, while those in general education support the concept of bilingual education but believe that the approach to teaching ELLs should be teaching English first and content later.

Since the landscapes of classrooms today are indicative of the aforementioned global transitions, classrooms are characterized by diversity, multiculturalism, modality, and multilingualism. Therefore, educators must begin to embrace these transnational changes and prepare themselves to enhance their pedagogical approaches to be inclusive of both language and content in order to
appropriately serve the growing number of English language learners in the United States. Multiple modalities in bilingual education appears to be the viable and effective mechanism to transition students into the mainstream culture, while preparing them for the global society. This means students should possess advanced math, science, and reading skills, speak multiple languages, think critically, and creatively outside of the box and not be taught English first. However, adequate education is often unavailable to English language learners. The concept of implementing and training educators on multiple modalities to be utilized in the ESL classroom can support students in bilingual education. The complexities of teaching language and content have been expressed by participants in this study. Those with a background in ESOL/TE-SOL, or bilingual education are more willing to try and integrate these two aspects of learning.

The implementation of multiple modalities with ELL students can support different learning profiles and needs that each ELL student brings to the classroom. Of those respondents who had a bilingual background/education, the support for this pedagogical approach was suggested as one that can be easily implemented to create a community of teachers and learners. According to Zhang (2016), the disparity between everyday language and scientific/academic language leads to limited language development. Multimodal tools are approaches that are used to support the brain’s function of students. Thus, enforcing the relationship between content required to be learned and deeper understanding of that content. From the results, those who did not have a bilingual, ESOL/TESOL background suggested strategies but stated they did not implement them or would require further professional development.

ELL educators can create dialogues through different modes to meet those auditory learners. ELL educators suggested activities that expose ELL students to multiple dialogue from a variety of technology means such as interactive presentations with smart annotations, creation of a multi-touch bilingual books with interactive widgets, capturing the setting of a story with green screen movies, integration of music applications to allow students to record their voices and add multiple layers to self-reflect on their reading, and use of augmented reality to bring content to life such as animals and body systems to enhance comprehension. Furthermore, the use of digital applications can be used to empower English language learners to share their knowledge and serve as a formative assessment tool. Allowing students opportunities to practice these dialogues in a variety of kinesthetic dispositions such as sitting, standing, integrating props, body language or gestures allows for educators to better and efficiently assess for understanding. General educators, supported technology for ELL students but form the results, they did implement technology in this way. They maintained to the use of computers and smartboards. The narrative collected regarding the use of technology, was the lack of training by schools.

Ensuring ELL students can have sensory and tactile experience such as role playing using the targeted language. Allowing students to write in non-traditional formats such as using a smart tablet that would support accessibility tools, dictation, interactive presentations, spelling, typing, and writing through tactical activities. According to Iddings et al. (2005), multimodal literacy experiences can support the learning and language acquisition of English Language Learners. This research supports the increase in learning through the use of visual and verbal technological multimodal learning (Fadel, 2008). As a result, students feel more comfortable and perform better when learning in classroom where teacher can reach the students’ learning styles (Cronin, 2009, Omrod, 2008).

Conclusion
While the rise of ELL students continues to grow in many suburbs, based on this and other similar studies, there is evidence that educators are not adequately trained to meet this current trend. In this research of the 200 participants, only 24 held a bilingual certification and 23 either a ESOL/TESOL certification. Overall, only 23.5% of the sample had pedagogical knowledge with regards to educating ELLs with developmentally appropriate practices. For the 2017-18 school year, 80% of ELLs were enrolled in various school districts. Of those students, 55% of them make up the overall enrollment statewide. The second largest region to hold ELL enrollment, is the region of focus in this study. It holds 17% of all ELLs and share a 16% of ELLs statewide (New York State Association of School Business Officials, 2017). This is an increase that was not part of this region a decade ago. Hence, the disparity between the increase
of ELLs in suburban areas to the training teachers has come into question. Based on the results the influences in teaching that come from beliefs/attitudes in bilingual educations appears to impact the way teachers teach.

In accordance with Language Belief Theory used in this research, it is important to account for the language choice and use of that language by ELL students while in school. Language is a marker of the communities and groups ELLs are part of. While this study discusses beliefs about bilingual education, and pedagogical instruction, the importance of language as it relates to culture and identity are important as well to the overall development of ELLs. Hence, it is key that educators strive to meet linguistic needs not just for language purpose but for key internal influences. Spolsky (2005) states that students who do not hear or speak their language suffer from language attrition. Therefore, the beliefs that educators have about bilingual education not only affects instructional practices in the classroom for the ELL students but can also indirectly influence the connections ELLs develop regarding their identity in the United States.

Finally, it is important for policy makers to fund and to focus on professional development for teachers that do not have a bilingual background to ensure ELLs are receiving a fair and equitable education. State changes that require all teachers to receive training on multimodal learning and other approaches is crucial at this time.

References


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Abstract
One in five Americans is learning disabled; thirty-five percent of them drop out of high school; fifty-four percent are unemployed. Below average reading skills contribute significantly to these statistics, yet there are few reading resources designed for learning disabled teens and young adults. The books they are able to read are too childish, and those that are age-appropriate have challenging vocabulary and sentence structure. In addition, these books do not include illustrations which are critical to the LD learner’s comprehension. Finally, there is not one digital product that targets this audience specifically, despite the fact that research shows they respond very positively to computer-based learning. The result is a learning disabled adult population which is poorly prepared for life after age 21.

This study was conducted to test the efficacy of a digital literacy resource, Tiplitt, designed for teens and young adults with learning disabilities. A chapter of an e-book was created to incorporate elements that have been shown by research to be effective in teaching those with disabilities: illustrations, animations, interactivity, and multi-sensory stimulation. The pilot study involved 88 students from three school districts in New Jersey who read the beta chapter and then completed a twelve-question survey to determine their comprehension, retention, engagement, and response to the digital components of the chapter. Positive results for comprehension, engagement, and retention fell in the 85% range, and positive response to digital components was close to 60%. Points out in The Brain That Changes Itself, “When we reach adolescence, a massive ‘pruning back’ operation begins in the brain, and synaptic connections and neurons that have not been used extensively suddenly die off – a classic case of ‘use it or lose it.’” (Doidge, 2007)

Therefore, in order to improve outcomes for this group, the answer must lie in motivating them to read more. Fortunately, there are two promising resources to explore and develop further in order to address this issue: illustrations and digital media. One theory for the diminishing interest in reading among LD students is the general absence of illustrations in their reading.

Statement of the Problem
The number of challenged teens and young adult readers is alarmingly high, with only 37% of all twelfth graders scoring “proficient or better” in reading on the Nation’s Report Card in 2017 (Nation’s Report Card, 2017). A report by Common Sense Media (2014) indicates that 45% of 17-year-olds say they “seldom or never” read for pleasure during one year. The outlook for career success for learning disabled young adults is dim, with only 46% of working age LD adults being employed, and 67% of them earning $25,000 or less per year (Morin 2014).

To complicate matters, the older LD student avoids reading because it is taxing, slow, and frustrating (Cunningham & Stanovich, 1997). Therein lies the most challenging aspect of teaching teens and young adults: they cannot read so they do not like to read; reading is labored and unsatisfying so they have little reading experience; and, because they have not read much, they are not familiar with the vocabulary, sentence structure, text organization, and concepts of academic “book” language. Over time, their comprehension skills decline because they do not read, and they also become poor spellers and poor writers. (Moats, 2002)

Therefore, in order to improve outcomes for this group, the answer must lie in motivating them to read more. Fortunately, there are two promising resources to explore and develop further in order to address this issue: illustrations and digital media. One theory for the diminishing interest in reading among LD students is the general absence of illustrations in their reading.
materials. Younger children with reading difficulties often find support in books with pictures that reinforce the text. Illustrations help young readers create mental images of simple story lines and well-defined characters. In many ways, pictures serve as the key to reading enjoyment for children who have difficulty turning abstract concepts into concrete thoughts. However, there are almost no resources for older readers in the form of a picture book. This audience has long outgrown the juvenile story lines and characters that mark many of the choices in this category. Leveled books for older readers do exist in the form of “Hi-Lo” selections (high-interest, low-reading level), but they are limited in number and scope and are not always illustrated. Graphic novels offer illustrations, but often in a frenzied format with multiple panels on one page with dialogue bubbles advancing the story, which can often be confusing for the LD reader. Digital literacy solutions specifically for LD teens and young adults are scarce, and often reflect learning strategies that are dated and fail to engage, such as traditional multiple choice questions. The use of these resources is generally limited to a classroom setting, and requires teacher intervention and extensive training for optimal utilization.

Research Questions
This study examines how these two elements, illustrations and digital media, motivate teens and young adults to read, and increase their levels of understanding and engagement. The research questions are:

1. Did the illustrations, interactivity and digital components add to the students’ interest in the story?
2. Did the illustrations, interactivity and digital components add to the students’ comprehension and retention of the story?
3. Did the illustrations, interactivity and digital components help the students to enjoy and feel engaged in the story?

Hypothesis
Illustrations, interactivity and digital media components will positively affect teen and young adult readers’ comprehension, retention and enjoyment of a story.

Type of Research Design and Data Analysis
This is a qualitative study that presented a reading sample to a group of learning disabled teens and young adults. The sample was a digitized beta version of an age-appropriate book chapter; it was illustrated, animated and contained digital components such as interactive gaming questions to check for understanding. It offered students the option of a “reading companion” which was an avatar that provided text-to-speech assistance.

After reading the chapter on a computer or tablet (with or without teacher assistance), students were asked to complete a survey indicating their level of enjoyment, engagement, comprehension, retention and response to digitized components.

Data from the survey was compiled and converted into tables that reported the results of the survey.

Description of Sample and Instruments
The study was conducted in three New Jersey school districts with varied socio-economic populations, as determined by their District Factor Groups. (These are defined by using demographic variables from the US Census.) Two of the districts were DFG “B” and one was DFG “GH,” with “A” being the lowest and “J” being the highest.

Eighty-eight students participated in the study, from grades 6 through 12+ including students from an ungraded Extended School Year (ESY) program for those with extensive cognitive disabilities. Ages of the students ranged from 11-21+. All students were identified as having special needs and tested at least two reading levels below their grade. All were served with either basic skills instruction, resource room instruction, a self-contained classroom and/or ESY.

Students read a chapter of a digital, age-appropriate book, Framing the Pitch (found on the website www.tipltt.com). They used either Chromebooks or iPads depending on the available technology in the school district. The book chapter consisted of thirty digital pages, all illustrated and animated. The pages contained either chapter text or checks for understanding. These checks appeared every three pages and were game-type questions that the students completed and then recorded their responses in a “thought cloud” that they could review at the end of the chapter. They also received points for answering the questions.

When students completed the chapter, they were given a two-sided paper questionnaire with twelve questions about their reading experience. Each question allowed for one of four responses: “Yes,” “Kind of,” “Not really,” “No.”
“No,” which would later be converted to a four-point Likert scale. These results were recorded and charted in Excel and then analyzed as per the hypothesis.

Limitations
The limitation that was most often reported had to do with a technology malfunction. Students in the first school found some pages were skipping and it was frustrating for them to read the book. The coding problem was repaired immediately and subsequent students had no difficulty navigating the chapter.

Also in the first school, about 15% of the students chose not to use the reading companion, although they had been guided to do so. This was corrected by making the instructions more specific during the administration of the study.

Selected Review of Literature
The relationship of imagery to the ability to think is one of the preeminent theories of human cognition. Van den Broek, Rapp and their colleagues suggest that in order for students to comprehend and understand what they are reading, they must make coherent mental representations of the information or story, and meaningful connections among the ideas in the text; this requires higher order cognitive processing. (Rapp & van den Broek, 2005; van den Broek, Kendeou & White, 2009). Lindamood, Bell and Lindamood have established a successful and long-standing learning program on the theory that concept imagery is critical when remediating reading. They conclude that we must focus on “stimulating the sensory-cognitive functions of concept imagery if we want to successfully remediate for children and adults” (Lindamood, Bell & Lindamood, 1997).

Research shows that electronic books can be highly motivating (Joo, Park, Shin, 2017). They hold the potential to help children extend their vocabulary, word knowledge, and concepts about print and story comprehension. Multisensory features such as audio support, animations and video clips add layers of meaning to electronic books that are not found in traditional texts. These features facilitate reader comprehension by reflecting the action of the text and signaling the mood of the story (Labbo, 2000). Grimshaw found additional benefits in his study where reading and comprehension skills were examined based on print versus electronic text. An electronic version of a story with audio narration generally scored highest when tested for comprehension (2007).

Perhaps the most critical advantage to the digital platform is its ability to offer the reader an opportunity to interact with both the book itself and other readers. Research shows that interactive digital reading materials are significantly better than paper books in keeping a student’s attention and fostering interest in reading (Hsu & Chen, 2013), and that interactive strategies produce greater success than the use of “computerized workbooks” that march students through material they learn through rote. “Interactive among the ideas in the text; this requires higher order cognitive processing. (Rapp & van den Broek, 2005; van den Broek, Kendeou & White, 2009).

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virtual humans to mimic the natural face-to-face dialogue that normally takes place between student and tutor in real life forms the foundation of a unique and critically important enabling technology for teaching in the future” (Takacs, B., 2005).

**Summary of Methods and Procedures**
Students were told by teachers that they would be participating in a study which would be asking if they enjoyed a new digital book. It was made clear that their responses were anonymous and that their input could be helpful in creating additional reading material for young people with special needs. During class time, each student was given either a Chromebook or iPad, depending on the school’s resources. At least one head teacher and numerous teachers’ aides were also present. The website for the book was written on the board and teachers assisted the students with locating it. Once all the students were on the first page, the operation of the digital book was explained to them – how to turn pages, how to answer questions, how to put their answers into the “thought cloud.” If students were having difficulty, teachers assisted throughout. As soon as each student finished the chapter, s/he was given a paper questionnaire with twelve questions that addressed their comprehension, retention, engagement and appreciation of digital components. Once students completed the questionnaires, they were collected and the session was over.

Results were tabulated and charted on an Excel spreadsheet. They were then analyzed to determine if they supported the study’s hypothesis.

**Results**
The results of the survey strongly supported the study’s hypothesis, where 4=yes, 3=kind of, 2=not really, 1=no.
The charts below illustrate the students’ short and long-term comprehension of the chapter and a measure of their engagement.

Q: I could understand what was happening in the story.

Q: I can remember what the story was about.

Q: The story was interesting to me.

An interesting note is that not one respondent reported that they did not understand the story or could not remember what the story was about. This is noteworthy since the reading scores of this group of students indicated that, in general, comprehension and retention were problematic for them. The following questions targeted the specific elements of Tiplitt designed to address the special needs of challenged readers: text-to-speech; illustrations; animation; interactive questions; technology.

Q: I liked when someone read me the story on the computer
Q: The pictures helped me understand the story.

Q: It was fun to see the pictures move.

The text to speech feature was evaluated positively by 71% of the respondents. Students would only choose this option if they felt it would be helpful. The question about pictures strongly validates the use of illustrations for challenged readers, a feature not often found in books for teens and young adults. A full 85% of respondents found them helpful. Tiplitt’s interactive questions were designed as an alternative to traditional, multiple choice reading comprehension questions. Their purpose was to check for understanding by using simple gaming techniques. It was critical that these questions be fun to answer but not distract from the story.

Q: The questions helped me remember parts of the story.

Q: The questions were fun to answer.

Students responded to the interactive nature of the questions: moving answers into a “cloud” and getting points for answers. In both cases, more than half the responses were positive.

Q: I liked moving answers into the cloud.

Q: I liked getting points for answering questions.

Q: It was fun to read this story on a computer.
Q: I’d rather read on a computer than read a printed book.

Discussion
Technology has become a critical tool in education, and used properly, can greatly enhance the teaching/learning environment for many students. This study focused on its advantages for the teen/young adult learning disabled reader.

Given the dearth of reading resources for this audience, it’s imperative for educators to explore tools that will engage them, assist with their ability to comprehend literary texts, and motivate them to read more. The pilot study of Tiplitt, a digital literacy resource, has given us information about the tools and strategies that will accomplish those goals.

Results indicate that using a digital format helps students comprehend and enjoy a text. Over 85% of respondents answered positively that they both understood the story and remembered what it was about. Seventy-five percent found it interesting. According to the respondents, the digital elements that were contained in the text adding to their positive responses. These included: illustrations, animation, text-to-speech, interactive questions, and the very act of reading on a computer.

Since there are few resources that contain these components, what can a teacher do to use these results to improve reading for students? In most cases, these elements can be introduced in a simple way in class. For instance, while students are reading, pictures that match the text can be projected for the students to help them with imaging. Interactive questions can be created using the many gaming elements on a Smartboard or smart phone. When students are reading independently, audio books can be utilized so they can read along with narrator, creating a text-to-speech climate. For students who prefer e-books, there are numerous sites that provide free digital books. (https://ebookfriendly.com/free-public-domain-books-sources/)

This, of course, is more labor intensive for the teacher, but can reap many rewards. And until more digital resources are available for this unserved audience, this will provide an alternative that may improve their reading and put them on a path towards making new neural connections.

Summary
The pilot study was conducted to evaluate the efficacy of the digital literacy resource, Tiplitt. Specially, it addressed the following components: illustrations, animation, interactivity, multi-sensory elements and electronic delivery.

Students were asked to read a beta chapter of an e-book and answer questions that checked for understanding throughout the story. When they had finished, they completed a survey that addressed their comprehension and retention of the story, and their response to illustrations, animations, interactive questions, and digital components such as text-to-speech.

Results demonstrated a very positive response to all components tested, and indicated that the use of these elements could result in good outcomes for teen and young adult readers.

In the area of comprehension, 86% of respondents said they understood the story, both while they were reading it and afterwards. 85% said they remembered it, indicating that short-term retention was strong.

In the area of engagement, 74% of respondents answered that they found the story interesting.

All the digital components of the chapter were ranked positively by over half the respondents.

The results of this study suggested the inclusion of these elements in reading instruction for learning disabled teens and young adults. Even if there are currently few digital resources available for this target audience, teachers can include many of them through the use of smartboards and audiobooks.

Recommendations and Conclusions
The state of reading is not improving for most students, and statistics are even more dismal for teen and young adult learning disabled readers. There are very few reading choices designed for them, and the result is that they are simply not reading. As this group becomes older, the chances of life success grow dim because their neural connections literally die from disuse.

It is critical that educators and those who create learning resources recognize the sheer number of readers who face this dire future and make adjustments to the way this target audience is being served. This would include lessons that reflect the components that have been tested in this study. It also means that educators should make this research and their own experiences known to those who
can create more resources for their learning disabled students. Future research should include a follow-up on the efficacy of lessons for LD

teens/young adults that include illustrated, age-appropriate stories, some form of text-to-speech, interactive questions and additional digital components.

References

Dr. Maria Cleary is President and CEO of Tiplitt, LLC, and is currently developing a digital literacy resource for learning disabled teens and young adults. She is an experienced school superintendent and principal and has taught on the elementary through post-graduate levels. She has also written and produced award-winning programs for WNBC-TV, Connecticut Public Broadcasting, Cablevision of Connecticut, the Archdiocese of NY and a variety of Fortune 500 companies.
ABSTRACT
Student engagement in learning is critical to the development of lifelong learners. Many research studies have found that student engagement is congruent with teacher-student interaction, school culture, and student achievement. However, in the research literature, little has been documented about the role of the school leader in ensuring teachers are equipped with the skills, knowledge, and expertise to engage students in learning.

The purpose of this qualitative study is to investigate the extent to which middle school principals in a single large urban school district develop teacher instructional practices that cultivate student engagement across disciplines in Grades 6-8. The research focuses on the school leaders’ use of the elements and attributes of the Danielson’s Framework for Teaching (2013) to facilitate student engagement. It further examines the ways in which middle school principals invest in teacher development to promote student engagement and the leadership role of the principal in developing teacher instructional practices. The study will inform the decision-making processes of school leaders seeking to improve student engagement and foster lifelong learning.

Findings indicate the school leaders’ belief that when students are engaged in learning, they are active participants in the learning experiences. Engagement practices are embedded into the culture of schools in good standing, are routinely evident in classroom instruction, and their impact consistently monitored. The school leaders prioritize teacher learning and accept this as a primary responsibility. They maintain structures that provide teachers with opportunities to assume leadership roles in the school community and time to collaborate around teaching and learning.

The researcher concludes in order to engage students in high levels of learning, school leaders should focus their attention on (1) prioritizing teacher learning as a primary responsibility, (2) the collaborative improvement of teacher practice, (3) cultivating teacher leadership, and (4) utilizing the Danielson Rubric to monitor teacher instructional practices.

INTRODUCTION
The work of school is becoming more complex and demanding, while the organization of school remains, for the most part, static and rigid (Elmore, 2002). As the world changes and the expectations of education shift to meet these changes, the nature of teaching and its effectiveness must follow suit. These shifts are not a problem, but rather an indication of how education, as a living practice, is alert to issues of what is called for at important periods of social, economic and technological change (Friesen, 2009). Long considered the instructional leader of his or her organization, today, as never before, the system leader is tasked with creating a collaborative culture that fosters both adult and student learning; with student achievement as the ultimate outcome.

Elmore (2002) points out that schools will buckle under the pressure accountability requires mainly because “schools and school systems were not designed to respond to the pressure for performance that standards and accountability bring and their failure to translate this pressure into useful and fulfilling work for students is dangerous to the future of public education” (p. 3). He explains the accountability movement stems from the basic belief that schools, like other public and private organizations in society, should be able to show evidence of student learning and should be engaged in the improvement of practice and performance over time. He points out most educators lack the training and expertise to engage in systemic, continuous improvement in the quality of educational experiences they provide to students and to subject themselves to the discipline of measuring their success by the metric of student academic performance. Elmore (2002) concludes, teachers are accustomed to working in isolation. They are not equipped or trained to allow others to scrutinize their practice and collaborate with them to facilitate success.
Several researchers describe learning as both an individual and a social process (Dufour & Fullan, 2013; Elmore, 2002; Thompson, Gregg, & Niska, 2004). It is now common place to argue that teachers learn through social interaction around specific problems of practice and that enhancement of teacher learning requires support from collegial interactions where teachers can work together on their practices (Elmore, 2002, p. 17). Elmore concludes: The practice of improvement is about changing three things fundamentally and simultaneously: (1) the values and beliefs of people in schools about what is worth doing and what is possible to do; (2) the structural conditions under which the work is done; and (3) the ways in which people learn to do the work. (p. 30) Elmore (2002) cautions that professional development should not be arbitrarily decided on but should be aligned to the practice provided to ‘real students’ in the context of the classroom. Much of this adult learning which he describes is reminiscent of the Professional Learning Communities model proposed by Dufour and Fullan (2013) wherein systemic groups of teachers work collaboratively in their schools, over an extended period of time, on problems of practice they have identified. The goal would be to improve instructional practices across the school and system, rather than focus on individual teacher improvement. With leaders leveraging time and money to school or system improvement and continually monitoring the effect of the new practices on student achievement, Elmore (2002) contends that successful professional development will result. Participation in collaborative work, however, is not enough to improve the knowledge, skills, and practices of teachers, if they are not cognizant of the organizational expectations around student learning. The results of several studies of ‘high collegial interactions’ among teachers, did not result in classroom practices that reflected the rhetoric of reform except in a school where the principal and teachers explicitly created a normative environment around a specific approach to instruction (Clark & Peterson, 1986; Elmore, 2002). Principals should therefore, be continuously focused on the quality of instruction and shared best practices in their schools, if high levels of improvement of student performance and achievement are the intended result. At its highest level, pedagogy should be about what teachers do to not only help students learn but to also actively strengthen their ability to learn (Hargreaves, 2004). Engaging students in learning is central to a student’s development into a lifelong learner (Danielson, 2011). Numerous studies have focused on the desire to increase student engagement and ultimately student achievement. Harris (2008) notes, “Worldwide, educationists are concerned with student disengagement from school and learning” (p. 57) as disengagement has been identified as a major cause of early school leaving, disruptive behavior at school, and low academic achievement (Finn, 1993; Newmann, 1992; Willms, 2003). Historically, student engagement focused on increasing student participation and positive behavior so they would remain in school (Taylor & Parsons, 2011) in contrast to superficial participation, apathy, or lack of interest in learning (Newmann, 1992). Recently, student engagement has been built around the goal of enhancing all students’ abilities to learn how to learn or to become lifelong learners in a knowledge-based society (Gilbert, 2007). While there are several existing definitions for “engagement,” Schlechty (2011) asserts engagement is demonstrated by four indicators: attention, persistence, voluntarily commitment of time to task, and relevance. He suggests when students are engaged, they see the activities in which they engage as personally meaningful which results in a high level of interest to motivate them to persist in the face of difficulty. The student subsequently finds the task sufficiently challenging that he/she believes its completion will result in something worthwhile. Students who are not engaged in learning exhibit behavior that mirrors the opposite. Although they may learn at a high level, they are unable to apply their learning to different processes and contexts and usually have a literal grasp of what they learn. Other students, who are not engaged in learning, tend to be compliant and disengaged. They also learn at literal levels and are unable to transfer knowledge and information across disciplines and contexts. Research identifies various types of engagement, including social engagement, physical engagement, behavioral engagement, academic engagement, institutional engagement, psychological engagement, and more recently, intellectual engagement (Friesen, 2009; Taylor & Parsons, 2011). Fredericks, Blumenfeld, and Paris (2004) classify forty four engagement studies into behavioral, emotional, and cognitive categories. They assert while these categories are non-hierarchical, each is equally important to student engagement. Some proponents of education consider engaging disengaged pupils to be one of the biggest challenges
facing educators. Willms (2003) and Cothran and Ennis (2000) contend approximately twenty-five to sixty-six percent of students are considered disengaged. Gilbert (2007) further points out a greater issue might be students leave schools incapable of or unprepared for a productive and healthy life in the “Knowledge society” in which they live and lead.

Statement of the Problem
Moss (2015) claims, “Highly effective teachers in every classroom- that is what parents and stakeholders want, and certainly what school children deserve” (p. 16). Americans want to be assured all students are provided with the necessary knowledge and skills they need to be prepared for success in higher education, the workforce, and life in the 21st century (Danielson, 2011).

In recent years, several research studies have focused on the impact of student engagement on student achievement, following the school of thought that student engagement is the centerpiece of instruction. They purport when students are disengaged from their learning, the likelihood of academic success is diminished (Finn, 1993; Danielson 1996; Park 2003; Schlechty 2011; Sibold 2016).

If a central factor in the improvement of student achievement is student engagement, a central question becomes:
• What is the role of the school leader in promoting and supporting student engagement in the classroom?

Previous research studies conclude student engagement is contingent on the level of interaction between teachers and students in the classroom, however, the extent to which system leaders develop teacher instructional practices that cultivate student engagement has not been studied among high need students. This study will address this gap in the existing literature. The study will serve as an additional body of knowledge for school leaders as they engage in the important task of promoting high levels of student engagement in every classroom. School leaders will be provided with information that may impact their decision-making processes and help them ensure students are exposed to high levels of engagement in learning.

The purpose of this study is to investigate the extent to which system leaders develop teacher instructional practices that cultivate student engagement across disciplines in Grades 6-8 classrooms. This research study will be viewed through the lens of the Danielson’s Framework for Teaching (2013). The results of this study will identify strategies used by schools in good standing for effective student engagement and provide educators, more specifically, middle school principals, with strategies to promote student engagement.

Research Questions
This study investigates the extent to which school leaders develop teacher instructional practices that cultivate student engagement across disciplines in grade 6-8 classrooms. The following research questions will be addressed in this study:
1. Are the elements and attributes of the Danielson Framework for teaching utilized to facilitate student engagement?
2. What is the leadership role of the principal in promoting student engagement in the classroom?
3. In what ways do principals invest in teacher development to promote student engagement in the classroom?

Conceptual Framework/Assumptions
The Framework for Teaching was initially developed in 1996 as an observation-based evaluation of first year teachers and used for the purpose of licensing (Danielson Group, 2013). Used as a teacher evaluation tool in several states, including New York, it is grounded in a constructivist view of teaching and learning and provides a common language for educators. Twenty-two components clustered into four domains: Planning and Preparation, Classroom Environment, Instruction, and Professional Responsibility serve as guideposts for improved student performance and engagement in learning (Danielson, 2013). The Framework outlines critical attributes and possible examples to guide teachers as they seek to engage students in learning and school leaders as they work to ensure students are engaged in high levels of learning. According to the Framework, student engagement is the centerpiece of instruction. When observing for evidence of student engagement, leaders should not only be attuned to what teachers are saying, but to what students are doing as a result of what the teacher has said (Danielson, 2013).

The Danielson Framework facilitates active and teacher-centered professional learning to take place. Professional learning is completed by the learner through an active intellectual process that has three essential features: self-assessment, reflection on practice, and professional conversation. Shulman (2004) agrees the
Danielson model allows teachers to be active participants in inquiry concerning their own teaching practices and through writing, dialogue, and questioning, authentic learning can occur. In the Framework for Teaching (2011) Charlotte Danielson describes the importance of having a comprehensive teacher evaluation framework in place as follows:

A framework for professional practice can be used for a wide range of purposes, from meeting novices’ needs to enhancing veterans’ skills. Because teaching is complex, it is helpful to have a road map through the territory, structured around a shared understanding of teaching. Novice teachers, of necessity, are concerned with day-to-day survival; experienced teachers want to improve their effectiveness and help their colleagues do so as well; highly accomplished teachers want to move toward advanced certification and serve as a resource to less-experienced colleagues. (p. 2)

Those mentors, coaches and supervisors who support teachers must be able to recognize classroom examples of the different components of practice, interpret that evidence against specific levels of performance, and engage teachers in productive conversations about their practice (Danielson, 2011).

According to Costa and Kallick (2010) our students are in the 21st century and are waiting for the teachers and the curriculum to catch up with them. Educators are realizing a new vision is becoming increasingly apparent as we become more concerned with survival skills needed for our children’s future, for the perpetuation of our democratic society, and even for our planetary existence (Costa & Kallick, 2010).

Significance of the Study

The most crucial role of the system leader is the focus on improving the instructional core of his or her organization. Elmore (2000) noted, the practices of successful principals dictate that they are directly and explicitly accountable for the quality of instruction and performance in their schools.

This study will serve as an additional body of knowledge around the important task of middle school leaders to educate students at high levels so that they will be able to navigate their world. School leaders will be provided with information that may impact their decision-making processes and help them ensure that students are exposed to high levels of engagement in learning ultimately improving student achievement and cultivating lifelong learners.

Delimitations: This study included schools that are located in the urban New York City region and did not extend to Long Island or neighboring suburbs. Middle school principals with a minimum of two years of leadership were the focus of the study.

Limitations

The current study has limitations. The participants were principals who provided their insights through the interview questions. This self-reporting was solely their views and as a result, had the potential to be biased. The school leaders could have presented their practices in an overinflated manner as this information is directly aligned to their personal abilities and leadership. The practices they described could be present in their buildings but might not be as consistently evident as described.

LITERATURE REVIEW

Introduction

The middle years, Grade 6-8, herald a period during which students are experiencing cognitive, emotional, physical, and social changes (Schunk & Meece, 2006). This complex phase of their lives is characterized by a growing desire to think independently while at the same time caring deeply about being accepted by their peers and being part of a group (Caskey & Anfara, 2007). Added to these dynamics are the feelings of vulnerability and self-consciousness that come with puberty.

Educators have an imposing set of forces to consider when designing instructional strategies to effectively reach middle school students (Maday, 2008). In recent years, several research studies have focused on the role of student engagement on student learning, following the school of thought that student engagement is essential to quality instruction. They purport when students are disengaged from their learning, the likelihood of academic success is diminished (Danielson 1996; Finn, 1993; Park 2003; Schlechty 2011; Sibold 2016).

This on-going discussion of student engagement raises the issue as to whether or not schools are adequately preparing students to meet the demands of the challenging world in which they live. While some researchers argue “our students are in the 21st century and are waiting for the teachers and the curriculum to catch up with them” (Costa & Kallick, 2010, p.1) relegating the construct of student engagement directly to the school and staff, others contend that learning is influenced by how
individuals participate in educationally purposeful activities (Coates, 2005) placing the onus of student engagement on the students. As educators and policy makers become more concerned with ensuring students are provided with the survival skills and expertise needed to navigate the 21st century, many have begun to acknowledge that a new vision is needed (Costa & Kallick, 2010). Subsequently, several theoretical frameworks have been developed to provide guidance and insights on engaging students in learning. One framework that is at the forefront of this movement is the Danielson Framework for Teaching “which identifies those aspects of a teacher’s responsibilities that have been documented through empirical studies and theoretical research as promoting improved student learning” (Teacher Effectiveness Program, 2013, p. 4). It is through this lens that this research study will be conducted.

With studies recommending schools conduct widespread systemic reform to improve student performance, focusing on student engagement continues to be an on-going discussion (Daggett, 2014; Fullan & Dufour, 2012). Several research studies contend student engagement has been traditionally linked to the instruction provided by classroom teachers (Patrick, 2001; Schlechty, 2011) but little has been studied about the principal’s role in ensuring students are engaged in classroom instruction. The purpose of this study is to investigate the extent to which school leaders develop teacher instructional practices that cultivate student engagement across disciplines in Grade 6-8 classrooms. Using the lens of the Danielson Framework for Teaching, this study will explore the extent to which system leaders invest in the development of teacher practice. Additionally, it will examine the extent to which the elements of Danielson’s Framework are utilized to facilitate student engagement and the leadership role of the principal in promoting student engagement in the classroom. The literature and research will be explored through three primary themes: student engagement, leadership role in improving teacher practice, and implementing change.

**Student Engagement**

Student engagement has primarily and historically focused on increasing achievement, positive behaviors, and a sense of belonging in students so they might remain in school (Taylor & Parsons, 2011). It first emerged as a concept in the 1980s and rose to prominence in the 1990s. Because the focus was on high school completion, research on student engagement targeted students in middle school and high school where disengagement typically becomes a concern (Willms et al., 2009). Student engagement was regarded as a way to re-engage or reclaim predominantly socio-economically disadvantaged students, at risk of dropping out of high school. Taylor and Parsons (2011) note, over time, student engagement strategies were further developed and implemented as a way to manage classroom behavior but over time has evolved into the goal of hopefully creating lifelong learners. They further stated, “Student engagement has become a strategic process for learning and an accountability outcome onto itself” (p.5).

Finn (1993), whose work has framed several early research studies on engagement, examined the role of engagement or involvement in schools as it relates to student achievement. His study, considered to be on the “cutting edge” of methodological developments (National Center for Education Statistics Research and Development Reports, 1993), examined the proposition that students who did not remain active in school or class may be at risk for failure. He presented a model of engagement with a behavioral component he labeled ‘participation’. His study recommended early and persistent efforts should be made to promote participation amongst youngsters who are noninvolved in elementary grades. He further declared youngsters who are not active participants in class, or in school, are susceptible to failure despite their race or socio-economic status. Finn (1993) suggested further research should be conducted to identify classroom aspects and elements geared toward encouraging perseverance of engagement behaviors as engagement behaviors are “amenable to influence” (p. 7). Considering the problem of disengagement, Finn (1993) called for research to identify the “manipulable aspects of classroom processes . . . that encourage student engagement” (p.1). Newmann (1992) also focused on student engagement stating the most immediate and persisting issue for students and teachers is not low achievement, but student disengagement.

Engaged students make a psychological investment in learning. They try hard to learn what school offers. They take pride not simply in earning the formal indicators of success (grades), but in understanding the material and incorporating or internalizing it in their lives. (p. 3) Newmann (1992) identified indicators of disengaged students to include disruption of classes,
skipping classes, and failing to complete assignments. He also pointed out some students who were disengaged behaved well in school but displayed little excitement or commitment or pride in mastering the curriculum.

For the past two decades, the concept of student engagement has grown from simple attention in class to a construct comprised of cognitive, emotional, and behavioral components that embody and further develop motivation for learning. Similarly, the goals of student engagement have evolved from dropout prevention to improved outcomes for lifelong learning (Christenson, Reschly, & Wylie, 2012)

Many students thrive during adolescence. They are deeply engaged in their studies, participate in, and often lead, school and community activities, and seem set for life as they move on to post-secondary education with certificates and awards in hand (Willms et al., 2009). But many others, “withdraw from the learning process, in body or in spirit, before they have achieved the level of knowledge and understanding needed to succeed as adults in today’s world” (Dunning, 2008, p. 3).

Theorist Csikszentmihalyi (1997) linked student engagement to the learning environment through his “Flow: The Psychology of Optimal Experience Theory.” This theory suggests engagement is a deep absorption in an activity that is intrinsically interesting. Individuals in the flow see the activity as worthwhile even if no further goal is reached. Activities with a high skill level and low-challenge lead to boredom and disengagement; activities with a low-skill and low-challenge lead to apathy; activities with a low-skill and high-challenge cause students to worry and lack confidence; while activities with a high-skill level and high-challenge create a balance that allows flow to be experienced. Sometimes students note they “are in a zone” (Taylor & Parsons, 2011, p. 20). This zone—the flow state—is intrinsic motivation at its best. During such times concerns about food, time, and behavior are forgotten and students are fully engaged (Taylor & Parsons, 2011). Under Flow Theory, the conceptualization of engagement is the culmination of concentration, interest and enjoyment instead of apathy or boredom (Shernoff, Csikszentmihalyi, Schneider, & Shernoff, 2003).

There is no single prevailing definition for student engagement in the literature and different researchers offer varied perceptions of its meaning. In fact, many researchers argue defining, operationalizing and measuring engagement is similar to the challenges that occur when dealing with other broad psychological constructions due to the individualized nature of how it is perceived (Dweck & Molden, 2005). Student engagement is a multi-dimensional construct—one that requires an understanding of affective connections within the academic environment (e.g., positive adult-student and peer relationships) and active student behavior (e.g., attendance, participation, effort, prosocial behavior) (Appleton, Christenson, & Furlong, 2008; Newmann, Wehlage, & Lamborn, 1992).

Frederick et al. (2004), building on prior research, including Bloom (1965), identified three dimensions of engagement in the research literature. They cite the first as behavioral engagement stating students who are behaviorally engaged would typically comply with behavioral norms, such as attendance and involvement, and would demonstrate the absence of disruptive or negative behavior. The second is emotional engagement; here students who engage emotionally would experience affective reactions such as interest, enjoyment, or a sense of belonging. The third dimension is cognitive engagement. Cognitively engaged students would be invested in their learning, would seek to go beyond the requirements, and would relish challenge (Frederick et al., 2004, p. 62-63). Schlechty (2011) refers to this as the voluntary commitment of time to task. This suggests that it is the student who intentionally commits to learning instead of relying on external factors.

Newmann (1992), defines engagement as the “active involvement, commitment, and concentrated attention, in contrast to superficial participation, apathy, or lack of interest” (p. 11). Engaged students make a psychological investment in their learning. They try hard to learn what school offers. They take pride not simply in earning the formal indicators of success (grades), but in understanding the material and incorporating or internalizing it in their lives.

Newmann (1992) construes engagement in academic work to “result largely from three broad factors: students’ underlying need for competence, the extent to which students experience membership in the school, and the authenticity of the work they are asked to complete (p. 17). He further explains, school membership refers to the conditions that allow students to buy-into the notion of schooling as deserving of their time and effort. This includes “establishing clarity of purpose, equity, and personal support, providing frequent occasions...
for all students to experience educational success, and integrating all of these features into a climate of caring” (p. 20). In the earlier research studies, the indicators for successful students were distinct from their unsuccessful peers on a range of participatory behaviors in class and out. Successful students attend class and arrive on time; they come to class prepared; they participate in, rather than disrupt, classroom activities; and they do more homework and participate more actively in extracurricular activities.

Several studies (Baubles, 2007; Marks, 2000; Newmann, 1992) agree that student engagement cannot be separated from the motivation, autonomy, interest, and effort students expend in the work of learning, understanding, or mastering skills academic work is intended to promote. Individuals learn best when they have a connection to their learning. Trowler (2010) states student engagement is concerned with the interaction between the time, effort, and other relevant resources invested by both students and their institutions intended to optimize the student experience and enhance the learning outcomes and development of students. She concurs that disengagement in school is associated with behavioral problems and decreased academic achievement. In contrast, pupils who are engaged in school develop the academic and social efficacies that underlie successful adulthood (Covell, McNeil, & Howe 2009).

With the current shifts in education to standard-based learning and accountability, educators are increasing their focus on engaging students in classroom learning and accountability, and relatedness, and meaningfulness as principles integral to student motivation. When supported, these have been shown to improve the quality, consistency, and persistence of one’s effort at a task thus supporting student engagement (Sibold, 2016). The researchers utilized four motivation constructs as the conceptual basis of the intervention for the following reasons: “First, three of the four principles (e.g., autonomy, competence, and relatedness/belongingness) are considered basic human needs, thus central to participation and engagement in school. The fourth principle, meaningfulness, pertains to the interest or value for learning, a feature that students often mention in relation to emotional engagement” (Turner, et al., p. 3).

The researchers met with teachers four times per year to help them learn and enact instructional practices shown to support student engagement. They found patterns of teacher-student interaction changed over the course of the intervention and that theoretically supported changes in teachers’ instruction, when sustained, have the potential to enhance student behavioral engagement. Two distinct patterns in their research showed an increase of teacher motivational support and student engagement. Newmann (1992) contends engagement implies more than motivation which refers to the desire to succeed in school-related tasks. “Students can be motivated to perform well but are still not engaged. Focus should be on how students demonstrate active interest, effort and concentration in specific work the teachers design” (p. 13). Research demonstrates student engagement can be improved as a teacher’s authentic instruction makes positive differences in student engagement (Park, 2003). Concurring with this notion, Coates (2005) states the concept of student engagement is based on the premise learning is influenced by how an individual participates in educationally purposeful activities. While students are seen to be responsible for constructing their knowledge, learning is also seen to depend on institutions and staff—generating conditions that stimulate and encourage involvement. Students who perceive a positive working relationship with their instructor are more likely to volunteer their energy to the expectations set by that individual. This includes the ability of the teacher to help students self-regulate and thus manage their own engagement (Manigault, 2014).

A myriad of research studies have linked student engagement to the quality of the classroom interaction between students and teachers, instructional practices, and classroom climate (Willms et al., 2009; Marks, 2000). In recent years, several organizations have worked with educators, businesses, communities and govern-
ment leaders to develop comprehensive plans for the improvement of the knowledge and skills of learners. The P21 Framework for 21st Century Learning (2002) is one such organization as it provides specific elements that are the critical systems necessary to ensure 21st century readiness for every student. The Framework notes that if the standards, assessments, curriculum, instruction, professional development and learning environments are aligned, the result will produce students who are equipped with the skill, knowledge, and expertise needed to engage students in their learning and to master their careers and life.

These elements are:
1. Content Knowledge and 21st century themes
2. Life and Career skills
   - Critical thinking
   - Collaboration
   - Creativity
   - Communication

Building off similar research studies, the Canadian Education Association conducted a research project involving over 32,000 students. This multi-year research and development initiative was in response to concerns about the number of adolescents from diverse backgrounds who were dropping out of school, and about the gaps in achievement among different groups of students. The initiative was designed to capture, assess, and inspire new ideas for enhancing the learning experiences of adolescents in classrooms and schools, using an expanded framework for thinking about student engagement and its relationship to learning (Willms et al., 2009). The researchers included a new dimension, intellectual intelligence, to their definition of engagement.

Researchers Willms et al. (2009) define student engagement as the extent to which students identify with and value schooling outcomes, have a sense of belonging at school, participate in academic and non-academic activities, strive to meet the formal requirements of schooling, and make a serious personal investment in learning. They also identify three dimensions of engagement:

1. **Social Engagement** A sense of belonging and participation in school life.
2. **Academic Engagement** Participation in the formal requirements of schooling.
3. **Intellectual Engagement** A serious emotional and cognitive investment in learning, using higher order thinking skills (analysis and evaluation) to increase understanding, solve complex problems, or construct new knowledge. (p. 9)

According to Willms et al. (2009) the construct of intellectual engagement is fairly new and allowed them to investigate if classroom experiences can be improved to create more effective and engaging learning environments. A number of researchers are clear that the work students want and need to do should be intellectually engaging (Csikszentmihalyi, 1997; Danielson, 2009; Dweck, 2006; Fried, 2001; Jardine, Clifford, & Friesen, 2008; Schlechty, 2002; Willms et al., 2009).

The researchers found intellectual engagement decreases steadily and significantly from Grade 6 to Grade 12. The longer students remain in school, the less likely they are to be intellectually engaged. Additionally, students are more likely to be socially engaged in schools with a positive classroom and school climate, with high expectations for student success appearing to be the most important factor. They also found students are more likely to have positive records of attendance when classroom and school learning climates include high expectations for student success and appropriate instructional challenge. Students are more likely to be intellectually engaged when classroom and school learning climates reflect the effective use of learning time, positive teacher/student relations and disciplinary climates, high expectations for success, and appropriate instructional challenge (Friesen, 2009).

The Danielson Framework for Teaching, the theoretical framework that guided this research study, provides clearly defined critical attributes and possible examples to support improved teaching and learning in classrooms where students are engaged in high levels of learning.

**Danielson Framework for Teaching**

“Student engagement in learning is the centerpiece of the Danielson Framework for Teaching: all other components contribute to it” (Danielson Rubric, 2013, p.37). First published by ASCD in 1996, Enhancing Professional Practice: A Framework for Teaching was an outgrowth of the research compiled by Educational Testing Service (ETS) for the development of Praxis III: Classroom Performance Assessments, an observation-based evaluation of first-year teachers, used for the purpose of licensing.

In 2009, the Bill and Melinda Gates Foundation embarked on the large research project, Measures of Effective Teaching (MET). The program contained videos that captured over 23,000 lessons that were analyzed ac-
According to five observation protocols, and the results of those analyses (together with other measures) correlated to value-added measures of student learning. The aim of the study was to determine which aspects of a teacher’s practice were most highly correlated with high levels of student progress. The Framework for Teaching was among the models selected for this large-scale study which involved the (online) training and certification of hundreds of observers for the purpose of rating the quality of teaching in the lessons. “In order to fulfill this obligation, it became necessary to supply additional tools to aid in the training of observers, so that they could make accurate and consistent judgments about teaching practice as demonstrated in the large numbers of videotaped lessons” (p. 5). Subsequently, the model refined its rubric-related language and added critical attributes and possible examples for each component identified. These served to provide further guidance to observers and to clarify what practice and performance would look like in an array of settings. According to the Danielson Rubric (2013), practitioners found the enhancements not only made it easier to determine the level of performance reflected in a classroom for each component of the Framework, but they also contributed to judgments that are more accurate and worthy of confidence (p. 3).

The slightly modified Framework was released as the Danielson Rubric in 2013 as an evaluative tool aligned to the components of the Common Core State Standards. This standards-based teacher evaluation system is currently utilized as an evaluative tool in several school systems, including New York City, for which a specific Danielson Rubric (2013) has been adapted. In the revised rubric, the language remains the same but it excludes the introduction to how the rubric has changed since its original publication. It also provides a more summative and accurate description of the components than others using the original performance indicators developed by Danielson. The Levels of teacher practice range from ineffective on the low end, to highly effective practices as the ideal. These levels of teacher practice are delineated by specific elements and critical attributes contained in the rubric.

Early engagement models (Finn, 1998; Newmann, 1992) provide a clear understanding of the importance of engagement to student connectedness to school. However, they provide only a limited understanding of how the work that students are expected to complete affects their perceptions of, or the reality of their engagement in the learning process (Manigault, 2014). The Danielson Framework for Teaching outlines critical attributes and possible examples of engagement expectations that should be evident in effective teaching and learning. In a review of literature on student engagement, Taylor and Parsons (2011) noted there has been a shift in the way we think about student engagement “the greatest of which is the change from focusing upon disengaged students (who are not learning) to engaged learners (who are learning)” (p. 2). They theorized the older work about student engagement attempted to reshape ‘renegade’ students back into the fold of schooling, but current work is more willing to revision schools to fit the learning needs of students (Taylor & Parsons, 2011).

The goal of the Charlotte Danielson Framework for Teaching (2013) is to provide support for student achievement and professional best-practice through the domains of Planning and Preparation, Classroom Environment, Instruction, and Professional Responsibilities. Student engagement is at the core of the domain on Instruction. It defines student engagement not as “busy” or “on task” but as “intellectually active”. It outlines that while the learning activities in which students are involved may be “hands on, they should always be “minds on” (Teacher Effectiveness Program, 2013, p. 14).

The research-based Danielson Framework, outlines specific actions and responsibilities aligned to successful teaching and learning outcomes through the critical attributes and examples of engagement it identifies. It identifies those aspects of a teacher’s responsibilities that have been documented through empirical studies and theoretical research as promoting improved student learning: In the classrooms of accomplished teachers, all students are highly engaged in learning. They make significant contributions to the success of the class through participation in high-level discussions and active involvement in their learning and the learning of others. Teacher explanations are clear and invite student intellectual engagement. (p. 13)

The Framework for Teaching identifies four critical elements that, if present, will result in high levels of student engagement: activities and assignment; grouping of students; instructional material; structure and pacing (Danielson, 2013). The activities and assignments are crucial to student engagement as they determine the instructional tasks students are being asked to perform. It is recommended the tasks should be cognitively challenging allowing students to share their thinking, reflect on their learning, and ask critical questions, thus en-
enhancing metacognition. Students should be engaged in discussions, “encouraged to ask ‘what –if’ questions, select their work from a range of (teacher-arranged) choices, and make important contributions to the intellectual life of the class” (Danielson, 2013, p.14). Danielson (2013) states there are many options for student grouping in this Framework. Students may be grouped according to the tasks designed and their individual needs or they may be formed according to student choice. The decision is one the classroom teacher makes daily to advance the learning experience. Additionally, the material selected should engage students in deep learning. She further asserts lessons should be paced to prevent boredom or rush and should allow time for reflection and closure.

“The best evidence for student engagement is what students are saying and doing as a consequence of what the teacher does, or has done, or has planned” (Danielson, 2013, p. 14). She adds, a lesson in which students are engaged usually has a discernible structure: a beginning, a middle, and an end with scaffolding provided by the teacher or by the activities created for the lesson. Students are encouraged to reflect on what they have learned to ensure they are obtaining important information from the discussions that occur during the lesson, the texts they have read, or the questions they have posed. Danielson suggested further, “A highly effective learning environment is characterized as one in which virtually all students are intellectually engaged in challenging content through well-designed learning tasks and activities that require complex thinking by students” (p. 37). Danielson (2011) stresses “No matter how good a lesson is, we can always make it better. Just as in other professions, every teacher has the responsibility to be involved in a career-long quest to improve practice” (p. 33).

While the Danielson Framework for Teaching is not the only existing definition of effective classroom engagement practices the responsibilities it entails seek to define, for school leaders, what teachers should know and be able to do in the exercise of their profession (Danielson, 2013).

**Leadership Role in Improving Teacher Practice**

The closer educational leaders get to the core business of teaching and learning, the more likely they are to have a positive impact on student outcome (Robinson, Lloyd, & Rowe, 2008). Leaders are responsible for the effectiveness of organizations as the success or failure of an organization rests on the quality of their decision making (Bennis, 2009). Race to the Top guidelines (2009), a national imperative introduced by the Obama administration to improve schools, requires principals to conduct a rigorous supervision process which influences a teacher’s professional development, compensation, promotion, retention, tenure, and certification. The guidelines recommend rewarding highly effective educators with merit pay and removing those deemed ineffective. However, these notions do not improve teaching and learning (Dufour & Mattos, 2013).

“It is time to let go of the myth of the charismatic individual leader who has it all figured out, as no one person can substantively or unilaterally change an organization. Effective leaders recognize that they cannot accomplish great things alone. (Dufour & Marzano, 2011, p. 1)

While the decades old conversations about school reform continue, theorists Dufour and Marzano (2011) indicate doubt that the problems of low achievement and student engagement are a result of teachers who refuse to work hard or who are disinterested in the well-being of their students. Conversely, they cite the problem as a lack of the collective capacity to “promote learning for all students in the existing structures and cultures of the system in which they work” (p. 15). The theorists credit Ernest Boyer, to whom they refer to as one of the most influential figures in the advancement of public education and teacher training, for highlighting the connection between school improvement and the individuals who work in schools. They explained that Boyer noted, “When you talk about school improvement, you’re talking about people improvement” (p.15). The idea is that the school is essentially the individuals who work there and any efforts should be aimed at those individuals. Schools, therefore, can only be as good as the people who work in them (p. 20). According to Dufour and Mattos (2013), if principals want to improve achievement in their schools, rather than focus on the individual inspection of teaching, they must focus on the collective analysis of evidence of student learning which can be achieved in the collaborative culture and collective responsibility of a Professional Learning Community (PLC).

Research has steadily converged on the importance of strong learning communities for teacher growth and commitment, suggesting their potential contribution to favorable student outcomes (Dufour & Fullan, 2013; Freisen, 2009; Marzano & Dufour, 2011; Riggio et al., 2008; Ryan & Patrick, 2001). In support of learning communities, Dufour and Eaker (1998) content that in a
Professional Learning Community (PLC), educators create an environment which fosters mutual cooperation, emotional support, and personal growth, as they work together to achieve what they cannot accomplish alone. They further contend that schools where staff members espouse a shared responsibility for student learning and are organized to sustain a focus on instructional improvement are likely to yield high levels of student learning. Little (2016), postulates the quality of a school’s teaching staff can be judged by the depth and breadth of knowledge, skill, and judgment that teachers bring to their work both individually and collectively.

If one of the most important variables in student learning is the quality of instruction students receive each day, then schools must utilize strategies that result in more good teaching in more classrooms more of the time (Dufour & Marzano, 2011, p. 20). For far too long, teachers have worked in isolated classrooms with only brief interludes to discuss professional learning. Research shows, however, teachers improve their practice and hence, their effectiveness, in the company of their peers (Friesen, 2009). Countless research studies confirm the positive effect of the PLC process on both student and adult learning (Carroll, Fulton, & Doerr, 2010; Louis, Leithwood, Wahlstrom, & Anderson, 2010; Newmann & Wehlage, 1995). According to Dufour and Mattos (2013) research also notes educators in schools that have embraced PLCs are more likely to take collective responsibility for student learning, help students achieve at higher levels, and express higher levels of professional satisfaction. These individuals also share teaching practices, make results transparent, engage in critical conversations about improving instruction, and institutionalize continued improvement (Byrk, Sebring, Allensworth, Luppescu, & Easton, 2010). Dufour (2004) notes powerful conversations that will transform learning should focus on promoting team learning that will improve classroom practice as this will lead to higher levels of student achievement.

To foster a school culture in which PLCs flourish and student achievement improves, Dufour and Mattos (2013) recommend five key steps the school leader should take. These are:

1. Embrace the premise that the fundamental purpose of school is to ensure that all students learn at the highest levels and enlist the staff in examining existing practice, program, and procedure to ensure it aligns with that purpose.
2. Organize staff into meaningful collaborative teams that take collaborative responsibility for student learning and work interdependently on goals for which members are mutually accountable.
3. Have teams establish a viable curriculum for each unit of study that clarifies essential learning for all students
4. Use evidence of student learning to identify students who need additional support or enrichment, teachers who struggle to help students become proficient, identify skills or concepts teachers need to improve on, and coordinate with other teams or each other to build teacher expertise
5. Create a coordinated intervention plan to ensure that students who struggle receive additional time and support. (p. 37)

When Elmore (2002) discusses the issue of school accountability he insists it should be a “reciprocal process”. He notes for every increment of performance that school leaders expect from teachers, they have an equal responsibility to provide teachers with the capacity to help them meet this expectation. He maintains this requires “a strategy for investing in the knowledge and skills of educators” (Elmore, 2002, p. 5). This investment should take the form of professional development, which describes activities designed in some way to increase the skill and knowledge of educators (Fenstermacher & Berliner, 1985). Building on the original standards for professional development adopted by the National Development Council in 1995, Elmore (2002) developed the Consensus View of Professional Development.

In a given school or school system, specific professional development activities would follow from a well-articulated mission or purpose for the organization and that purpose would be anchored on some statement about student learning; should embody a clear model of adult learning; should be designed to develop the capacity of teachers to work collaboratively on problems of practice within their own schools and with practitioners in other setting; should demonstrate commitment to consistency and focus over the long term; should occur as close as possible to the location where teaching takes place, and should be continually evaluated on the basis of the effect it has on student achievement. (p. 8)

Recent findings about top-performing school systems in the world support the notion learning improves when teacher learning happens in the classroom, teacher leadership receives consistent support, and teachers have opportunities to learn from one another (McKinsey & Company, 2007). It is critical for teachers to
have a familiarity with one another’s work that comes with frequent conversations of a professional nature centered on the work, access to each other’s classrooms, and collaborative planning time. It is also very clear that as self-reflective as a teacher may be, receiving constructive feedback from one’s peers is imperative in order to improve teaching (Friesen, 2009). Extensive studies have examined existing leadership styles and their impact on organizations. “The research supporting the importance of effective school leaders in creating the conditions for effective schooling is growing rapidly” (Dufour & Marzano, 2011, p. 47). According to Chang (2011), distributed leadership has a positive influence on academic optimism and indirectly affects student academic achievement. Robinson et al. (2008) conducted a meta-analysis study that examined the impact of leadership on student academic and non-academic outcomes. The study indicated the average effect of instructional leadership on student outcomes was three to four times more than that of transformational leadership. A study conducted by Heck and Hallinger (2009) examined the effect of distributed school leadership on learning and concluded there was significant direct effects of distributed leadership on changes in the school’s academic capacity and indirect effects on student growth rates in math. The researchers found that principal leadership was largely indirect. Principals appeared to impact student learning by creating conditions in the school that would have a positive impact on teacher practice and student learning. While leadership practices are particular to school context, the preponderance of evidence indicates school principals contribute to school effectiveness and student achievement indirectly through actions they take to influence school and classroom conditions (Leithwood et al., 2004). The closer educational leaders get to the core business of teaching and learning, the more likely they are to have a positive impact on student outcomes (Robinson et al., 2008). This supports Burns’ (1978) views that a transformational leader is typically focused on the end product uniting staff in pursuit of goals that match the leader’s vision, while finding ways to excite even the most uninterested employee. This is further supported by the research of Finnegan and Stewart (2009). They found transformational leadership behaviors the most effective form of leadership as it translates into a culture of trust. Principals do indeed make a difference in student learning and the most powerful strategy for having a positive impact on that learning is to facilitate the learning of the educators who serve students through the Professional Learning Community process (Dufour & Marzano, 2011).

Senge’s (1990) Fifth Discipline is credited for reintroducing the term “learning organization,” championing the idea that school should be about adult learning as well as student learning. Schools that operate professional learning communities recognize its members must engage in ongoing study and the constant practice that characterizes an organization committed to continuous improvement (Dufour & Eaker, 1998; Little, 2006). Little (2006) concurs, pointing out the likelihood of a school being effective in supporting high levels of student learning and well-being is heightened when it plays a “powerful, deliberate, and consequential role in teacher learning (p. 2). She recommends four goals for teacher learning:

Making headway on the school’s central goals, priorities, or problems; building the knowledge, skill, and disposition to teach high standards; cultivating strong professional community conducive to learning and improving; and sustaining teacher commitment to teaching. These goals are designed to join the needs and interest of individual teachers to the collective needs and interest of the school. (pp. 2-3)

“The quality of a school’s teaching staff can be judged by the breadth of knowledge, skill, and judgement that teachers bring to their work both individually and collectively (Little, 2006, p. 2). Senge’s (1990) five disciplines of a learning organization provide guidelines for leaders; system thinking, personal mastery, mental models, shared vision, and team learning. Senge (1990) states system thinking is the cornerstone of the learning organization as it encompasses all the other disciplines. He defines the concept as the leader’s ability to understand patterns that will allow for proactivity rather than reactivity when change in program and practices are being made. Peck (1998) points out that it takes time to create such a community. He intuits, before true communities are formed, members go through the stages of pseudo-community where everyone agrees with each other and ignores individual differences, to chaos where these differences are highlighted and addressed. Finally, when members of the community enter the stage of emptiness and are devoid of judgement, control, prejudices and bias; true communities will form. Members will then be able to communicate honestly with each other about their abilities and limitations.
Little (2006) also touts the merit of ensuring these communities are systemically created to support teachers in “acquiring a deep understanding of what it means for children to learn core concepts and skills in particular domain” (p.4). She advocates for a focus on the ‘instructional triangle’ (p.6) to guide clear, focused professional learning. The triangle includes a focus on the strengthening of teachers’ knowledge of subject-specific content concepts, a grasp of student thinking and learning (closely examining student work and student thinking) and teachers’ emphasis on understanding the nature and significance of student diversity (cultural, linguistic, and cognitive).

When school leaders combine knowledge and skills with the necessary support systems of standards, assessments, curriculum and instruction, professional development, and learning communities “students are more engaged in the learning process and graduate better prepared to thrive in today’s digitally and globally interconnected world” (F21, 2007).

Ultimately, “school is more likely to be effective in supporting high levels of student learning and well-being when it also plays a powerful, deliberate, and consequential role in teacher learning” (Little, 2006, p. 2). Schools seeking to engage in a change project to improve student learning are likely to do so successfully by focusing on improving the quality of teacher instruction.

Implementing Change

Fullan (2002) proposed, “Effective school leaders are key to large-scale, sustainable education reform” (p. 15). The research demonstrates, if students are to be prepared for the complex demands of the 21st century, systemic school improvement is necessary (Bandura, 2006; Costa & Kallick, 2010; Elmore, 2002; Freisen, 2009; Hargreaves, 2004; P21, 2007). Engaging teachers in school improvement, as a collaborative knowledge-building process, is also key to understanding the types of practices educators might start to cultivate, to improve the educational experiences and learning outcomes for all students (Friesen, 2009). The key to improvement might be transforming schools from organizations into communities (Sergiovanni, 1992).

Kotter (2012) theorizes the rate of change is not going to slow down anytime soon. If anything, competition in most industries will probably speed up even more “in the next few decades” (p. 3). Wheatley (1996) agrees with this notion of change, “Everything is in a constant process of discovery and creating” (p. 13). Change can be a difficult, slow, and painful process due the interconnectedness of things. When one element in a system is changed, others are ultimately impacted. Kotter (2012) contends that driving change requires eight strategic steps which, if undertaken well, will “significantly reduce the incidence of disappointment, waste of resources, burned out, scared or frustrated employees” (p. 4). He notes when leaders remain cognizant of the barriers that mitigate against successful transformation and address them well, successful change processes will result. For Kotter (2012), the following eight steps are integral to any successful change process: (1) establishing a sense of urgency, (2) creating a guiding coalition, (3) developing a vision and strategy, (4) communicating the change vision, (5) empowering broad-minded action, (6) generating short-term wins, (7) consolidate thinking and producing more change, (8) anchoring new approaches in the culture (p. 19). He emphasizes effective change hinges on the completion of all the steps, although not necessarily in that order, as each is vital for change to be successful. Individuals have a personal connection to their work and how they perform it. Subsequently, for most people, embracing change is a difficult construct. Bridges (1991) agrees that change happens in everyone’s life even if one does not agree with it. However, while change is situational and can be planned, it is on the slow psychological process of transition that leaders should also be attuned. It may be surprising to learn that where organizations often fall short is not in the mechanics of designing and deploying change itself. Rather, in most situations, the change occurs but the people affected by it are left behind, without the proper motivation, knowledge, or support to perform in the post-change environment (Conrad, 2014). Bridges (1991) suggests that although even the best leaders cannot anticipate all the changes they may encounter or initiate, all leaders can improve their effectiveness in helping their organizations through the transition process. It is a three-phase process that people go through as they internalize and come to terms with the details of the new situation that a change brings about.

Theorist Edgar Schein (2010) points out organizational learning, development and planned change cannot be understood without first considering culture as the primary source of resistance to change. Culture is constantly reenacted and created by our interactions with others and shaped by our own behavior (Schein, 2010).
Organizations do not adapt a culture in a single day, instead it’s formed over a course of time as the employees go through various changes, adapt to external environment, and solve problems (Schein, 2010). He identifies three levels of culture: (1) Artifacts, (2) Espoused Beliefs and Values, and (3) Basic Underlying Assumptions. The artifacts are the visible products of the group, such as the slogan, handbooks, and architecture of the organization. The espoused values are those beliefs, ideas, goals and values about how things should be. The basic underlying assumptions are those unconscious, taken for granted beliefs and values we hold, those that determine our behaviors, our perceptions, our thoughts, and our feelings. “Cultures tell their members who they are, and how to behave toward each other and how to feel good about themselves” (Schein, 2010, p. 29). Essentially, culture is what differentiates an organization from a random collection of people. It is that intangible force attached to the values members hold in common and pass on to others as ‘the way things are done’ in the organization. Deal and Kennedy (1982) define organizational culture as the way things get done around here.

Scharmer (2009) noted the following:

All people effect changes irrespective of the formal title or position they hold but the times in which we live require collective leadership. We cannot meet the challenges at hand if we do not change our inner conditions and illuminate our blind spots -the source of our attention and action. (p. 405)

Like Bridges (1991), Scharmer (2009) argues that leadership arises from people and groups who are capable of letting go of establish ideas, practices, and even identities. Significant innovations are about doing things differently, not just by talking about new ideas. Fullan (2013) reminds us that change is not a destination, but a journey. Whyte (2001) asserts:

Finding work to which we can dedicate ourselves always calls for some kind of courage, some form of heartfelt participation ... the intrinsic worth of work lies in the fact that it connects to larger, fiercer world where we are forced to remember first priorities. (p. 35)

Literature Review Summary

The review of related literature illustrates the challenges school leaders face as they attempt to engage students in the six to eight middle grades in high levels of learning. The literature presented purports students who are engaged in learning are more likely to be successful than students who are disengaged, despite their race, language, or ethnicity, since engaged students exert effort to master the skills, knowledge, and crafts academic work is intended to produce (Newmann, 1993). According to the research literature, (Freisen, 2009; Senge, 1990; Little, 2006) if students are to succeed in the 21st century, it is imperative for school leaders to facilitate systemic school reform that will result in the strengthening of the skills and knowledge of teachers. The recommendations support the establishment of systemic professional learning communities as a viable improvement option (Elmore, 2002).

Several studies in the research literature have concluded student engagement is contingent on the level of interaction between teachers and students in the classroom environment and that student engagement impacts student achievement (Baubles, 2007; Danielson, 2013; Finn, 1993; Schlechty, 2011). The extent to which system leaders develop teacher instructional practices that cultivate student engagement, however, engagement among high need students, however, appears to be limited. This study will serve to add to the existing body of knowledge on student engagement. It will focus on how school leaders ensure teachers are equipped with the skills to educate students at high levels of engagement in order to prepare them to navigate their complex world.

Research Design

According to Creswell (2014), human beings construct meaning as they engage with the world they are interpreting. This qualitative research study sought to examine the role of school leaders in developing and supporting teachers’ ability to engage students in learning. Qualitative research is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem” (Creswell, 2014, p. 4). A qualitative design was selected for this research study since it allows for rich data collection and an opportunity to present “individual meaning and … the complexity of a situation” (Creswell, p.4) in a written report.

Purposeful sampling was utilized in this study. The researcher selected twelve New York City middle school principals for this research. Recruitment was limited to middle school principals with two consecutive years of leadership in a school designated “in good standing”. This means the schools selected were meeting or exceeding the achievement targets established by the New York City Department of Education. These school
leaders play critical roles in the evaluation of day-to-day instructional practices of teachers, utilizing the Danielson Rubric as the evaluative tool. Face-to-face interviews ranging from forty-five minutes to one hour were arranged around the participants’ schedules and conducted with each middle school principal in his/her place of work. Interview questions were semi-structured design in order to allow the researcher the opportunity to question, understand, explore, and describe the data and allow the participant the freedom to describe his or her own feelings and thoughts without being manipulated by the biases of the researcher. McMillan and Schumacher (2006) categorize semi-structured questions as those that have no choices within the questions from which the respondent selects.

The data collected from this phenomenological research study added to the body of knowledge that informs student engagement practices. The design provided an opportunity for the researcher to ascertain school leaders’ perspectives on student engagement, describe their deliberate efforts to ensure teachers are providing engaging learning experiences for students, and cite the elements and attributes of the Danielson Framework used to facilitate student engagement efforts.

Population, Sample and Sampling Procedures
According to the New York City Department of Education School Quality Result (2016-2017), 606 middle schools provide instructional opportunities for students. Of that number, 406 are in good standing, and are led by principals with two or more consecutive years of experience. From this population, a small purposeful sampling of twelve principals was selected. Introductory emails were sent to a total of forty middle school principals and the first twelve to respond, were selected to participate in the study. This non-probability purposeful sampling of principals was chosen because the principals possess a minimum of two consecutive years of experience as leaders in NYC public middle schools which are in good standing. These principals were not only familiar with the Danielson Rubric and its components, but also with professional learning opportunities available to teachers, and the system changes resulting from the implementation of the rubric.

Instrumentation
Qualitative researchers collect data themselves through examining documents, observing behavior, or interviewing participants (Creswell, 2014). According to DiCicco-Bloom and Crabtree (2006), interviews are among the most familiar strategies for collecting qualitative data. Unlike with the more structured surveys, the persons being interviewed are able to actively participate in meaning making instead of being only a source from which information is extracted. Subsequently, the data collection instrument for this research study was in the form of semi-structured, open-ended questions which were administered in face-to-face interviews with middle school principals at the location their work takes place. Creswell (2014) explains, this characteristic of qualitative research allows the researcher to gather information by actually talking directly to people and seeing them act within their context. Interviews helped attain the “purpose of the qualitative research, which is to contribute to a body of knowledge that is conceptual and theoretical and is based on the meanings that life experiences hold for the interviewees” (DiCicco-Bloom & Crabtree, 2006, p. 314).

The interview questions were developed to ensure alignment between the research purpose and information being sought. The researcher developed a written protocol for all interviews to ensure uniformity of the data collection process. An expert panel, knowledgeable in the area of student engagement and school leadership, was used to evaluate the interview questions for reliability and validity. Subsequent to their review, the researcher reviewed and modified the questions, based on their recommendations. Since the research process for qualitative researchers is emergent (Creswell, 2014), requiring flexibility in data collection or modification of questions to glean information, a script was developed to ensure the reliability of the instrument. However, the researcher included additional prompts in the interview script to delve deeper into questions posed and responses offered by the participants but refrained from inserting personal ideas to prevent any compromise to the data collection process. The information provided by the interviewees was recorded, transcribed, and analyzed. Transcripts were sent to interviewees for member checking allowing them an opportunity to assess the accuracy of the information captured.

Data Collection
The researcher sought permission to conduct the study by the Institutional Review Board (IRB) committees at Sage Colleges of Albany and the New York City Department of Education. No interviews or contact with
the participants was initiated until the IRB approvals had been granted.

Once approval had been granted, the researcher contacted participants via email with an introductory letter requesting their participation in the study. They were also sent a letter of Informed Consent outlining the details of the research study. This included the purpose of the research, the nature and duration of the participation, the procedures that would be followed, and the ways in which confidentiality and privacy would be maintained. Additionally, participants were informed of any risks and benefits of the research study and told they had the right to withdraw at any time. The researcher de-identified school sites and participants to maintain confidentiality through the use of pseudonyms in the published research study. Participants were additionally asked to sign a letter of Informed Consent, which clearly stated their participation in the study was voluntary.

Interviews, lasting no more than 45 minutes to one hour, were scheduled with the principals at their place of work at a time that was convenient to them and outside of instructional periods. Data gathered was transcribed via a password protected drive, sent to the transcriber, who signed a confidentiality agreement, and returned to the participants for member checking. This afforded participants the chance to review the data for accuracy and clarify any information provided. All names were redacted from the published documents and pseudonyms used to maintain confidentiality.

**Validity**

Creswell (2007) describes validity as an attempt to assess accuracy of the findings. After the data collected in this research study has been transcribed, it was returned to each participant for member checking. This allowed the participants to scrutinize their responses to ensure the information they provided depicted their intended perspectives. Any changes or adjustments were made at that time to ensure the accuracy of the data. Additionally, prior to the interview process, the questions were reviewed by a panel of experts and modifications made based on their recommendations. Finally, findings were triangulated, allowing the researcher to examine data collected in order to build a “coherent justification for themes” that emerged from the data collected. When completed, this action adds to “the validity of the study” (Creswell, 2014, p. 201).

**Reliability**

All protocols and procedures for the interview were the same and were adhered to verbatim. Participants were asked the same questions from a script developed and included in the Appendix of this document. Next, all data collected were coded in the same manner and double-checked for accuracy.

**Data Analysis**

Interviews, digitally recorded, were transcribed and analyzed. Creswell (2014) asserts that handling quantitative data is not usually a step-by-step process, meaning the analysis does not take place in a linear order but is iterative. After the digitally recorded interview data was transcribed and returned to participants for member checking, it was imported into the Nvivo software to help manage, explore, and identify patterns in the data. Each interview was opened and explored to identify emerging themes or ideas. A node was created to collect the first main idea or theme identified and then a query or text search was conducted to ascertain if this was an emerging theme. All references or related ideas were gathered and stored in the node to allow the researcher to review all the material in the one place. The researcher displayed a word tree to see all references to the theme. The researcher further recorded insights in memos to be utilized in the presentation of findings. This process was continued until all themes or ideas had been identified and no new themes were emerging, resulting in a process referred to as “saturation”. The researcher analyzed the data for answers to the research questions and reported the findings.

**Researcher Bias**

In qualitative research, bias affects the reliability and validity of the findings. Bias is defined as a “personal and sometimes unreasoned judgment” (Merriam-Webster Dictionary, 2018). The researcher engaged in several steps to minimize bias during the research process considering that she is an assistant principal in a middle school and has personal views and experiences related to the topic.

First, the researcher ensured that all ethical guidelines established in the Sage and NYC Department of Education Institution Review Board (IRB) were followed. Next, it was determined that questions posed were objective, open-ended, semi-structured, and not hinged on assumptions or experiences with the research topic. During the interview, the researcher remained in the stance of an interviewer and not as a school leader. This included not deviating from the established script, asking leading questions, nor providing personal insights.
Summary of Findings
Research Question One
Are the elements and attributes of The Danielson Framework for Teaching utilized to facilitate student engagement?
For the purpose of this study, participants were specifically asked to define student engagement, share engagement practices routinely evident in classrooms, share the element of the Danielson Rubric (2013) on which they primarily focused, and identify the element of the rubric with the strongest impact on student engagement. All twelve school leaders interviewed, agreed that active participation is a strong indicator of engagement. The majority of the leaders initially focused on Danielson’s component 3b- Questioning and Discussion Technique as an engagement initiative but also interwove additional components as a part of their instructional focus. Across schools, leaders utilize the elements and components of the Danielson Framework for Teaching (2013) to foster classroom practices that engage students in learning and were able to describe several of those practices during the interviews.
Research Question one, finding one. All twelve school leaders identified active involvement or participation in learning as a strong indicator of student engagement and described a variety of engagement practices routinely evident in classrooms in their schools. Some participants defined student engagement as a cognitive/intellectual construct while a few considered it a psychological one. All respondents concurred that when students are engaged in learning, they are active participants in the learning experiences.
Research Question one, finding two. All participants, twelve of twelve respondents, indicated by their responses that no singular element or component of The Danielson Framework for Teaching guaranteed student engagement. The majority of school leaders agreed that component 3b- Questioning and Discussion Technique played a fundamental role in student engagement. Some, identified components 3d- The Use of Assessment in Instruction and 3c- Engaging students in Learning, as components from the framework that are also important to ensuring students are engaged in their learning. A few principals also identified planning and preparation for instruction as components essential to fostering student engagement.
Research Question one, finding three. Each administrator explicitly described engagement practices that are built into the culture of the school and are routinely evident in classroom instruction. These activities are centered on collaborations which allow students to frequently interact with each other through meaningful discourse and learning activities.
Research Question Two
What is the leadership role of the principal in promoting student engagement in the classroom?
Research Question two, finding one. All twelve school leaders interviewed, prioritized teacher learning and accepted this as a primary responsibility. Some considered their role as one of facilitator of learning, others saw themselves as staff developers, while others self-identified as coaches and instructional leaders.
Research Question two, finding two. In all twelve schools, administrators have developed structures that provide teachers with opportunities to assume leadership roles in the school community. Teachers receiving effective or highly effective ratings from the Danielson Rubric (2013) were utilized as grade leaders, coaches, team leaders, and model teachers. These teachers received professional development provided by the leaders themselves or by coaches affiliated with community-based or Department of Education initiatives. They routinely and strategically shared best practices with teachers in their schools.
Research Question two, finding three. Twelve of twelve school leaders explicitly indicated they monitor the impact of professional learning on student engagement. Classroom observations emerged as the primary method participants used to monitor the impact or effectiveness of professional learning. Most participants work with their teacher leaders and assistant principals to monitor the implementation of strategies shared in professional development sessions. Some principals required teachers to immediately implement new learning while others provided additional support as well as time for teachers to develop the new skills, before routine implementation is required. Many principals relied on conversations with teachers and students to provide additional support, aligned to teacher needs, in order to ensure implementation. A few leaders insisted their teachers participate mainly in cycles of learning instead of participating in arbitrary learning sessions.
Research Question Three
In what ways do principals invest in teacher development to promote student engagement in the classroom? Teacher collaboration around teaching and learning is a common practice in the schools of good standing included in this study. The principals unanimously indicated the necessity of structured periods of time
allocated during the instructional day, to permit teachers to work together on issues related to their practice. They described varying structures ranging from once weekly to once daily teacher meetings, designed to provide a forum for the assessment of student progress and the sharing of best practices. Community-based resources such as those provided by the New York City Department of Education, the local superintendents’ offices, and other entities, are leveraged to further build teacher skills, knowledge, and expertise. The school leaders also united around their efforts to use teachers who demonstrated expertise in their discipline and practice, to operate as exemplars for their peers.

Research Question three, finding one. Twelve of twelve school leaders interviewed displayed consistency in their actions to allocate structured time during the instructional day for teachers to collaborate around the improvement of student engagement and student learning. Although the duration and frequency of the meeting times varied, with some teachers meeting for 45 minutes weekly to others meeting once daily for 45 minutes, all schools had programmed times for teacher meetings. Not only did teachers meet with each other, the principals indicated they also took time to meet with teachers to help them modify and or refine their instructional practices. Additionally, time was provided for teachers to attend professional development offered by entities outside of the school building.

Research Question three, finding two. All twelve school leaders utilized at least two resources available outside of the school building to improve teacher practice. Some of the resources were provided through collaboration with organizations partnering with the Department of Education and other local agencies aimed at improving student academic performance. The majority of these programs provided each site with a coach, who worked with the teachers to develop engagement practices. All twelve school leaders reported utilizing the human capital present in the building, to improve pedagogy.

Research Question three, finding three. The twelve leaders were unanimous on the importance of teacher to teacher collaboration. Systemic teacher meetings, inter-visitations, and coaching opportunities were provided to foster shared understanding and accountability across grades and subjects.

Conclusions
This study was intended to explore the instructional practices of individuals who are leading middle schools designated ‘in good standing’ by the New York State Education Department. This designation indicates they are meeting or exceeding achievement targets established by the State of New York. The researcher sought to identify the ways in which the leaders develop teacher instructional practices to facilitate student engagement in learning. The information uncovered may impact the decision-making processes of leaders striving to expose students to high levels of engagement in learning, in order to cultivate life-long learners. Conclusions specific to each research question include the following.

Research Question One
Are the elements and attributes of the Danielson Framework for Teaching utilized to facilitate student engagement? In order to discuss the notion of student engagement, the researcher first sought to establish a definition for the concept. The responses yielded a variety of definitions with no single prevailing definition common to all leaders. This finding aligns with the findings of Appleton et al. (2008) and Newmann et al. (1992), who depicted student engagement as a multi-dimensional construct requiring the understanding of affective connections within the academic environment and active student behavior. The majority of participants described engagement as an intellectual or cognitive process while others described it as a psychological process, both dimensions of engagement identified by Frederick et al. (2004).

Common to all the responses was the indication that when students are engaged, they are actively participating in the learning experiences being delivered. Each of the twelve participants converged on this premise. Study results are therefore linked to the finding of Finn (1993) that active involvement or participation is integral to engaging students in learning and improving academic outcomes. The interviewees detailed numerous ways in which students actively participated in the classroom. These included students participating in hands on activities, engaging in collaborative discourse around their learning, working together, working on the board, being provided with choice in products, grappling with challenging content, peer-editing work assigned, and participating in Socratic Seminars to highlight a few. As a recommendation resulting from his breakthrough study which identified participation as
pivotal to engagement, Finn (1993) suggested further studies should be conducted to identify classroom aspects and elements geared toward encouraging perseverance of engagement behaviors. He contended, “Engagement behaviors are amenable to influence” (p. 7). He called for research to identify the “manipulable aspects of classroom processes that encourage student engagement” (p.1). This study built on that body of knowledge. Several examples of engagement protocols, behaviors, and processes referencing peer-based collaborative classroom learning are included in this dissertation.

Engagement practices are built into the culture of the schools in good standing. School leaders detailed the practices routinely employed to foster active participation and collaboration amongst students and teachers.

**Research Question Two**

What is the leadership role of the principal in promoting student engagement in the classroom? Based on the findings of the research, the researcher concluded that in schools where students are meeting and exceeding learning targets, school leaders intentionally and strategically promote opportunities to improve pedagogy. The research found that each of the twelve school leaders interviewed assumed responsibility for the development of the knowledge, skill, and expertise of the teachers in their schools. This means that these leaders directly provided teachers with feedback and professional learning experiences geared toward improving their instructional practices. Through classroom visits, feedback on practices observed, and providing opportunities to improve their craft, leaders were constantly attuned to the pulse of instruction in their schools. This aligns with the research study of Robinson et al. (2008) which found the closer educational leaders get to the core business of teaching and learning, the more likely they are to have a positive impact on student outcomes. McKinsey and Company (2007) reinforces this point with the advice that the only way to improve instructional outcomes is to improve teacher practice.

The leaders of schools in good standing also routinely monitor the messages being provided in the learning sessions by either meeting or planning with those leading professional development sessions or attending those that occur. This action and those mentioned above, are congruent with Elmore (2002) Consensus View of Professional Development which suggests specific professional development activities should follow a well-articulated mission or purpose hinged on expectations about student learning, develop the collaborative capacity of teachers, occur close to the location of teacher work, be continually evaluated, and have a consistent focus over the long term.

**Research Question Three**

In what ways do principals invest in teacher development to promote student engagement in the classroom? In accordance with their espoused belief that they are directly responsible for teacher learning, the leaders of the schools in good standing examined in this research study, dedicated time and resources to professional learning, as well as ensured they cultivated teacher leaders to champion that work. Job-embedded professional learning took place in all twelve schools aligning their practice to the research literature on professional development. Little (2016) shared that the quality of a school’s teaching staff can be judged by the depth and breadth of knowledge, skill, and judgment that teachers bring to their work individually and collectively.

Teacher teams, built into the daily organization of the school, met routinely and systemically to review student progress and share best practices. Inter-visitations provided occasions for teachers to visit each other’s classroom and learn from each other.

The researcher concluded that leaders in schools meeting achievement targets leverage resources in their schools, those available in the community, and those provided by the Department of Education, to consistently and systemically support the improvement of teacher practice. An investment in coaches and consultants also enabled additional layers of support for systemic teacher improvement. The leaders’ assumption of collective responsibility for learning instead of the development of isolated teachers, aligns with the research literature on student engagement. Dufour and Marzano (2011) recommend leaders advocate for students by utilizing strategies that result in more good teaching in more classrooms more of the time. To alleviate conditions where teachers worked in isolation, Friesen (2009) made recommendations for leaders to instead allow teachers to improve the quality of their practice and effectiveness, in the company of their peers. Various models and meeting times for teacher collaboration were described in this research study. Despite the variations, the leaders’ actions were congruent with Elmore (2002) in his belief accountability is a reciprocal process, and
for every increment of performance the school leader expects from teachers, they have an equal responsibility to provide them with the capacity to meet that expectation.

Recommendations
The findings of this research study indicate that intentional actions related to policy and practice should be implemented by system leaders, in order to cultivate student engagement across disciplines in grades six through eight classrooms. Based on the findings from this research, the following recommendations are made:

Recommendations for Policy and Practice

Recommendation one. Classroom instruction. It is recommended that school leaders deliberately focus on improving the quality of teacher practice, specifically focusing on the components of The Danielson Framework for Teaching (2013) that promote student engagement. The Danielson Framework for Teaching (2013) has outlined elements and components which provide guidance about the expectations and structure of instructional practices vital to engaging students and developing lifelong learning. While no one component should be prioritized, component 3b- Questioning and Discussion Techniques, is predominantly incorporated as an instructional focus in schools in good standing. Other components such as 3d- Using assessment in Learning, 3c- Engaging Student in Learning, and component 1e- Designing Coherent Instruction, are also high leverage tools utilized as instructional focus to enhance classroom instruction and engage students in learning.

It is further recommended that a primary focus for principals should be how teachers are engaging students in learning. Classrooms in which students are actively involved in rigorous learning activities, should be a staple in schools seeking to improve instructional outcomes. Students should consistently collaborate through deliberate classroom conversations, hands-on activities, Socratic seminars, and activities that shift the dynamics of the classroom from a teacher-centered focus to a student-centered focus. Students should have equity of voice and should be provided with choices which allow them to interact, discuss, question, facilitate, and develop critical thinking skills. Students should also be involved in personally meaningful activities that foster metacognition and peer evaluation. This is in alignment with the findings of Friesen (2009) who noted students are more likely to be intellectually engaged in learning and have positive records of attendance when classroom learning climates hold high expectations for their success and maintain appropriate instructional challenge. Teachers should deliberately plan these activities daily and infuse them in their classroom culture. This will prepare students for the complex world in which they live as they will be mirroring skills and behaviors that exist outside the classroom and in the broader society.

Recommendation Two. Teacher learning. It is recommended that principals take direct responsibility for teacher learning by operating in the capacity of facilitator, instructional leader, coach, and or staff developer. This belief was expressed by the principals of schools in good standing seeking to improve learning outcomes. Their espoused belief, supported by the research literature, (Friesen, et al., 2009; Elmore, 2002) that student improvement is dependent on teacher expertise, knowledge, and skill, is evidenced by the actions they take to promote engagement in the classroom. In addition to those beliefs, the researcher contends leaders who invest in improving teacher learning will also benefit from the implementation of the following practices:

1. Routinely visit classrooms to observe teacher engagement practices. Review samples of student work, check bulletin boards, and speak to students and members of the school community to further evaluate the impact of professional development on teacher practice.
2. Provide teachers with clear and immediate feedback on their practice or do so in a timely manner.
3. Monitor professional learning being provided to ensure the instructional mission/vision of the school is not being compromised but instead is being supported.

It is further recommended that school leaders invest in time for improving the quality of instruction in their schools. Teachers should be afforded the time to attend professional learning sessions, especially cycles of learning offered by the school district or community-based organizations. Leaders in schools of good standing allocate time during the instructional day for pedagogues to refine and improve their practice.

Recommendation Three. Collaborative improvement of practice. It is recommended that principals focus on the collaborative improvement of instructional practices among teachers instead of totally focusing on individual improvement of instructional practice. Study participants create teacher teams across subjects and disciplines. They encourage teacher inter-visitation and collegial feedback. Through shared practices, teachers learn from each other and with each other in carefully
structured Professional Learning Communities. They discuss student performance and participate in other important discourse that propels student improvement. This collaborative gathering of teachers is also aligned with the concept of Professional Learning Communities (PLC) recommended to improve the collective capacity of teachers (Dufour & Mattos, 2013; Little, 2006). It also aligns with the findings of McKinsey and Company (2007) which indicated top-performing school systems in the world concur learning improves when teacher learning happens in the classroom and teachers have opportunities to learn from each other.

Recommendation Four. Teacher leadership. It is recommended that principals develop teacher leadership throughout their schools. John Kotter (2012) identified the creation of a guiding coalition as one of the eight steps necessary for successful change to occur. The researcher recommends school leaders create strategically structured initiatives for the cultivation of leaders in the school community. Exemplifying this practice, the principals who participated in this study identified members of their organization who are effective or highly effective in their practice and tasked them with roles that result in the collaborative improvement of instruction in their schools. These individuals are model teachers, whose classrooms receive scheduled visits by inexperienced teachers. They are leaders of grade and subject teams where they work with peers to examine, diagnose and triage student performance. They act as staff developers who meet frequently with the principals to glean strategies and information to advance the instructional vision and mission of the school. As a result of these leadership responsibilities, these teachers contribute to the overall improvement of the school. This should serve as an exemplary model for schools looking to improve teaching and learning.

Recommendations for Further Research/Studies

Recommendation One. Application of Danielson Model in Elementary and High Schools to improve student engagement. The population interviewed for this dissertation was school leaders of middle schools who provided their personal insights for the research study. Further research should be conducted to determine if the elements of the Danielson Framework are being implemented on the elementary and high school levels. It would be important at the elementary level since this is where foundational learning takes place. It is important at the high school level since student engagement is consistent with academic achievement in the upper grades (Friesen, 2009).

Recommendation Two. Leader perceptions vs classroom practice. Further research should be conducted to examine the congruence between the school leaders’ perception of engagement practices cultivated and the classroom implementation of these practices in middle schools. Although the school leaders who participated in this research study provided their perceptions and descriptions of classroom practices, there was no evidence they are aligned with the realities that exist in classrooms.

Recommendation Three. Student perception of engagement. Further research is recommended to determine if students perceive they are actively engaged in their learning. In thinking about the study, the researcher wondered about the lack of student voices in the discourse about student engagement. Would students endorse the practices outlined by the school leaders as being engaging? Did the strategies described spark engagement or did students, acting in compliance, participate because they were expected to do so? What role do students think technology plays in student engagement? Further research studies should examine these phenomena as they would also add to the body of knowledge that exist about student engagement and its impact on student achievement.

Summary

The research literature is laden with studies outlining the relationship between teacher and student interaction in the classroom and the relationship between student engagement and student achievement. Yet, little information exists about the direct role the school leader plays in ensuring teachers are engaging students in their learning. The New York City Accountability Data (NYSED, 2017-2018) reveals that 67% of New York City middle schools are meeting or exceeding achievement targets. This means that 33% of the students being served are seated in classrooms in schools that are not adequately preparing them to meet the needs of their challenging world. Additionally, the literature on student engagement reveals that the longer students remain in school, the less likely they are to be intellectually engaged (Friesen, 2009). These two significant pieces of data are simultaneously troubling and interesting. The researcher wanted to learn more about student engagement and how principals in MS of good standing, as defined by NYCDOE, perceive their role in promoting
student engagement in the classroom and supporting teachers. The hope was that the information gleaned would add to the body of knowledge that currently exists and provide a guide to educators who are leading schools not meeting the targeted achievement levels.

The findings, revealed in this document, illuminate the pivotal role school leaders play in promoting student engagement. In order to improve student achievement, it is first necessary to improve the skills, knowledge, and expertise of the individuals who are directly providing the instruction. Leaders, who develop a clear vision for student improvement, articulate it clearly to the school community, develop a guiding coalition of individuals who have bought into the vision, invest time and resources to said vision, and are able to monitor and revise as needed, are charting a course to ensure that all students are exposed to high levels of learning. All students have a right to be afforded an excellent education. School leaders have the responsibility to ensure they leverage all the available resources to provide each student with learning opportunities and learning environments that will facilitate their academic success.

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ABSTRACT
The purpose of this qualitative study was to examine the principal’s role in fostering a supportive school climate for students of color in racially diverse school communities in New York City. Data for this qualitative study were collected through interviews with New York City public elementary school principals and a review of publicly available data for the respective schools. The research found that principals included racial advocacy as part of their leadership role in promoting supportive schools for students of color. These leaders were aware of how racial identity impacted interactions at all levels of the school community. Additionally, school leaders in this study favored restorative disciplinary practices to promote more supportive schools for their students of color.

Key words include: Diversity, integration, achievement gap, gentrification, disciplinary practices and Critical Race Theory

Significance of the Study
In June 2017, former Chancellor Carmen Farina introduced the DOE’s plan to promote academic equity and excellence. The document explicitly stated that school diversity would be a priority. The five year goals were increasing the number of schools that serve English language learners and students with disabilities, increase the number of schools that are economically stratified and to increase the number of students in racially representative schools by 50,000 students in the next five years. The DOE defined racially representative as having at least 50% Black and Latino students but no more than 90%.

At the time that the document was published, 30.7% of the city’s public schools were racially representative. This research will be of value to educators in this system and in other cities as they become more racially integrated. This study may suggest leadership practices for consideration by school leaders and policy makers.

This study addresses the gap in the research as it relates to the role of school leaders in addressing the needs of students of color in schools that become diverse. School leaders at economically and racially diverse schools, such as those in gentrifying communities will benefit from this study. As more urban communities are transformed by gentrification, it is important for educational leaders to examine how this phenomenon impacts students of color in their schools as their schools become more diverse. What happens to school climate and culture when a school’s demographics are impacted by gentrification? Are students of color better supported in a diverse community or further marginalized, affecting student outcomes? Standardized test data consistently show black and brown students performing significantly lower than their white peers.

After nearly a half century of supposed progress in race relations within the United States, the modest improvements in achievement gaps since 1965 can only be called a national embarrassment. Put differently, if we continue to close gaps at the same rate in the future, it will be roughly two and a half centuries before the black-white math gap closes and over one and a half centuries until the reading gap closes (Hanushek, 2016).

Insights from the research about how leaders leverage their roles will inform practice for principals, and system leaders of communities that are diverse or are becoming more diverse because of gentrification. Leaders across all fields use different functions of their role to achieve their goals and to influence the culture and climate of their organizations (Schein, 2010). Bolman and Deal’s four frames would suggest that school principals, in varying degrees, will create systems and structures of operation, manage human capital, negotiate shifts in resources and power, and communicate a cohesive and galvanizing vision. This study adds to the existing research on school culture and climate by looking specifically at how elementary school principals address the needs of students of color in schools located in gentrifying neighborhoods in New York City. As schools in New York City become increasingly more diverse as the result of gentrification (Austensen et al., 2015), the School Accountability Act (Rodriguez, 2015) and the DOE’s diversity initiatives (New York City Department of Education, 2017).
Research Questions
This research study is guided by four questions crafted to explore the role of the school leader in fostering a supportive school climate for students of color in racially diverse public elementary schools. Each of the questions correlates with one of Bolman and Deal’s four leadership frames; symbolic, political, structural and human resource (2006).
1. How do the principal’s beliefs about race affect climate for students of color?
2. What are the issues of equity and access that surface for leaders of schools undergoing gentrification?
3. How do leaders’ decisions about policy and practice affect school climate for students of color?
4. How do leaders leverage human capital to create a supportive climate for students of color?

Literature Review
Critical Race Theory. Critical race theory (CRT) is a framework often used to examine matters of racial inequity in the fields of law, education and other social sciences. Led by legal minds, scholars, and activists like Derrick Bell and Richard Delgado (2001), critical race theorists seek to analyze and address current issues of race and to uncover how racism is perpetuated. CRT is based on several key tenets (Delgado & Stefancic, 2001). The first of these tenets is that racism is the norm and not the exception, explaining patterns of racism shared by people of color. A second tenet is white over color ascendency or what is known as interest convergence. It is the lack of incentive for Whites to act against racism as they are the beneficiaries of it. The third pillar of CRT is that race is not based on fixed genetic or biological features, rather, it is socially constructed and manipulated by the dominant group. Another important principle is that of intersectionality. Borrowed from 40 feminist ideology, the premise that at the intersection of all the ways one identifies, is a differentiated experience. In other words, how one experiences race and racism is different for a black woman than it is for a black man or a black gay man. Finally, CRT asserts that only people of color can tell their story. Embedded in this belief is the praxis of storytelling as activism and libertarianism (Delgado & Stefancic, 2001).
Ladson-Billings and Tate (1995), argued that the concept of race had not previously been systematically applied as a theory to explain educational inequality. Their research posited that race, not class and gender alone, account for the disparities in educational outcomes between White and non-White students (Howard & Navarro, 2016). CRT isolates race as the variable that has the greatest impact on educational outcomes for students of color (Ladson-Billings and Tate, 1995). Ladson-Billings & Tate asserted that: (1) race will always be significant in the United States of America; (2) our society is organized around property and (3) educational inequities can be attributed to the intersection between race and property (1995).
The Racialized Context of Education. “As we become personally aware of our own racialized existence, we can more deeply understand the racial experiences of others” (Singleton, Linton, 2006). Glenn Singleton, author and racial equity consultant said this is the first step toward addressing the achievement gap between white students and students of color. The extent to which one is aware of race and how it affects all facets of life, including schooling, is the beginning of racial and cultural proficiency (Singleton, Linton, 2006). The American historical epochs that began with the conquest and displacement of indigenous people, followed by slavery, Jim Crow and separate but equal, have resulted in a current day reluctance to acknowledge and address race including the effects of implicit bias on schooling (Carter, Skiba, Arredondo, & Pollock, 2017), (Terrell & Lindsey, 2009). The historical impact of racism has created a vastly different school experience for the average student of color from his or her White peers with the former lagging behind in most dimensions of schooling (Margo, 2005). Taylor, Kyere and King (2018) collected a list of measures by which African American youth are disproportionately disadvantaged. These measures include: standardized test scores, dropout rates, graduation rates and college enrollment. They went further to identify disproportionality in opportunities for learning as well, including: lower teacher expectation, lower representation in higher ability tracks, overrepresentation in special education and exclusionary discipline practices (Taylor, Kyere & King, 2018).
To help students achieve, and close racial achievement gaps, it is important to thoroughly assess Black children in ways that take into account the complexities they are nested in to hear their voices to understand them and their educational needs in order to respond accordingly (Davis, Chang, Andrzejkiewski, & Poirier, 2014; Delpit, 2003; Garcia Coll et al., 1996; Wallace &
To thoroughly assess and identify Black children’s needs, a genuine caring, supportive, and respective relationship across their developmental contexts—family, school, and communities—are critical (Taylor, Kyere, & King, 2018).

There has been a great deal of research on outcomes for students of color since Brown v. Board of Education (Hanushek, 2016), (Rothstein, 2004). One consequence of the case was that black students lost the opportunity to form these supportive and caring relationships with their teachers. They were bussed to white schools and taken out the setting where black teachers understood their challenges but did not believe them less capable because of their race (Harvey & Harvey, 2005). Prior to Brown vs. Board of Education it was often the case that students of color were educated by overqualified black teachers who could not get work at institutions of higher learning. These teachers were a part of the communities in which their students lived. By contrast, black students in integrated schools often had to overcome isolation in dismissive and overtly racist environments (Harvey & Harvey, 2005). Rothstein considers the achievement gap to be the single most important educational issue of the century. He challenges the colorblindness that sometimes results in the normalization of underachievement of students of color or the blaming of schools for the inability to close the gap (2004).

**The Impact of Gentrification on Education.** The office of Housing and Urban Development (HUD) defines gentrification as neighborhood change characterized by higher-income groups moving into low-income areas, altering the financial and cultural makeup of the community. Fueled by an affordable housing crisis and a greater demand for centrally located housing, gentrification results in increased demand and higher housing-costs that leads to the displacement of long-term residents (Ng, 2016). Just as Rothstein asserts that housing and accompanying school segregation were created by laws, policies, and regulations, that privilege whites, it is reasonable to consider that gentrification may also be supported by laws, policies, and regulations that result in the perpetuation of social and racial stratification.

A 2016 HUD report on gentrification describes how some of their policies have contributed to conditions that promote gentrification. Their HOPE VI revitalization project which replaced more than 92,000 units of public housing with mixed income resulted in retaining 50% of the low-income tenants. Coupled with other revitalization plans such as dog parks and bike shares, the report acknowledges that the program resulted in gentrification and the permanent displacement of low-income families (Ng, 2016). Gentrification has the potential to yield positive outcomes for all members of the neighborhood when there are efforts made to integrate these communities (Chetty, et al, 2018). Scholarly research on the topic makes a strong case that neighborhood composition can impact mobility. A mix of classes is preferable in a community over high concentration of poverty in influencing upward mobility (Freeman, 2006). The theory of peer effects suggests that relationships within the context of neighborhood have the potential to provide love, support and friendship as well as the possibility of promoting upward mobility assuming social capital is developed between neighbors of different classes (Freeman, 2006) (Horsford, 2016).

One can also find considerable data that gentrification’s effects can be more detrimental than helpful to the 33 indigenous members of the gentrifying community (DeSena, 2006; Stigler, 2016; Siegal-Hawley, Thacik & Bridges, 2016). Middle-class adults attracted to the benefits of urban living create a higher demand for housing, forcing rents up and resulting in African American and immigrant families being pushed out of their neighborhoods over time (Rothstein, 2017, p. 237). The result is often that families of color are moved to segregated suburbs that become increasingly more crowded. Only if developers receive incentives or are required by public policy to include affordable housing as part of their revitalization projects will socio-economic and racial equilibrium be maintained (Pearman & Swain, 2017). Research specific to the gentrification of low-income communities of color by middle to upper-middle class white families indicates a correlation between school choice and gentrification. Expanded school choice reduces the anxiety gentry families may have about buying property in disinvested urban neighborhoods, resulting in the greater likelihood of gentrification. Pearman and Swain (2017) assert that schooling options alleviate White households’ concern that they will have to send their children to neighborhoods that are predominantly comprised of poor Black and Hispanic students. A related consequence of middleclass White families using school choice options is the siphoning of public education funds from the...
neighborhood to other community schools, charter or independent private schools. The outcome is often a greater stratification of the gentrifying community in the absence of a connection with a neighborhood school (Pearman & Swain, 2017).

Managing relations with people from other racial and class groupings can engender such discomfort, that a gradual insulation occurs in which the comfort of sameness is sought and people thought of as “other” are excluded (Vincent, Butler, & Ho, 2017). For middle-class White 34 families, engaging with other classed and ethnic groups is an espoused value driven by a progressive or social justice ideology. They see school integration as a means of better preparing children for the future (Siegel-Hawley, et al., 2016). Their research also suggested that parents who had grown up in diverse settings sought out diversity for their children. The decision made by gentry families to choose urban schools for their children is often revisited throughout the student’s tenure. Reasons include anxiety about student safety, lack of academic rigor, and the quality of the teaching and administrative staff (Siegel-Hawley, et al., 2016). The decision made by middle-class White families to stay in the local, high-poverty school is also based on the cultural capital these families believe they have to secure enriched experiences and educational resources for their children (Kimelberg, 2014). This can be seen as parents making demands for special tracked classes for their children at the expense of poor, less resourced students (Milner, 2008).

Gentrification creates the conditions for many of the same dynamics to occur for students of color as happened to the indigenous people in the late 1800’s and to African Americans post 1954; displacement from their communities, changes in the teaching staff that do not reflect the cultures of African American and Latino students and as a result, the potential invalidation of their cultural experience and worth. (Harvey & Harvey, 2005; Austensen et al., 2015). The challenge of addressing high needs students, coupled with the privilege wielded by gentry parents, results in conflict that can leave stakeholders wanting to retreat to separate, and equal (Stillman, 2013).

In 2013 The United Nations put forth the declaration on the rights of indigenous peoples, acknowledging the non-recognition of their culture. The document lists characteristics shared by indigenous people around the world (Asia Pacific Forum, The United Nations, 2013). Historically, they have suffered from the non-recognition of their own political and cultural institutions and the integrity of their cultures has been undermined. (Asia Pacific Forum, The United Nations, 2013, p. 11). Similarly, Woodson posits (Ladson-Billings and Tate, 1995) that American schools inspire the oppressor with the belief that his race is responsible for everything that is praiseworthy, while making those of Black and Brown races feel they have never and will never achieve anything as significant as the dominant race (1995).

Ladson-Billings and Tate also reference W. E. B. DuBois’ description of what it feels like to be Black in America. It is a peculiar sensation, this double-consciousness this feeling of always looking at one’s self through the eyes of others, of measuring one’s soul by the tape of a world that looks on in amused contempt and pity. One ever feels his two-ness -an American, a Negro; two souls, two thoughts, two unreconciled strivings; two warring ideals in one dark body whose dogged strength alone keeps it from being torn asunder (Levine, 2006). What DuBois called double-consciousness acknowledges the lived experience of the African American. It is one that grapples with the conflict of wanting to unify his two selves; the American and the Black man, without having to sacrifice one or the other (Levine, 2006). An inclusive, student-centered learning climate can accommodate this double-consciousness and have a positive effect on overall sense of safety and belonging as well as improved engagement with 38 learning (Bryk, et al., 2010, p.59). The school building leader plays a role in creating an inclusive school culture and curricula reflective of all student groups. Creating a climate of safety and support. According to an extensive study of Chicago Public School reform efforts, (Bryk, Sebring, Allensworth, Luppescu, &Easton, 2010), one of the pre-requisites of a positive school climate is student safety. The need to feel safe is a basic human need. The absence of physically and emotionally safe interactions has a direct impact on learning through loss of instructional time, and a loss of motivation. A healthy school climate is characterized by the collective responsibility of staff and families in addressing concerns and holding students to high expectations. In schools with weaker school climates, school staff work in silos, only taking responsibility for what is in their direct purview (Bryk et al., 2010). Data from this study indicated that in highly effective schools, students are clear on the shared norms and hold themselves and their peers to them.
Related to school climate is the academic expectations teachers hold for their students. Teacher expectations are tied to school culture and the collective beliefs the community holds of its students. The level of personal support and connection teachers provide to their students is a key indicator of a positive school climate and predictor of higher achievement outcomes (Bryk et al., 2010). In 1954 the U.S. Supreme Court, in the landmark Brown v. Board of Education case, declared state laws that established separate public schools for black and white students to be unconstitutional. The result was that black students were bussed to white schools and were expected to learn the norms and curricula of those schools without the guidance of the educators of color who could validate and support them (Harvey & Harvey, 2005). UCLA’s 2014 study on school segregation shows that not much has changed in the 60 years following the supreme court decision. New York City in particular, remains the third most segregated school 39 system in our country. (Orfield, Frankenberg, Ee, & Kuscera, 2014). There is also a significant gap between student and teacher racial composition in NYC public schools. This gap represents a lack of role models and shared experiences. Latino students comprise 41% of NYC public school students while only 15% of teachers are Latino. Black students account for 27% of the student population. Only 18% of the teacher workforce is Black. 6% of schools in the city have no Latino teachers and 9% have no Black teachers. This absence of representation on the teaching force represents a missing voice and resource for fostering more inclusive schools (Disare, 2018).

**Race and School Disciplinary Practices.** Emdin (2016) posits that youth of color are the neo-indigenous of U.S. urban communities and like indigenous people around the world, have a legacy of removal from their land or territories, destruction or devaluation of their culture, and subjugation to a dominant culture (The Civil Rights Project, Advancement Project, 2000). Emdin illustrates these similarities by comparing the experience of Sioux children attending the Carlisle Indian Industrial school in 1879 with today’s urban youth. The Sioux children were seen as needing to be saved or acculturated by the white missionaries who ran the school. This played out as a zero-tolerance approach to discipline that fostered fear and resistance as the Indian students were forced to assimilate to the White culture. Emdin asserts that youth in urban settings share a similar experience in that students of color, particularly boys, are disproportionately represented in disciplinary referrals and special education placement. Their ways of interacting and communicating are viewed negatively by the dominant culture expressed in traditional schooling (Emdin, 2016), (The Civil Rights Project, Advancement Project, 2000).

A 2018 Government Accountability Office Report (Green, 2018), a national analysis of discipline policies, found that Black students across all schools, including charter, public and affluent independent schools, were disproportionately disciplined. This was true across gender and was observed as early as preschool. The report found that in 2013-14 Black students accounted for 15.5 percent of all public-school students but represented almost 40% of student suspensions. This national study disaggregated the data by poverty and challenged the supposition that poverty was a greater determinant of disciplinary action than race. In the most affluent schools, Black boys were suspended four times more frequently than White boys, supporting the 30 idea that Black boys are disproportionately disciplined regardless of income (Green, 2018).

A 2016 report by UCLA’s Office of Equity, Diversity and Inclusion studied how the criminalization of Black boys and men happens, providing a possible cause for the disproportionate disciplinary action against Black boys. The study includes an explanation of how the brain’s natural cognitive processes are complicit in the creation of implicit biases like the ones against males of color. The brain naturally sorts and categorizes. When the brain is overexposed to images of young Black men and negative behaviors, this negative association is impressed on the brain in a process called implicit social cognition. In the absence of a positive counter-narratives, future exposures to young men of color are automatically placed in the category the brain has created for them whether the association is accurate or not (Transforming perception, 2016). The greater the percentage of Black students, the lower the likelihood that restorative practices are implemented (Payne and Welch, 2013). Punitive disciplinary practices have been shown to have adverse outcomes such as increases in dropout rates and undesirable behavior for Black children (Fabelo et al., 2011). Restorative practices, an alternative to more punitive approaches can contribute to more positive outcomes for all stakeholders (Bazemore and
Schiff, 2010). Restorative practices focus on restoring relationships when offenses have been committed rather than meting out punishment for negative behavior (Morrison, 2003). Restorative practices have been shown to contribute to a positive school climate, but the racial composition of school communities have been shown to predicate the prevalence of restorative practices.

Methodology
The disparities in educational performance have been quantified by numerous studies and publicly available data (New York State Education Department, 2018; New York City Department of Education, 2018; Hanushek, 2016; Rothstein, 2004). Rather than identify outcomes, the researcher focused on trying to uncover the extent to which educational leaders influenced those outcomes for students of color). This grounded theory study was anchored in responses from interviews of 11 elementary school principals. Responses were coded based on identified themes found in the responses provided by the participants. Analysis of those responses, the School Quality Review and Comprehensive Education plan generated theories and recommendations that address how school leaders might influence outcomes for students of color. Purposive sampling was used to select participants with first-hand knowledge or exposure to the racial diversification caused by gentrification. The researcher identified schools for the study first by identifying gentrifying communities in New York City as defined by the Furman Center for Housing and Urban Policy (Austensen et al., 2015). For this study, the participants included 11 elementary school principals in New York City whose schools are located in gentrifying neighborhoods. Additional criteria in the selection of these subjects included the percentage of students receiving free or reduced lunch at their schools. Schools included in the sample had between 40 and 70 percent of their students receiving free or reduced lunch. This was to ensure that the selected schools had been affected by their neighborhood’s gentrification. Due to the racial segregation of NYC public schools (Khan & Fertig, 2016), the researcher was unable to identify the desired number of schools meeting the 40 to 70% free and reduced lunch criteria. As a result, the sample was expanded to include principals at schools in gentrifying neighborhoods, some of which had below 40 percent or above 80% of their students receiving free or reduced lunch.

Participants were asked nine open-ended interview questions. This type of questioning was used to allow participants the latitude to address the questions based on their own values and experiences. Each of the questions was designed to explore the principal’s beliefs and practices as they related to four leadership quadrants; symbolic, political, structural and human resources (Bolman & Deal, 2006). In addition to the interviews, publicly available data were analyzed for explicit or implicitly stated beliefs about social justice, equity or culturally inclusive practices. These artifacts included the School Quality Review and the Comprehensive Education Plan.

Results
Principal’s beliefs about race affect school climate for students of color. Seven out of 11 school leaders used their school’s mission/vision as an evolving, guiding document that reflected their core values and beliefs. When asked about their mission statements, all but three principals were readily able to recall the ideals expressed in those statements. All of the principals discussed goals and initiatives aligned with realizing their mission and visions. All six of the integrated schools and one of the segregated schools had revised mission and vision statements to be better reflect their values as the school evolved.

Ten of the 11 principals who were interviewed, stated that they engaged their communities around the core values expressed in the school’s mission and vision. They used various opportunities to share the school’s values and to garner support for reaching shared goals or launching new initiatives. These interactions included one on one orientations, parent meetings with the principals that centered around articles or books relevant to the core values. They also used other mediums including social media, school websites and their CEPs and Quality Reviews to communicate the school’s mission/vision. Principals engaged with their stakeholders with these topics through parent education or professional learning.

Seven out of 11 school leaders had a racial advocacy orientation to their role. In the integrated schools all
the principals, regardless of race or gender, included racial advocacy as a function of their leadership role. All six of the principals in the integrated schools and the one principal in the predominantly White school had an advocacy orientation toward racial equity. These seven leaders included three White females, two Black females, one Latina and one White male. These leaders all cited formal and informal partnerships they had forged to advance their learning. These seven leaders advocated for racial equity in their school communities.

**Issues of equity and access that surface for leaders of schools undergoing gentrification.** Principals were aware of how racial identity impacted interactions at all levels of the school community. Ten out of 11 principals interviewed expressed an awareness of how interactions between various stakeholders were impacted by race. Responses to interview questions indicated that this sometimes took the form of middle-class White parents advocating for things that served their children’s interests, sometimes at the expense of other members of the school community. These principals also recognized that their own racial identity and the degree of privilege or power associated with it was a variable that impacted their interactions with community members. The school leaders interviewed also expressed an awareness of the greater context of residential displacement and the potential impact on the already marginalized members of their communities. Principal F stated, “my fear is that the children of color who are in public housing are going to be shuffled to the side”.

Providing equitable access for all students was a priority for leaders of schools in gentrifying communities. Ten of the 11 principals expressed ways in which their schools offer targeted support, resources or opportunities to their students of color. Several principals did this by providing extra arts or cultural enrichment programming to their school’s offerings. After school programming was also mentioned as a form of valuable support to students and their families. Principals also mentioned programs specifically designed to promote student voice for students of color.

Addressing the academic achievement gap between white and non-white students was an area of focus for principals of gentrifying schools. Seven of 11 principals discussed the efforts they were making to close the persistent achievement gap they observed in their schools. They organized professional learning to focus on the deficits they observed. They provided small group interventions and tutoring to address these gaps.

**Policy and practice decisions affect school climate for students of color.** One finding was that maintaining the physical integration of diverse students in their schools was upheld through various enrollment policies and practices. All six of the principals in the integrated school stated that maintaining the physical integration of diverse students in their schools was a priority. They upheld this priority through various formal enrollment policies and informal practices at the school level. They did this to be able to continue to serve populations that were being pushed out by rising housing costs in gentrifying neighborhoods.

It was also found that principals prioritized social emotional learning and favored restorative over punitive disciplinary practices. Nine of the 11 principals mentioned that they included social emotional learning as part of instruction at their schools because it contributed to a more positive climate for students of color. The school leaders found it useful to engage in this work with their staff as they saw disparities between the treatment of Black and White boys by teachers.

**Leaders leverage human capital to create a supportive climate for students of color.** The study found that Principals attempted to hire staff that reflected their students’ racial and cultural make-up whenever possible. All 11 principals said this was something they strongly considered when vetting candidates for the vacancies they held. They were also clear that they this priority came second to the candidate’s qualifications for the job. Based on the interviews, finding experienced, qualified teachers was challenging but finding teachers of color who met hiring criteria was particularly challenging for the leaders of the integrated schools. They found that far fewer teachers of color applied to their schools than white teachers. Additionally, the principals of the integrated schools formed partnerships and professional learning communities to support anti-bias work in their school communities. A total of seven out of 11 school leaders named consultants they had worked with to support their work with staff and parents. They also mentioned that they participated in professional learning on topics of racial equity as a matter of their own personal growth and development.
Conclusions
The principals’ beliefs about race contributed to explicitly stated values about equity and inclusion. Where those values included racial equity or diversity, the principals engaged in the work of raising the consciousness of their stakeholders on those topics. There were two differences between the principals who lead integrated schools and those who lead the segregated schools. The leaders of the integrated schools took on an advocacy stance as the leaders in their communities. They actively sought ways to mitigate racial disparities to create equitable communities.

What was uncovered in the findings was consistent with the literature on CRT. One of the tenets of CRT is what is known as interest convergence or ascendency theory. This is the premise that people of color benefit from the advocacy or organizing efforts of White groups when their interests are aligned. When their interests diverge, even those Whites who adamantly oppose racism, will default to advancing their case even when it creates inequities (Milner, 2008)

The research showed that principals in integrated schools navigated the demands of White parents who argued for their interests over those of the rest of the school community. This is consistent with the research on the impact of gentrification on school communities. The decision made by middle-class White families to stay in the local schools was based on the cultural capital these families know they have to secure experiential and educational resources for their children (Kimelberg, 2014). This can be seen as parents making demands for special tracked classes for their children at the expense of poor, less resourced students (Milner, 2008; DeSena & Ansalone, 2009).

The reality of implicit bias explains why well-meaning teachers are unable to completely let go of the stereotypical view they hold of some of their students as observed by one of the principals in the study. Consistent with the existing research, the principals’ decision to engage in restorative practices contributes to more positive outcomes for students in creating environments that are more emotionally safe and inclusive (Bazemore & Schiff, 2010; Morrison, 2003). Principals in the study valued disciplinary approaches like restorative practices and SEL that they believed would counter the punitive practices that disproportionately affect boys of color. SEL and restorative practices, both anchored in relationship and emotional intelligence building (Morrison, 2003), help to counter the negative narrative some teachers hold of students of color. Finally, all the principals reported having their student’s racial and cultural backgrounds in mind when hiring for their schools.

Recommendations
A policy recommended is that as the principal and his or her community become more aware of the need for inclusivity, integration or anti-racist practices, that they include these sentiments in their school’s mission and vision. Stating the espoused values explicitly may contribute to culture creation that includes these beliefs (Schein, 2010). A second recommendation for practice is the adoption of restorative practices and SEL at schools that are racially diverse. Restorative practices and SEL offer approaches to teach students and their teachers how they can contribute to a safe and supportive environment. (Morrison, 2003).

The first policy recommendation is that mandatory implicit bias training be required part of leadership and teacher pre-service and in-service training. The training would allow them to engage with their stakeholders with sensitivity and perceptively. The researcher recommends that implicit bias training begin with an exploration of self and race as suggested by those in the field of racial equity and cultural proficiency (Singleton, 2006; Terrell & Lindsey, 2009). It is also recommended that the training include the use of protocols that counter implicit bias. As suggested by Ladson-Billings & Tate (1995) the use of counter narrative can be a powerful tool in reducing stereotyping.

It is recommended that future study include a qualitative study of the challenges faced by Black female principals of diverse schools. The leader’s race and gender were not in the scope of this study but comments made by participants raised questions for the researcher as to how leadership in racially diverse schools might differ for Black women. Specifically, how implicit biases about Black women affect perceptions of them as the leaders of racially diverse schools.
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Hypothesis
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Description of Sample and Instrument(s)
Limitations
Selected (brief) Review of Literature

Summary of Methods and Procedures
Results
Discussion
Summary
Recommendations for Future Practice
Recommendations for Future Research
Conclusion
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