

Cultivating Growth Minded, Resilient Students



**D39 Community Review Committee (CRC)
2014-15**

Abstract

The District 39 (D39) Community Review Committee (CRC) proudly presents its 2014-2015 report on “Cultivating Growth Minded, Resilient Students.” The Report is the culmination of work by over 40 volunteers from all aspects of the D39 community, including parents, school and district administrators, teachers and support staff. The CRC work began by first developing a topic in June 2014. The committee then spent many months researching the topic. The CRC then summarized its findings in this report that is presented to the D39 School Board in May 2015 . The Report includes recommendations to the D39 Board for consideration in adopting into the D39 strategic plan.

This year’s report is divided into sections rooted in the research conducted and prepared by the CRC:

- Section 1: Overview and Background
- Section 2: The D39 Landscape
- Section 3: Non-cognitive Factors: The Drivers of Long-term Academic & Life Success
- Section 4: Pressure, Anxiety and Balance: The D39 Experience
- Section 5: Conclusion
- Section 6: Appendix
- Section 7: Works Cited

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Section 1: Overview and Background

In June 2014, the D39 CRC came together for its first meeting to identify topics of interest for the CRC to study for 2014-2015. After initial brainstorming, five topics emerged for further consideration:

1. To audit the District's implementation of past CRC recommendations in order to understand what has been implemented, what is still relevant, and what needs to be revisited.
2. To continue to learn more about and discuss the role of technology in D39 and provide support to D39 as it develops a 3-5 year plan.
3. To explore summer learning programs to better understand what kids are participating in, how those programs benefit students, and what opportunities there are for improvement.
4. To research and discuss gender differences to better understand what D39 is doing, what new research suggests can be done to bridge traditional gaps, and how D39 students compare with national trends.
5. To develop skills, mindsets and behaviors to help students be resilient when faced with challenging work and cope/persist as pressures and demands increase.

While members of the CRC expressed interest in all of the topics, the fifth option garnered the most enthusiasm. There was agreement among CRC members that there are already high standards established for D39 students and a rigorous curriculum is already in place. There was consensus that D39 students generally perform well and exceptional teachers support them. So the inquiry was not about the rigor or quality of the D39 education, but rather about *how, in the competitive D39 environment, can schools and parents cultivate growth-minded, resilient students, who are capable of persisting and coping with all of the demands that go into a 21st Century education?*

The CRC's study of the resilience/persistence topic quickly expanded to include other topics such as academic perseverance (grit, delayed gratification), academic mindsets (growth mindset, stress management), and academic behaviors/executive functions (time management, organization, self-regulation). Current research and work that has garnered attention in these areas includes Carol Dweck's work on *Mindset*, Paul Tough's book *How Children Succeed*, and Angela Duckworth's *Grit Initiative*. As the CRC research continued, the committee began to organize these topics under the broader heading of non-cognitive factors that unified all of the various interests.

Teaching children to have grit and patience towards their goals, even if they fail at something, is more important than teaching them how to be successful all the time.

– Thomas Hoerr, "Got Grit?" Educational Leadership (2012)

"School performance is a complex phenomenon, shaped by a wide variety of factors intrinsic to students and in their external environment. In addition to content knowledge and academic skills, students must develop sets of behaviors, skills, attitudes, and strategies that are crucial to academic performance in their classes, but that may not be reflected in their scores on cognitive tests. Other researchers have described these factors as non-cognitive skills; we broaden the term to non-cognitive

factors to go beyond a narrow reference to skills and include strategies, attitudes, and behaviors. This change in terminology suggests a more expansive understanding of non-cognitive factors, requiring that we look beyond individual-level skills to consider the ways students interact with the educational context within which they are situated and the effects of these interactions on students' attitudes, motivation, and performance.”¹

The CRC formed three sub-committees to study the topic. The first sub-committee looked at what skills and mindsets are needed to best develop resilient/persistent children. The second sub-committee considered what resources or tools are available to help students cope with increasing pressures. The third sub-committee looked into D39 trends and collected data to shed light on the attitudes and knowledge of D39 stakeholders' on the pressures students face and identify the skills that are needed to be academically successful.

The sub-committees gathered information and researched expert sources that included the following:

- guest speakers at CRC meetings who shared knowledge and information (see Works Cited).
- meetings with district administrators and educators to gain perspective and understand current initiatives;
- surveying students, teachers and parents to better understand attitudes and current knowledge on this topic; and
- the exchange of ideas and information.

Section 2: The D39 Landscape

CRC members took many actions to better understand the D39 landscape. CRC members looked at past CRC reports; discussed current efforts and initiatives with teachers and administrators; and surveyed teachers, parents and students to determine current knowledge, attitudes and practices related to non-cognitive factors and academic stress. Highlights of what was learned are outlined below and addressed throughout this report.

Prior CRC Reports

The CRC reviewed prior CRC research and reports to determine whether there was any overlap with the current topic. While no other prior CRC report focused specifically on building resilience and persistence or developing non-cognitive factors, the 2011-2012 CRC report on “Characteristics of Successful Learners” (CSL) has some overlapping issues with the current topic. In addition, the 2007-2008 CRC report on “Wellness” touches on policies and initiatives that affect students' overall mental health, including stress and anxiety.

Current D39 Initiatives

The CRC interviewed D39 principals, grade-level administrators and school social workers to help identify current D39 programs that focus on social-emotional development and/or that are aimed to strengthen students' non-cognitive factors.

¹ Farrington, C.A., Roderick, M., Allensworth, E., Nagaoka, J., Keyes, T.S., Johnson, D.W., & Beechum, N.O. *Teaching Adolescents to Become Learners. The Role of Non-Cognitive Factors in Shaping School Performance: A Critical Literature Review*. Chicago: University of Chicago Consortium on Chicago School Research, 2012.

Social-Emotional Development Initiatives

D39 offers multiple levels of intervention and support for students based on social and emotional developmental needs. Two of its programs are Second Step and Zones of Regulation.

Second Step is the core social-emotional learning program that has been fully implemented in D39. The program is currently piloting new tools and strategies to help identify students who need additional social-emotional support.

Zones of Regulation is a newer program. This past school year it was piloted in third grade at Central Elementary School and at Harper Elementary School. In both schools, Zones of Regulation is being used either as a Tier 1 curriculum in the general education classroom, Tier 2 curriculum through social work, or as a Tier 3 curriculum for students with an Individualized Education Program (IEP).

Teachers were offered the training opportunity, as an Academy 39 class, to learn more about Second Step and Zones of Regulation. Many Learning Behavioral Specialists (LBSs) and related service providers (like Occupational Therapists) use the Zones of Regulation program to enhance social emotional learning. Tools from the program like, “How Does Your Engine Run,” are frequently used for students with IEPs to help identify body signals reacting to stress. The program is also available for general education students in teaching strategies for addressing non-cognitive issues.

Social emotional learning is a priority in D39. Based on the feedback from interviews, the CRC believes there is an opportunity for D39 social work teams, teachers and administrators to share best practices and lessons learned from the existing D39 social-emotional programs. Additionally, there is an opportunity to improve communications with parents on the status and progress of these initiatives, so that parents can better understand the available resources that can be used at school and at home.

A 2014 CRC survey found that 28% of parents are unaware of Second Step.
-- CRC 2014 Survey

Non-Cognitive Initiatives

In addition to the social-emotional development initiatives, the CRC explored programs that support non-cognitive skill development. As previously mentioned, the CRC looked at the Characteristics of Successful Learners (CSL), which evolved out of recommendations from the 2011-2012 CRC report. CSL has been widely implemented throughout D39. Teachers use the CSL language to communicate with students and parents.

Several existing programs focus on the development of non-cognitive skills and include the following:

- Highcrest and WJH implemented a research-supported program to build Executive Functioning skills with the Rush NeuroBehavioral Center. Specifically, the “binder” system helps students with materials organization and long-term project planning;

- Highcrest and WJHS offer an “Academic Strategies” period in lieu of foreign language for students with IEPs;
- Social skills resources are offered for select students across D39;
- D39 Psychologists and Intervention Specialists have developed training, “*How Parents Can Help Their Children with Executive Function.*” Handouts include what parents can expect related to Executive Functioning skills depending upon the age of the student. Training has also been implemented for teachers at the elementary school level.

The programs are a good start in building the type of foundation students need and align with skills identified by teachers as growth opportunities for D39 students. Based on the information gathered through the interview process, however, the CRC believes there is an opportunity for the D39 Board to consider how the current CSL framework might be expanded and updated to incorporate new information on the development of non-cognitive factors. (See Section 3 of this report beginning at p. 7.) The CRC believes elementary students, in particular, could benefit from further targeted support and programs that develop non-cognitive skills like executive functioning. This is particularly true given the heightened organizational rigors and challenges presented to middle school and junior high student. In addition, the CRC agreed that even while the school day is already quite full, students who struggle with non-cognitive factors and executive functioning would benefit from additional support and intervention.

CRC Survey of Teachers, Parents and Students

In November 2014, the CRC surveyed teachers, parents and 5th through 8th grade students. The survey assessed knowledge, attitudes and beliefs about non-cognitive factors and academic stress, as well as overall mindset when it comes to education. The survey elicited a solid response rate from all three groups: 180 teachers (out of 329), 902 parents (out of 3500) and 851 students (out of 1432). Specific data points from the survey responses are incorporated throughout the Report along with a general summary.

Students feel supported, optimistic and confident

Students largely feel supported by their teachers and confident about their D39 education. The students who responded to the survey report that they enjoy learning and are optimistic about their education and their ability to learn.

Students expressed they experience feeling little peer pressure. Additionally, they feel “advocated for” in school and believe that teachers have reasonable expectations. According to the student responses to the survey, most feel parental support and do not believe that parents put too much pressure for perfection on them academically and socially.

The majority of students answered that they receive good grades, but are disappointed when a top grade is not earned. Students report struggling with time management and goal setting (teachers agree). As effective time management and goal setting are important for succeeding at New Trier High School and beyond, the CRC believes more education and reinforcement of these skills, for students in kindergarten through 8th grade, would be valuable.

Homework yields stress

For the most part, the survey data suggests that students do not feel that they are over-programmed, even though 49% of the responding students reported having activities after or out of school 4 or 5 times a week. With that noted, students reported feeling academic stress and open-ended responses to survey questions highlighted that much of student stress comes from homework and how to manage busy schedules.

On a scale of 1-5, 44% of students selected 4 or 5 (5 being a lot of stress) regarding their stress level towards schoolwork and grades.
-- CRC 2014 Survey

Interestingly, 62% of students indicate that they are spending more than one hour a night on homework; 37% are spending more than 90 minutes. Almost half of the teachers who responded to the survey indicate that students are spending more time on homework than in the past (before new standards and curricula were implemented). The survey numbers reveal that parents generally feel satisfied with the amount of homework students are receiving. Parents also noted in the survey responses that students using iPads for homework leads to distraction and can add to homework completion time. Based on open-ended responses to survey questions, however, parents seem more concerned about testing. Almost 40% of parents responding to the survey expressed concerns that there is too much testing.

Parents, teachers feel pressure

Parents and teachers were asked a variety of direct and open-ended questions related to academic stress and anxiety. These received a wide range of responses. The good news is that parents and teachers agree that a student's most basic abilities can be developed through dedication and hard work, regardless of talent or intelligence.

While the majority of parents reported not being concerned with the grades their children earn as long as the child is trying, parents reported feeling pressure personally to ensure their children perform at a certain academic level. In addition, 63% of parents responded that their children are "stressed" about academics or experience academic anxiety. In open-ended responses, parents frequently expressed concern about the extent of testing and the stress it causes students.

The majority of parents and teachers indicate that they feel D39 students are under more pressure to perform academically than their peers outside of D39.
-- CRC 2014 Survey

Sixty-five percent of teachers indicate a perceived increase in school refusal cases (kids not coming to school, avoiding tests, more visits to the nurse to avoid difficult work, etc.). In contrast, data provided by district administrators indicated that less than 1% (specifically .97%) of the D39 student population has had a reported separation anxiety/school refusal issues. While teachers were not asked what they believe is causing the perceived increase in student academic stress or school refusal, responses to open-ended questions suggests a variety of possible factors. The survey responses reveal that teachers feel that it "is difficult to keep up with the constant change," the amount of testing, and that there is simply not enough time to complete all of the tasks required of teachers.

Stress related to the implementation of new curricula and/or learning standards is experienced by both teachers and students. Seventy-six percent of teachers said that the implementation of new

curricula and/or learning standards has “definitely” impacted their own level of stress and 43% feel that students’ stress levels have “definitely” been negatively impacted. To help students manage stress, the majority of teachers are using form of stress relieving activities in the classroom. Examples in the responses to open-ended questions ranged from yoga, to “brain breaks” (jumping jacks, dancing, etc.), to meditation and deep breathing exercises.

Opportunity for collaboration and training

Parents and teachers recognize the importance of non-cognitive learning. Strategies are already being implemented at home and in the classroom. In addition, parents and teachers recognize the need to help manage and reduce student academic anxiety.

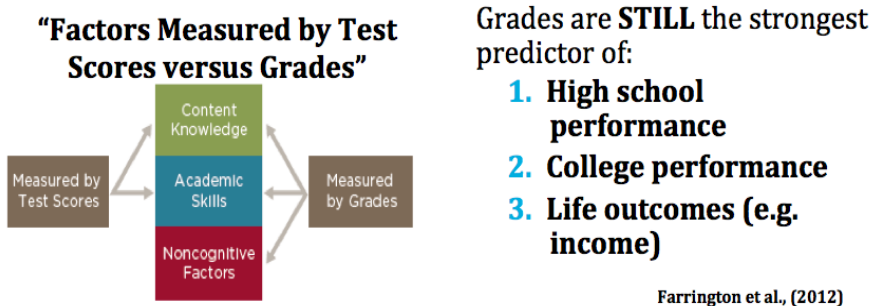
87% of parents indicate that they would be interested in training or information to better understand how to further develop non-cognitive skills. Teachers described wanting more training on non-cognitive factors and stress management techniques. -- CRC 2014 Survey

Responses to open-ended questions about what parents and teachers can do provide a number of worthwhile suggestions. A central theme is for parents and teachers to come together to learn more about stress management and non-cognitive skill development strategies. There is an opportunity to be more consistent in the implementation of best practice strategies between school and home.

Section 3: Non-Cognitive Factors: Drivers of Long-term Academic & Life Success

National attention has been given to the need for rigorous curriculum aligned with Common Core State Standards (CCSS) as a means to improve student performance on standardized tests. This, in turn, has been argued will produce students who are better prepared for college. Research indicates, however, that what matters most for college graduation is not the courses students take or their test scores, but instead, how well students perform in those courses as measured by their high school course grades. Research has found that the vastly better predictors of successful performance in high school and college are course grades, grade point average (GPA), and class rank. GPA is not only important in predicting whether a student will complete high school or college, it is also the primary driver of differences by race/ethnicity and gender in educational attainment.²

The Importance of Non-cognitive Factors



² Farrington, C.A., Roderick, M., Allensworth, E., Nagaoka, J., Keyes, T.S., Johnson, D.W., & Beechum, N.O. *Teaching Adolescents to Become Learners. The Role of Non-Cognitive Factors in Shaping School Performance: A Critical Literature Review.* Chicago: University of Chicago Consortium on Chicago School Research, 2012.

A potential oversight in current education policy lies in under-emphasizing the importance of students' grades. This non-cognitive factor is highly correlated with academic success and longer-term positive life outcomes (like income). While academic content knowledge and academic skills are measured in standardized tests scores, grades reflect the impact of content knowledge, academic skills, and non-cognitive factors.

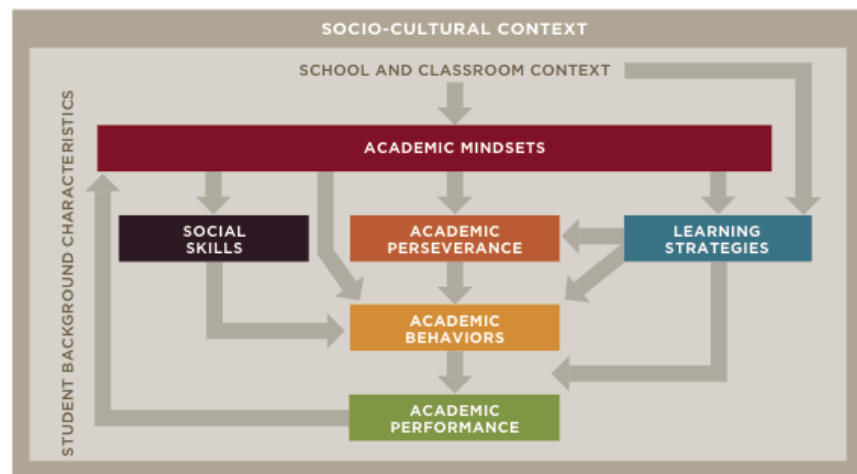
Research into Non-Cognitive Factors

“Non-cognitive factors are behaviors, skills, attitudes and strategies that are crucial for academic performance in classes BUT may not be reflected in scores on cognitive assessments.” ---Farrington et al., (2012)

There are five general categories of non-cognitive factors related to academic performance: (1) academic behaviors; (2) academic perseverance; (3) academic mindsets; (4) learning strategies; and (5) social skills.

Academic behaviors are those behaviors commonly associated with being a “good student.” These include regularly attending class, arriving ready to work (with necessary supplies and materials), paying attention, participating in instructional activities and class discussions, and devoting out-of-school time to studying and completing homework. (CSSR:10)

FIGURE 2.1
A Hypothesized Model of How Five Noncognitive Factors Affect Academic Performance within a Classroom/ School and Larger Socio-Cultural Context



Academic perseverance describes a set of psychological concepts with a long research history. Broadly, academic perseverance refers to a student's tendency to complete school assignments in a timely and thorough manner, to the best of one's ability, despite distractions, obstacles, or level of challenge. (CSSR:11)

Academic mindsets are the psycho-social attitudes or beliefs one has about oneself in relation to academic work. Positive academic mindsets motivate students to persist at schoolwork (i.e., they give rise to academic perseverance), which manifests itself through better academic behaviors, which lead to improved performance. (CSSR:11)

Learning strategies are processes and tactics one employs to aid in the cognitive work of thinking, remembering, or learning. Effective learning strategies allow students to leverage academic behaviors to maximize learning. These include strategies to help one recall facts (e.g., mnemonic devices); strategies for monitoring one's own comprehension (such as while reading or doing math problems); and strategies to self-correct when one detects confusion or errors in one's thinking. (CSSR:12)

Social skills are a fifth group of non-cognitive factors which includes such interpersonal qualities as cooperation, assertion, responsibility, and empathy. Social skills are acceptable behaviors that improve social interactions, such as those between peers or between student and teacher. Social skills repeatedly appear in the literature as important for future work and life outcomes, although their direct relationship to academic performance is more tenuous. (CSSR:13)

These five general categories interact interdependently to generate academic performance. The categories of Academic Behaviors, Academic Perseverance and Academic Mindsets took on particular importance in the CRC's research. The committee also explored the connection between non-cognitive factors and executive functions.

Research into Executive Functions

Executive Functions are cognitive processes –sometimes called higher order or self-regulation skills - that allow individuals to plan, organize, make decisions, pay attention, and regulate behavior. Several studies recognize that executive functions are essential for students to succeed academically and beyond. According to Harvard University's Center on the Developing Child, executive functions and self-regulation skills depend upon three types of brain functions: working memory, mental flexibility, and self-control.

- Working memory governs our ability to retain and manipulate distinct pieces of information over short periods of time.
- Mental flexibility helps us to sustain or shift attention in response to different demands or to apply different rules in different settings.
- Self-control enables us to set priorities and resist impulsive actions or responses.

These functions are highly interrelated. Each type of skill draws on elements of the others, and the successful application of executive function skills requires them to operate in coordination.³

Research suggests that students with strong executive functions are better able to stay on task, follow directions, shift gears when necessary, put together a plan or devise a strategy for completing work, and adapt to different situations or requests.⁴ This is because “executive functioning skills support the process (i.e. the how) of learning — focusing, remembering, planning—that enables children to effectively and efficiently master the content (i.e. the what) of learning—reading, writing, computation. They enable children to acquire knowledge and to participate in the school experience as actively engaged and competent learners. Children with stronger working memory, inhibition, and attentional skills also have been found to make larger gains on tests of early math, language, and literacy development during the preschool years than their peers with weaker executive function skills.”⁵

The numerous benefits of well-developed executive functions for students are well documented. Among other things, well-developed executive functions:

- Help students regulate thought, emotion and behavior;

³ *Building the Brain's "Air Traffic Control" System: How Early Experiences Shape the Development of Executive Function* (Working Paper No. 11.) Center on the Developing Child at Harvard University (2011). [Website](#) (reference February 2014).

⁴ Zelazo, P.P. *Executive Function and Emotion Regulation: A Developmental Perspective*, Ph.D. Paper Presented at the Annual International Trauma Conference, Boston, MA (2010).

- Minimize student’s frustration caused by poor organizational skills;
- Improve time management, prioritization and goal setting; and
- Equip students with coping skills to handle failure and/or the demands of complicated or challenging work.

A Connection to the 2011-2012 CRC Report

As the CRC looked into research on non-cognitive, executive functions, and related topics, the committee saw an obvious connection to the Characteristics of Successful Learners (CSL) program that D39 has already implemented. Some of the characteristics of successful learners that the 2011-2012 CRC Report identified and that have been integrated into student assessment within D39 include the following:

- | | |
|---|----------------------------|
| ● Transfers Knowledge to New Situations | ● Takes Responsible Risks |
| ● Thinks Flexibly | ● Acts Responsibly |
| ● Is a Self-directed Learner | ● Responds Effectively |
| ● Thinks Reflectively | ● Maintains Focus |
| ● Listens Actively | ● Thinks Inter-dependently |
| ● Demonstrates Perseverance | ● Self-advocate |
| ● Strives for Personal Best | |

With an already successful CSL framework in place in D39, and a handful of initiatives at work to teach non-cognitive factors and executive functions, the CRC believes that uniting, supporting and elevating these various educational efforts is worthwhile. The possible outcome could be a stronger connection between the social emotional learning curriculum and the social emotional learning programs, like Second Step and Zones of Regulation. The CRC committee members mapped the CSL framework to the five categories of non-cognitive factors. Targeted areas were identified where the present CSL framework could be enriched by further research and creating an alignment with the non-cognitive factors framework and curriculum (*See Appendix A*).

Collaboration is Key

When schools and families unite and work together to support learning, children succeed not only in school, but in life.⁶ In order to have students fully incorporate the importance of non-cognitive factors and executive functions learning into a daily practice, a collaborative approach both inside and outside the classroom that includes teachers, parents and families is needed.

Parents need to have an understanding of the basic concepts of non-cognitive learning, executive functions and their importance. In order to effectively collaborate with teachers, parents also need supplemental family-friendly resources that can be used to implement best practices at home. D39 parents already have some foundation to build upon. Results from the CRC parent survey support that parents have a general knowledge of non-cognitive skills, are ready to learn more, and understand the importance of sharing responsibility with the school to fully develop these skills.

⁶ Henderson, Anne T., Ed.; Berla, Nancy, Ed. *A New Generation of Evidence the Family is Critical to Student Achievement*, National Committee for Citizens in Education, 1994.

Recommendations

Recommendation 1: Expand and Further Implement Characteristics of Successful Learners Framework to Include Non-Cognitive Factors.

Since the CSL initiative was launched in 2011 and has been incorporated into the lexicon of D39 communications between school and parents as well as report cards, it is suggested that D39 expand the list of characteristics to include non-cognitive factors, such as self-control, self-regulation, social cognition, growth mindset and executive functions. Specifically, the CRC recommends D39 launch a curriculum review process that would engage district administrators and teachers in a process to:

1. **Build out the CSL framework** to emphasize priority non-cognitive skills.
2. **Develop scope and sequence/targets** for what CSL/non-cognitive skills should be emphasized by grade level.
3. **Coordinate opportunities for teacher professional development** on how to incorporate CLS into existing curriculum, interventions for students who struggle (to expand Zones of Regulation and Social Thinking), and share information with parents.
4. **Develop metrics to measure the successful implementation** of CSL/non-cognitive skills for existing and new programs.
5. **Establish and further promote a D39 teacher resource repository** of teaching materials on various curriculum topics. Existing resources from D39 teachers include: Lauren Kolod's [Pinterest site](#) and Sarah Brazee's [Pinterest site](#)

Recommendation 2: Prioritize the Development of Executive Functions for All Students. In order to support the continued development of executive function skills in all D39 students, we recommend that D39:

1. **Continue to invest in programs designed to boost executive function** and refine those programs, as needed, to ensure effectiveness.
2. **Expand the reach of programs to support early development of executive functions** in elementary students.
3. **Provide all stakeholders with training and resources** to build their knowledge and capacity to develop executive functions at school and at home.

Recommendation 3: Build Parent Awareness about CSL/Non-Cognitive Factors. Parents would benefit from enhanced communications and a better understanding of CSL/non-cognitive factors initiatives (as well as social-emotional learning initiatives). Specifically, we recommend that D39 should:

1. **Reinforce information about existing programs already in place** and ensure that the purpose and structure of these programs are consistently communicated to parents.
2. **Establish a common language** (definitions) that clearly and easily define the most important elements of CLS/non-cognitive learning, and create a reference guide for parents, teachers and students so that there is consistency in understanding and use.
3. **Build awareness about grade level CSL/non-cognitive factors** that parents should focus on and suggest strategies that can be used at home. Perhaps offer a list of reading for students and parents, sponsor a boot-camp to help parents learn more about at-home strategies to build non-cognitive skills.
4. **Recommend that FAN** and other speaker-series that are offered in the community continue to increase their focus on topics related to non-cognitive skill development.

Section 4: Pressure, Anxiety and Balance: The D39 Experience

The CRC was interested in exploring the stress and pressure that D39 students experience related to academics. Because of concerns raised by administrators, parents and teachers about academic-related stress in the survey, the CRC specifically looked into what causes student stress. The CRC explored best practices related to helping students cope with common stressors in the context of the 2014-2015 CRC Report.

About Academic Stress

The science and research about stress show that it impacts everything from academic performance to long-term health and mood. Overexposure to chronic stress can create problems in the prefrontal cortex, the part of the brain in charge of executive functioning.⁷ While some stress may be good, excessive stress is associated with a negative impact on academic performance, increased tardiness and absenteeism, an inability to focus, and decreased motivation to learn. Factors contributing to stress are complex and interrelated, they include outside influences such as homework, jobs, extracurricular activities, and use of technology.

Stress can have long-lasting effects on health and brain function. Research reports the negative consequences of stress on human health, happiness and performance. For students, stress can impact brain development permanently. "High levels of stress hormones, including cortisol, can suppress the body's immune response. This can leave an individual vulnerable to a variety of infections and chronic health problems. Sustained high levels of cortisol can damage the hippocampus, an area of the brain responsible for learning and memory. These cognitive deficits can continue into adulthood."⁸

Academic Stress in D39

As mentioned earlier in the report, the CRC survey showed that D39 students generally feel confident and well supported by their parents and teachers, but they do experience academic stress. On a scale of one through five for schoolwork and grades, with five as the highest level of stress, 44% of students rated their stress level at a 4 or 5. Sixty-three percent of parents indicated that they think their children are stressed about academics or experience academic anxiety.

Sixty-six percent of surveyed teachers said they are seeing an increase in school refusal cases, where students are not coming to school to avoid tests, and ask to be excused to go to the nurse to avoid difficult work. (As referenced earlier, data provided by D39 did not support this teacher perception.)

Teachers and parents agree that D39 students face greater academic pressure than students in many other school districts. Of those surveyed, 80% of teachers, and 55% of parents, indicated that D39 students are under more pressure to perform academically than their peers outside D39.

⁷ Noone, Robert, Ph.D. "Society, Parenting, and Anxiety: Constraints on Child Development." Chiaravalle Montessori School Programming. Evanston Main Library, Evanston, IL. 23 Sept. 2014. Speech.

⁸ *The Effects of Childhood Stress on Health Across the Lifespan*. U.S. Department of Health and Human Services Centers for Disease Control and Prevention, 2012. [Website](#).

Research on Stress: Lack of Sleep + Teenagers = Stress

Research reporting the negative consequences for adolescents who don't get enough sleep is increasing. The research is clear that adolescents who get enough sleep have a reduced risk of being overweight or suffering depression, perform better in school, and have an overall better quality of life.⁹ When adolescents are sleep deprived, it affects their ability to learn and retain new material, especially in abstract subject areas such as physics, philosophy, math, and calculus.¹⁰ Lack of sleep also results in a loss of attention span, increased absenteeism and tardiness, and diminished executive functioning skills.

Most adolescents are chronically sleep deprived, averaging a scant six to seven hours a night. The American Academy of Pediatrics (AAP) urges 12-18 year olds to sleep 8.5 to 9.5 hours a night.

Factors contributing to chronic sleep deficits are complex and interrelated. In adolescence, the brain's biological clock or circadian rhythm, shifts forward. Melatonin secretions, which trigger sleepiness, start later at night and then turn off later in the morning. This natural shift peps up adolescents at the traditional weekday bedtime of 9:00 p.m. or 10:00 p.m. and can explain why it is so hard to rouse them at sunrise. Also to blame is the rise of and addiction to technology and environmental influences, such as homework, jobs, and extracurricular activities. Some argue that early start times for school are negatively affecting students and subsequent studies show that even a very modest delay in school start time to align more closely with adolescents' circadian rhythms has positive results.¹¹

AAP Recommendations

The AAP recommends middle and high schools begin their school day at 8:30 a.m. or later. Doing so will align school schedules to the biological sleep rhythms of adolescents whose sleep-wake cycles begin to shift up to two hours later at the start of puberty.

"Chronic sleep loss in children and adolescents is one of the most common – and easily fixable – public health issues in the U.S. today."

- Judith Owens, MD, FAAP, "School Start Times for Adolescents," Sept 2014.

In D39, older students start their school days earlier than younger students. Those students who participate in band, chorus or orchestra can start as early as 7:10 a.m.

D39 Start Times

- 7th and 8th graders - All students start at 8:00 a.m.
Classes for band, orchestra and chorus begin at 7:10 a.m.
- 5th and 6th grades - All students start at 8:49 a.m.
Classes for band, orchestra and chorus begin at 8:00 a.m.
- K - 4th grades – all students start at 8:55 a.m.

⁹ *Let Them Sleep.* American Academy of Pediatrics, August 2014. [Website](#) (reference February 2014).

¹⁰ McNeely, Dr Clea, and Blanchard, Jayne. *"The Teen Years Explained: A Guide to Healthy Adolescent Development."* Johns Hopkins Bloomberg School of Public Health, 2010.

¹¹ Boergers, Julie PhD, Gable, Christopher J., Owens, Judith A. MD, MPH. "Later School Start Time Is Associated with Improved Sleep and Daytime Functioning in Adolescents." *Journal of Developmental & Behavioral Pediatrics*, Vol. 35, No. 1, January 2014.

Benefits of Delaying Start Times

In a study where school start time was delayed by 30 minutes, from 8:00 a.m. to 8:30 a.m. for an independent Rhode Island school district, the conclusion was that a modest delay in school start time was associated with significant improvements in measures of adolescent alertness, mood, and health. The results of this study support the potential benefits of adjusting school schedules to adolescents' sleep needs, circadian rhythm, and developmental stage. After the start time delay, the percentage of students getting less than 7 hours of sleep decreased by 79.4%, and those reporting at least 8 hours of sleep increased from 16.4% to 54.7%. Students reported significantly more satisfaction with sleep and experienced improved motivation. Daytime sleepiness, fatigue, and depressed mood were all reduced. Most health-related variables, including Health Center visits for fatigue-related complaints and class attendance also improved.¹²

Research on Stress: The Impact of Homework

When addressing the issues of pressure, anxiety and balance, homework policy and standards need to be considered and investigated. While homework is standard in most schools, expectations of homework for students compared to the reality of homework can be drastically different. That combined with the myriad of out-of-school activities, and other external pressures can result in more anxiety, more pressure and less balance. In order to better understand how homework affects these issues, the D39 homework policy needs reviewed and the implementation of the policy needs to be better understood.

D39 Homework Policy

When analyzing the D39 homework policy (Appendix B), it appears that it is directly in line with the National PTA guidelines: 10-20 minutes per night in the first grade, and an additional 10 minutes per grade level thereafter (e.g., 20 minutes for second grade, 120 minutes for twelfth). As suggested by experts, schools or districts should include teachers, parents, and students in any effort to set homework policies. Policies should address the purposes of homework; amount and frequency; school and teacher responsibilities; student responsibilities; and, the role of parents or others who assist students with homework. The D39 policy is written exactly as recommended.

Benefits of Homework

Homework usually falls into one of three categories: practice, preparation, or extension. The purpose usually varies by grade. At the elementary school level, homework can help students develop study skills and habits, and can keep families informed about a child's learning. At the secondary school level, homework can help students develop better study habits and skills. In addition, homework can help students develop self-direction, self-discipline, better time organization, and independent problem solving.¹³

Current research is mixed on the topic of homework. According to the Center for Public Education, "The link between homework and achievement is far from clear. There is no conclusive evidence that homework increases student achievement across the board." However, many studies find

¹² Owens, Judith A. MD, MPH, Belon, Katherine, BA and Moss, Patricia Moss, PhD. "Impact of Delaying School Start Time on Adolescent Sleep, Mood, and Behavior." (REPRINTED) *ARCH PEDIATR ADOLESC MED*/VOL 164 (NO. 7), July 2010. [Website](#) (reference February 2014).

¹³ *Research Spotlight on Homework*. National Education Institute. [Website](#) (reference February 2014).

that students who were assigned practice homework do better on tests than students who were not assigned homework. There is “generally consistent evidence for a positive influence of homework on achievement.”¹⁴ Research published in *Educational Leadership* aligns, “With only rare exceptions, the relationship between the amount of homework students do and their achievement outcomes was found to be positive and statistically significant.”¹⁵

D39 Students Feelings about Homework

When asked in the 2014 CRC survey about homework, answers varied among students, parents and teachers. Based on student responses to the CRC survey, 37% of 5th- 8th grade students are doing more homework than the current guideline.

- 62% of students report spending more than one hour a night on homework.
- 37% are spending more than 1.5 hours per night.

In other words, given the 10 min per grade policy, 37% of 5th-8th grade students exceed that guideline - 25.3% do 1-1.5 hours, 19.1% do 1.5-2hrs, 12.4% do 2-3hrs, 5.6 % do more than 3 hours of homework a night.

When asked the level of stress they feel related to homework (1 being very little, 5 being a lot), 43.8% students feel a 4 or 5.
-- CRC 2014 Survey

When asked direct questions, students generally feel homework and testing are manageable, yet open-ended questions indicate that homework is the primary cause of academic stress for students. Of the 686 students who answered an open-ended question: “*What can teachers and parents do to help you manage or minimize stress related to your schoolwork and grades?*” almost half stated that homework was a primary cause of stress. Common themes included: there is too much homework, not enough time to complete the homework, and hard to balance homework with other activities.

Parents and Teachers Feelings about Homework

Parents generally feel that homework is manageable. In open-ended responses to the CRC parent survey question, however, comments about *homework balance* dominated the responses. When asked *how the district can assist and support students’ ability to manage academic stress and anxiety*, homework related suggestions included:

- Assign less homework so that students feel less stressed about going to after school activities, have more free time to interact and socialize with peers, and get more sleep.
- Assign less but more focused homework.
- Assign more homework to better prepare students.
- Encourage teachers to coordinate homework assignments and testing (possibly reduce the number of tests/quizzes/projects due the same day).
- Communicate expectations to parents and students about amount of time students should spend on homework assignments.
- Expand intervention strategies (beyond Homework Assistance, High Success Centers, and Learner Qualities) for students who struggle with homework.

“Six hours of school and 2-4 hours of homework leaves no time for the more important social and peer interaction required to be successful in life and career.”
– D39 Parent, CRC Survey 2014

¹⁴ *Do students have too much homework?* The Brown Center Report on American Education. Washington, DC: The Brookings Institution, 2003.

¹⁵ Marzano, Robert J., and Debra J. Pickering. "The Case For/Against Homework." *Educational Leadership* 64.6 (2007) [Website](#).

Finally, according to the CRC survey, 48% of teachers indicated that students are spending more time on homework than in the past before new standards and curricula were implemented. Teacher suggestions are in line with the parents: coordination of homework and test taking would reduce stress for students and help them manage their workload better.

Helping Students Cope with Stress

The CRC recognizes that some stress is inevitable and to some extent beneficial. Consequently, the ability for students to cope with stress is essential. Becoming “friends with your anxiety” is an important part of training the brain. Students must experience anxiety in order to figure out how to manage it, and anxiety can sharpen responses. Mastering the ability to deal with anxiety and challenge provides students with a genuine sense of accomplishment and self-worth.¹⁶ Schools have an opportunity to teach students how to cope with stress, as well as reduce unnecessary stress.

Most D39 teachers - 76% - said they use some form of stress-relieving activities in their classroom. Examples cited included quiet time such as meditation and breathing exercises. One teacher said that relaxation, regulation, and meditation techniques in the classroom improve transitions and focus. Others cited Second Step breathing and positive self-talk. Teachers also utilize active breaks such as gross motor movement, stretching, yoga, and jumping jacks. Others found that free play, hands-on and multisensory learning, and music are helpful. Some said they relieve stress by taking breaks from the subject matter and talking about an unrelated topic such as jokes, sharing stories, talking about weekend plans, and other topics interesting to the students.

Many teachers expressed concern about trying to fit stress-reducing activities into their classrooms with an already-full curriculum. Teachers commented that they are stressed about their daily routines; there is too much to accomplish with little to no time in the day to add more. One teacher asked, “How can we fit in enough content and have ‘brain breaks’ in such a way that content is not disrupted and students can refocus appropriately?”

In addition to offering suggestions related to the stress students experience, some teachers’ comments suggested that teachers also feel stress. Many teachers commented that change is constant and frequent in the district, and it is difficult to keep up with all of the shifting expectations and priorities. One teacher asked for, and several teachers expressed support for, “no new initiatives” and more support for the initiatives that are underway. Anxiety and calm are contagious, therefore the CRC believes it is important to note teacher feelings that were shared through the survey.

Emerging Best Practices for Stress Reduction in Schools

Mindfulness, meditation and breathing exercises are all proven strategies for coping with stress.¹⁷ While not intended to be the only techniques to be considered, these have been recognized in numerous scientific journals and books.

¹⁶ Noone, Robert, Ph.D. "Society, Parenting, and Anxiety: Constraints on Child Development." Chiaravalle Montessori School Programming. Evanston Main Library, Evanston, IL. 23 Sept. 2014. Speech.

¹⁷ John Zinn on *60 Minutes with Anderson Cooper*, December 2014.

Mindfulness is a technique of focus on the present moment and breathing. Schools can improve performance by teaching mindfulness and thereby teaching students how to improve their attention spans and awareness. Mindfulness has a profound effect on stress levels and leads to better performance in the military, in education, for veterans, and in the health-care system.¹⁸

Recently, New Trier's Expanding Conversation Growing Community hosted a Mindfulness/ Meditation talk by AnnMarie Chereso at Project Mindfulness. Project Mindfulness teaches children how to learn to slow down, relax and gain control of their inner lives through simple mindfulness skills taught in the classroom. "Paying attention is a skill. A trainable skill." The organization states that regular mindfulness training builds neural pathways to train attention skills, helping children manage and understand their behaviors, and empower them to be more in control.

Kids are experiencing more pressure to succeed at a younger age and have little time or opportunity to just be.

– AnnMarie Chereso, Project Mindfulness

Recommendations

Recommendation 1: Re-evaluate School Start Times. Given the benefits of sleep to non-cognitive skill development and reduced stress/anxiety that have been identified by sleep research, the CRC recommends that D39 should:

1. **Form a committee to re-evaluate school start times** to align with current research/trends on sleep needs of children for brain development and executive functioning.
2. **Bring key partners together to propose creative scheduling solutions.**
 - Examine programming that currently begins prior to the start of the school day to address whether it can be modified to better accommodate sleep schedules.
 - Creatively schedule instruction in areas (e.g. the arts and RTI (response to intervention)) to incorporate them into the normal school day, rather than prior to the start of the school day.
 - Research how other schools have prioritized student health and learning by coming up with creative scheduling strategies. See <http://www.startschoollater.net/success-stories.html>

Recommendation 2: Re-evaluate and Monitor the D39 Homework Policy. More research and discussion is needed among D39 stakeholders to better and more fully understand how homework affects pressure and anxiety. Given the findings from the CRC survey, the CRC recommends the following:

1. **Develop a better understanding of students' attitudes toward homework:** Is the issue too much homework, too many activities or both? Do students with fewer activities feel there is too much homework? Do attitudes differ between high and low performing students?

¹⁸ Mindful. [Website](#) (reference February 2014).

- Are technology-based assignments or technology in general distracting students while doing homework? Student focus groups could help better clarify issues towards homework.
2. **Understand how the current homework policy is being implemented and to what extent it is monitored:** Despite the current policy, which is consistent with national guidelines, what is being done to monitor it? Is it up to the parents to address the amount of time a student is spending on homework? Is it up to the student? Or to the teacher(s)? How can teachers of the same grade assign homework consistently? (“Why do some second graders receive one hour per night of homework and others only fifteen minutes?”) Can we establish consistency? If there is a policy, and we believe it is the right policy, it should be consistently adhered to.
 3. **Identify support for students who need more homework assistance:** Students need to understand how long homework should take. Teachers should clearly communicate homework expectations and instruct students to monitor how long the assignment took him/her. If they are not consistent, and a student is struggling, there needs to be a system to identify when/if there needs to be homework intervention.
 4. **Establish guidelines so that assigned homework is evenly distributed and purposeful:** Given the current efforts in D39 to develop a new technology plan, perhaps there is technology that would help stakeholders coordinate and communicate about homework. Some Learning Management Systems, such as Canvas, Engrade, and Learning Village, are being used by other schools for this purpose. If not through technology, other options should be explored to better coordinate how and when homework is assigned.
 5. **Ensure parents know how, when and where to communicate issues:** Self-advocacy--while a goal for students--often needs to be supported by parents. If a homework issue appears to be developing--whether related to a specific subject, or pervasively--and the student is not able to effectively self-advocate, then the parent should notify the student's teacher(s). This should be done in a timely manner so that the teacher is aware of the issue.

Recommendation 3: Build Stakeholder Awareness about Emerging Best Practices to Cope with Academic Anxiety/Stress. In order to further study methods of coping with existing and future stressors with the goal of better balance in students’ lives, the CRC recommends the following:

1. **Consider the impact of teacher stress on students:** How can we reduce teacher stress? How can we fit stress coping techniques into the busy curriculum? What is already in place for teachers to reduce stress?
2. **Research and consider implementation of best practices for stress reduction for teachers, parents and students:** How do we align D39 with current research/trends related to stress on children’s brain development and executive functioning? What methods are other school systems using? How effective are other practices? What is appropriate for different grade levels? What have D39 teachers found to be effective?
3. **Share information with all stakeholders about the science and the research of stress and coping with stress:** Compile and distribute a database about stress management and coping mechanisms. How can we educate D39 stakeholders? How can D39 stakeholders benefit from best practices decisions?

Section 5: Conclusion

Do we have all of the answers when it comes to *how schools and parents cultivate growth-minded, resilient students who are capable of persisting and coping with all of the demands that go into a 21st Century education*? The answer, unfortunately, is no. It is a complex question without an easy, straightforward and simple answer.

The CRC did its due diligence while researching our question. The committee heard from many experts, researched many topics, and explored many ideas. In doing so, the CRC only scratched the surface in addressing the question. One observation, however, is clear. In the face of increasingly rigorous requirements and demands on students, parents, teachers and administrators – we cannot overlook the impact of non-cognitive factors on students’ academics and longer-term life outcomes. Nor can the negative impact of academic stress be underestimated.

The CRC believes its recommendations provide substantial guidance for the D39 Board on how to help students be successfully academically and beyond. To recap, those recommendations are as follows:

- Expand and Further Implement the Characteristics of Successful Learners Framework to Include Non-cognitive Factors.
- Prioritize the Development of Executive Functions for all Students.
- Build Parent Awareness about CSL/Non-Cognitive Factors.
- Re-evaluate School Start Times.
- Re-evaluate and Monitor the D39 Homework Policy.
- Build Stakeholder Awareness about Emerging Best Practices to Cope with Academic Anxiety/Stress.

These recommendations are not directed toward administrators, teachers or parents. These recommendations require all stakeholders to come together to help students meet the challenges that lie ahead.

Section 6: Appendix

Appendix A: Mapping CSL to Non-cognitive

What is in Place: Characteristics of Successful Learners	What we Learned: 5 Categories of Non-Cognitive Factors	Explicitly Work on these prioritized areas
<p>Acts Responsibly Complete work on time. Stay organized. Follow the rules Help others when you can</p> <p>Responds Effectively Follow directions. Speak and write clearly ad concisely. Be accurate.</p> <p>Transfer Knowledge to New Situations. Make Connection. Use what you already know in new situations</p>	<p>1. ACADEMIC BEHAVIORS -Going to class -Doing Homework -Organizing Materials -Participating, studying -Work habits</p>	<p>Overall Umbrella Executive Function Skills</p>
<p>Demonstrates Perseverance (Grit) Don't give up. Stay Focused and complete tasks to best of ability. Finish what started</p> <p>Think Flexibly Stretch your thinking by considering other options. Respond positively to feedback</p> <p>Strives for Personal Best Show Consistent Effort. Review your work and do it neatly. Be proud of what you do. Check work carefully</p>	<p>2. ACADEMIC PERSEVERANCE -Grit -Persistence -Resilience, -Delayed gratification -Self-discipline -Self-control, -Self-efficacy</p>	<p>Exhibiting Self-Control</p>
<p>Is a Self-directed Learner Be original. Try something new. Other options. What else? Use time wisely</p> <p>Takes Responsible Risks Go beyond and try new things. Look for challenges. Volunteer in class</p>	<p>3. ACADEMIC MINDSETS -I belong to the learning Community -My ability & competence grow with my effort -I can succeed at this -This work has value for me -Motivation</p>	<p>Having a Growth Mindset</p>
<p>Maintains Focus Manage impulsivity. Think before you act and make appropriate choices.</p> <p>Self-Advocates Ask questions and ask for help when needed. Take the initiative. Think for yourself.</p>	<p>4. LEARNING STRATEGIES -Study Skills -Metacognitive Strategies -Goal Setting -Help-seeking</p>	<p>Self-regulated Learning</p>
<p>Listen Actively Be understanding and show that you care. Focus on speaker and be ready to respond</p> <p>Think inter-dependently Be kind and thoughtful. Be a helpful group member. Learn from others</p> <p>Think Reflectively Ask thoughtful questions. Make good choices. Be aware of how actions affect others.</p>	<p>5. SOCIAL SKILLS -Interpersonal Skills, -Empathy, -Cooperation, -Conscientiousness, -Assertion, and -Responsibility</p>	<p>Social Cognition</p>

Appendix B: D39 Homework Policy

As stated in the 2012 D39 Parent/ Student Handbook (p 16):

Homework: Homework is defined as academically related work. Assignments given to students by classroom teachers require time outside of the regular classroom to be completed. Regardless of its form, homework is an important part of the instructional program and requires good cooperation between home and school.

Philosophy: Homework is an integral part of the learning process in D39 schools. It should have relevance to the curriculum and should be a process that facilitates learning. Homework reinforces classroom learning and gives teachers an additional perspective about their students. Considering this, it seems apparent that student effort outside the classroom is necessary for satisfactory advancement.

Homework Policy: Homework assignments are typically given to students in grades K-8. The emphasis should be on quality rather than quantity. Homework should be given on a regular basis, but never as work for work's sake. It should be reasonable in length and purposefully planned. Assignments should be given as a continuation and reinforcement of classroom work. Home study can develop broader knowledge, good work habits, and a sense of responsibility, which will benefit students throughout their entire lives. On average, students in grades 1-4 should be assigned 10 minutes per grade, per night. In the upper grades, please limit the amount of help you give to your child and communicate with the teacher about concerns. The teacher will not know if the students are having trouble or if she/he needs to reteach if all of the homework comes in perfectly every time. Consistent homework is a good way to reinforce regular study habits for the future. Another purpose is to place increasing responsibility for learning on the students as they get older. Teachers want to help students practice the concept of budgeting time both in and out of class. Students in grades 5-8, who do not complete homework assignments, may be assigned homework assistance. If you find that homework is taking an inordinate amount of time, please contact the teacher right away. General daily limits for homework average about ten minutes per grade level, beginning in first grade.

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