

HOW TO USE THIS PROTOCOL

This protocol can be used with a group of teachers or staff at your school to take a critical look at how growth-mindset approaches have been implemented in other schools in New York City. It is best used with a team who has already had some framing of what the growth mindset is and who has potentially begun trying it in their own classrooms.

- **Learning Targets:** Participants will understand how growth-mindset approaches have been implemented in one New York City school, and will generate insights to incorporate into their own practice.
- **Number of Participants:** 4–6
- **Time:** 45 minutes
- **Materials Needed:** CASE STUDY and FIGURE 1 for each participant, CHEAT SHEET for corresponding case study for facilitator (optional)

STEP 1

5 MIN
Introduction

- ▼ **Tell participants** that across the ten schools that participated in the Academic Behaviors Pilot last year, a similar pathway of incorporating growth mindset in classrooms was observed.
- ▼ **Direct participants' attention** to the Pathway of Change graphic (FIGURE 1), and explain:
 - ▶ **Frame growth mindset for students:** Typically as a first phase of incorporating growth mindset in their classrooms, teachers presented a mini-lesson to develop the concept that the brain is malleable and grows with effort and by taking on challenges. These mini-lessons utilized either videos or articles on brain growth.
 - ▶ **Feedback to students using growth language:** As a next step, teachers used growth-mindset language in their classrooms to frame mistakes as an opportunity for learning, to set high expectations (both high standards and high confidence in students' ability to reach those standards), and to focus on process and progress with students.
 - ▶ **Find opportunities to do more:** Teachers then developed tools and structures to reinforce growth mindset, such as an Effort Rubric, a Goal-Setting Template, Challenge Tasks, and Opportunities for Revision, among others.
 - ▶ **Focus on strategies or value:** Teachers found that the next step was often to focus on developing and utilizing strategies with students who struggled despite effort, and, for those who avoid struggle and quietly get by in the classroom, to focus on helping them see the value of their classwork.

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Growth Mindset Case Study Inquiry Protocol

ACADEMIC AND PERSONAL BEHAVIORS INSTITUTE

STEP 2

10 MIN
Case Study
Reading

- ▼ **Ask participants** to spend ten minutes reading the case study. While reading, they should keep in mind two questions:

1. How does work at this school fit into the Pathway of Change model (FIGURE 1)?
Note: If they choose, participants can complete FIGURE 1 with information from the case study while reading.
2. What ideas does the case study give you for your own practice, or that of the school?

STEP 3

30 MIN
Discussion

- ▼ **Lead a discussion** of the following five questions:

1. What was one thing that resonated with you while reading?
2. How did this school's process for developing growth mindset align with the Pathway of Change?
3. Based on the study, what do you think were the protagonist's biggest learning moments when implementing growth mindset?
4. What is one idea that reading this study gives you for your own practice, or for the school's practice?
5. Part of growth mindset is the willingness to take risks. What do you feel will be the biggest risk for you in pursuing this work? What do you hope you'll learn from taking this risk?



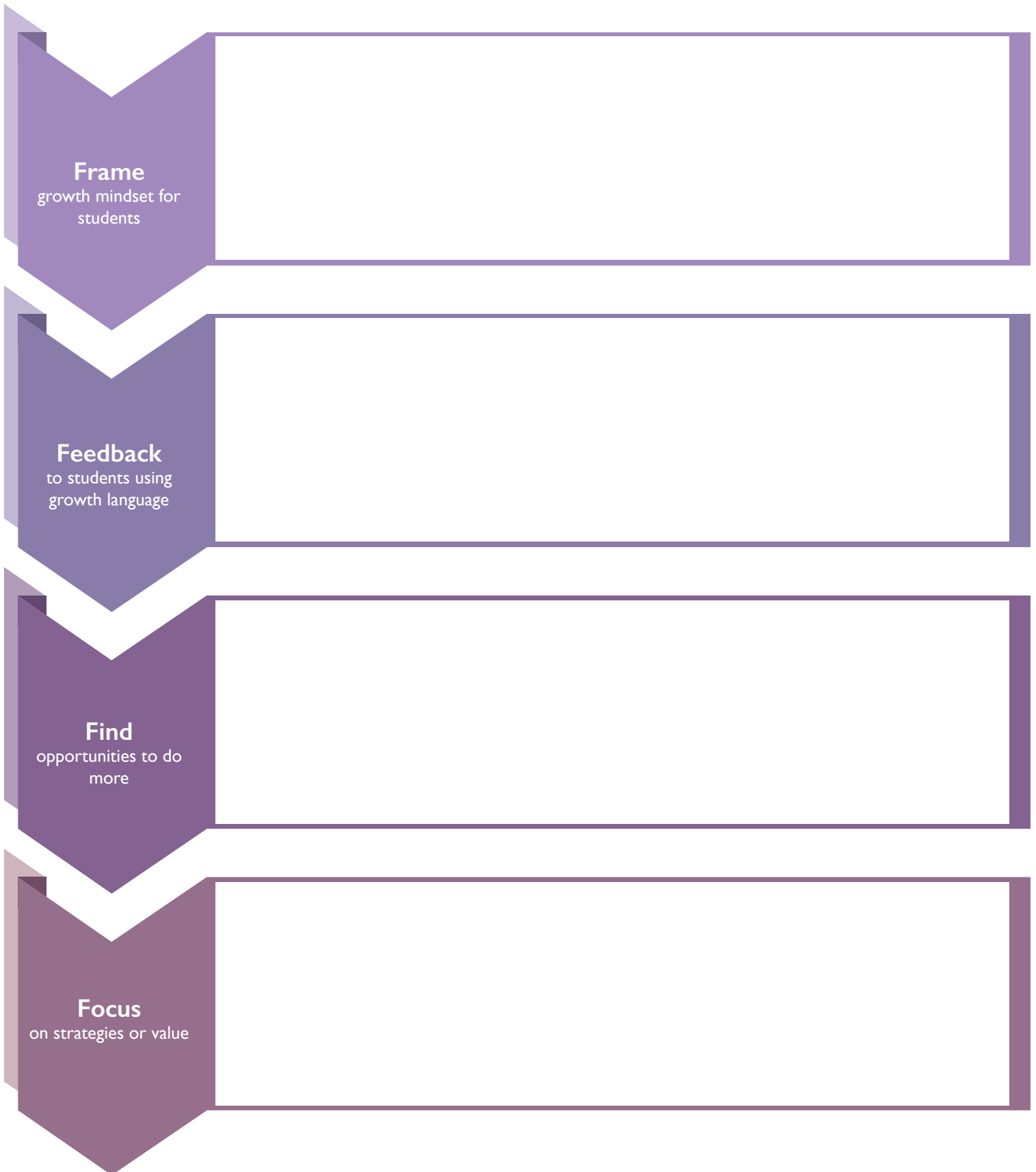
Facilitator Resource:

This step comes with a Cheat Sheet

Adaptations for completing the protocol with 20–30 participants

- Divide participants into small groups of 4–6.
- After reading the case study individually, have participants complete the 30-minute discussion in small groups (each group should choose one person to facilitate the discussion).
- After the discussion, ask each group to share out one big insight from the discussion with the whole group.

FIGURE 1. PATHWAY OF CHANGE



HOW TO USE THIS CHEAT SHEET



This cheat sheet can be used as a guide to educators facilitating this activity. Possible responses to the questions in step 3 of the **GROWTH MINDSET CASE STUDY PROTOCOL** are written below in ***bold italics***.

P.S./I.S. 268: Developing Student Self-Reflection

STEP 3

30 MIN
Discussion

- ▼ **Lead a discussion** of the following five questions:
 1. What was one thing that resonated with you while reading?
Answers vary.
 2. How did this school's process for developing growth mindset align with the Pathway of Change?
See possible responses in FIGURE 1 on the following page.
 3. Based on the study, what do you think were the protagonist's biggest learning moments when implementing growth mindset?
 - a. **When Michelle and Kaylonda began to observe the impact of using pre- and midflexions in helping students set reachable goals, predict challenges they would face, and identify strategies they would use to meet these challenges during the unit.**
 - b. **When, through use of the Effective Effort Rubric, both the teachers and students were able to identify individuals' areas of strength and difficulty, and how these identifications could then be used in one-on-one conferences with students and in identifying specific strategies for students to use in meeting the challenges they face.**
 4. What is one idea that reading this study gives you for your own practice, or for the school's practice?
Answers vary.
 5. Part of growth mindset is the willingness to take risks. What do you feel will be the biggest risk for you in pursuing this work? What do you hope you'll learn from taking this risk?
Answers vary.

FIGURE 1. PATHWAY OF CHANGE



P.S./I.S. 268: Developing Student Self- Reflection



A Case Study on the 2013–14 Academic and Personal Behaviors Pilot

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An Introduction to Academic and Personal Behaviors

According to a growing body of research spanning more than four decades, students' beliefs about whether effort leads to success have a dramatic influence on their success in school. In some sense, this notion of "growth mindset" runs contrary to the messages that are implicitly communicated to students through grades and test scores. These often send the message that intelligence can be measured in fixed numbers by which a student may be labeled, for example, a "Level One" or a "Level Four." In fact, "the most motivated and resilient students are not the ones who think they have a lot of fixed or innate intelligence," according to Carol Dweck, a leading researcher in the study of growth mindset. "Instead, the most motivated and resilient students are the ones who believe that their abilities can be developed through their effort and learning."¹

In the 2013–14 school year, four New York City middle schools and six New York City high schools took part in the Academic and Personal Behaviors Pilot. Led by the NYC Department of Education's Office of Postsecondary Readiness in partnership with Eskolta School Research and Design, Inc., this project asked schools to reshape how they give feedback to students in order to support the development of growth mindsets and thereby promote persistence.

The project launched in October with a presentation by Dr. David Yeager of the University of Texas at Austin, a leader in the field, sharing the latest research highlighting the successes of growth-mindset interventions in increasing student motivation. Teachers participating in the pilot had the opportunity to attend a series of monthly development seminars, in which they heard from scholars and practitioners about mindset theory and practice. Teachers in this case study used various resources and ideas from David Yeager and from Mindset Works, an organization cofounded by Carol Dweck (see Materials Cited on p.1).

Schools in the pilot also received support from a team at Eskolta or from a facilitator at the Department of Education, who in turn received coaching from Eskolta. In a series of in-school sessions held over the course of the year, these facilitators supported teachers in an inquiry process as they designed, reviewed, and refined their implementation of growth-mindset practices based on their own experience and data on the impact on students. By the end of the 2013–14 school year, participating teachers made plans with their facilitators and their principals to share their work and learning with their colleagues in order to encourage broader adoption of growth-mindset language and practices in the 2014–15 year.

This case study offers examples and insights from pilot work as it was carried out in practice. P.S./I.S. 268, on which this case study is based, is an elementary and middle school located in Jamaica, Queens, that enrolls around 600 students, from kindergarten through eighth grade. The student body consists of 5 percent English Language Learners (ELL) and 14 percent students with special needs. Eighty-six percent of the student body is eligible for free or reduced-price lunch. While efforts in recent years to reduce disciplinary infractions and suspensions have had success, the school has faced challenges, particularly among its middle school students, in fostering a culture in which students view high achievement in a positive light. Student names have been changed to protect privacy.

¹Dweck, C., "Boosting Achievement with Messages that Motivate," Education Canada, Vol. 47 (2) (2007).

Materials Cited

During the pilot, Michelle Mills and Kaylonda Marin, the teachers on whom this study is based, developed their own resources and used materials from Mindset Works' online EducatorKit (www.mindsetworks.com). Materials cited in this study include:

- *Preflection Sheet* (see Appendix)
- Mindset Works' Mindsets & Motivation resource: *Effective Effort Rubric*
- Mindset Works' Mindsets & Motivation resource: *Growth Mindset Feedback and Framing tools*

Introduction: Building Effort and Confidence

From the beginning of the 2013–14 school year, Michelle saw that Miles was reluctant to ask questions and had great difficulty completing each step of the essay-writing process. But by the third quarter, he began to show signs of greater self-confidence, and even though writing was still a struggle for him, he was beginning to successfully complete his essays. By the fourth quarter, his essays had become, in Michelle's words, "far more sophisticated." According to a survey taken at the beginning and end of the school year, his attitude toward learning had changed remarkably: where he had once believed that putting effort into schoolwork was a sign of weakness, he now viewed effort as the path to learning, proficiency, and expertise.

Miles was not the only student at P.S./I.S. 268 who experienced such a transformation during the 2013–2014 school year. Among the others was Darren, a student who had been diagnosed with special needs. Typical of many middle school students, Darren had failed to complete his written assignments and would often give up in frustration in the face of challenges. But by the year's end, he was earning strong scores on papers and regularly persevering at his work. Indeed, he had begun approaching his teachers in the hallway and asking, "What can I do to improve my grade?"

Over the course of the 2013–14 school year, 19 of 36 students involved in the pilot work at P.S./I.S. 268 showed a change toward a growth mindset (the perspective that intelligence can grow through effort), as opposed to a fixed mindset (the view that intelligence is essentially static) according to pre- and post-pilot surveys. Students who had once shunned feedback on their work grew to accept it. Students who had once shut down in the face of struggles now used strategies to address them. Similarly, as the table at right shows, student self-assessments using the Mindset Works *Effective Effort Rubric* (described in greater detail on pp. 3 and 4) revealed a substantial increase in student effort over time. The section that follows describes key components of the P.S./I.S. 268 pilot team's work to bring about these changes over the course of the 2013–14 school year.

Student Effort Clusters
(Based on student self-assessment using the *Effective Effort Rubric*)²

	Round 1	Round 2
High Effort	57.5%	82%
Low Effort	42.5%	18%

² Scores were gathered from non-identical samples of students over two rounds of self-assessment.

Changing the Language Used with Students Every Day

The *Growth Mindset Feedback* and *Framing* language tools provide examples of feedback phrases and ways to frame a task or new area of study that promote in students a growth mindset—that is, the belief that intelligence is not innate but rather grows through effort and hard work. Many phrases teachers use, such as “This is really easy,” or “You’re so smart!” unintentionally reinforce the impression that intelligence is fixed. The language tools provide dozens of “growth-minded” alternatives, such as “Mistakes are welcome here,” “Here are some strategies to figure this out,” and “All that hard work and effort paid off!”

From the beginning of their pilot effort in October, Michelle and Kaylonda noted areas of their verbal feedback to students that they intended to make more encouraging of the growth mindset. At the first P.S./I.S. 268 pilot team meeting, Michelle observed that when she said, “You’re very good,” to a student for whom success on a task came easily, it undermined the student’s motivation. Kaylonda reported that when she said to a student, “You’re good at math,” she found the student put less effort into other subjects.

Michelle and Kaylonda began to weave new phrases into their everyday classroom discussions. Kaylonda had noted that several of her students were reluctant to ask or answer questions during class for fear of being seen as struggling. To combat this, she began to consciously offer a few select reassuring phrases during class discussion to emphasize the value of struggle. These included “I am so proud of your effort,” “We’re all trying to understand,” and “I appreciate your questions.” In a few cases, the effect was clear. For one student who saw himself as a leader but was especially concerned with how his peers perceived him, the focus on effort “took some of the sting off of not getting [an answer] right” and “made a safer environment for him to share,” Kaylonda explained. Over the course of the year, hearing these phrases repeated again and again, this student had transformed; by April he was asking his classmates to “step it up” and “meet the challenge.”

Kaylonda reported that for one student, the focus on effort “took some of the sting off of not getting [an answer] right” and “made a safer environment for him to share.” By April, he was asking his classmates to “step it up” and “meet the challenge.”

In January, Michelle added to the repertoire of growth language in the classroom by focusing not just on the value of struggle but also on the identification of strategies to tackle work. Again, drawing from the *Mindset Works Growth Mindset Feedback* and *Framing* tools, she prompted students to divide into pairs and “share one thing that’s really confusing” with their partners as a first step in understanding a task. She

Key approaches to **creating an environment where effort is valued and rewarded** at P.S./I.S. 268:

- ✓ **Modeling that teachers also learn from mistakes** by soliciting, accepting, and acting on feedback;
- ✓ **Publicly displaying drafts** and celebrating progress;
- ✓ **Allowing students opportunities to practice individually** to ease their fear of making mistakes publicly;
- ✓ **Asking targeted questions** grounded in the growth mindset (e.g., “Did you have a successful day today?”);
- ✓ **Creating opportunities for students to reflect** on learning strategies.

would then highlight when students offered up effective strategies with simple phrases like “Elena shared a really good strategy with me.”

Creating a Reflection Process for Students

Emphasis on strategic thinking became the second key phase in the development of students’ growth mindset at P.S./I.S. 268. After students grew accustomed to growth language in the classroom in the fall, Michelle and Kaylonda introduced this next phase in the winter. First, students would complete a brief, forward-looking “preflection” before an assignment. These preflections were designed to prime students to think about the strategies they could use when struggling. For this step Michelle used what she called “tweet sheets,” which asked students to concisely reflect on the question “What do you think is going to be the most difficult part of this task?” as an entry point to discussion of effective strategies for taking on the challenge they identified. Kaylonda’s “preflection sheet” (see Appendix) asked students to identify one of their strengths on the last assignment, a strategy to improve on that strength, an expected challenge on the assignment at hand, and a strategy for taking on that challenge. The teachers found it was critical to connect each preflection sheet, through slight modifications, to the assignment at hand.

The preflection led to brief “midflections,” one-on-one conversations midway through a unit in which Kaylonda and Michelle referred to the students’ original goals and plans. “OK, here’s your preflection from before we started,” Michelle would say in a typical conference. “You said you have problems with conclusions. This is what you said you were going to do to fix that. So now, I want you to reflect: Have you done this? Have you tried it?” This connection back to original goals was key. Without it, students tended to repeatedly identify the same goals and forget what progress had been made.

Michelle and Kaylonda reported that as a result of the preflection and midflection process, students began to more effectively forecast challenges, plan strategies for taking on those challenges, and follow through on those strategies. For example, Kaylonda noted that the reflection process was especially useful for her student Darren:

Establishing goals that were within reach made a big impact on his work, especially in [English Language Arts]. For him to go from not writing papers to writing them and earning a 1 to writing and earning a 3—just seeing that he didn’t throw in the towel but instead worked harder on each assignment, and helping him by encouraging him and giving him the strategy help he needed, like using a graphic organizer, this was really important for him.

Introducing a Rubric for Assessing Effort

The third and final step in the work came in the spring. Now that students were more comfortable reflecting on their own struggles and the strategies they could use to address those struggles, Kaylonda and Michelle were ready to introduce a rubric for more systematically assessing growth. The *Effective Effort Rubric* lists seven key categories of student effort such as “Taking on challenges,” “Accepting feedback,” and “Perseverance.” The rubric provides descriptive indicators—such as “You took on some challenges because you felt pretty sure you would succeed” and “During this task, you kept working till the task was complete, even when it was difficult”—to let the teacher or student completing the rubric know whether to select “Starting,” “Emerging,” or “Growing” for each category. It was important for Kaylonda and Michelle to wait to introduce the rubric until after they had laid the groundwork for judgments of effort, since the rubric’s straightforward language might have been discouraging to

students. Indeed, to clearly tie the rubric to earlier reflections, the team added to the bottom of the rubric the simple but critical open-ended question: “What will you do next to improve your effort and use of strategies?” This helped ensure that the rubric was not viewed as an end point in the process of investing effort but, rather, as the beginning of a new cycle of growth.

Kaylonda and Michelle asked students to self-assess using the rubric. This signaled to students that effort was important in terms of their achievement in class and gave them more specific language than they had had thus far to identify it. On this point Michelle said, “They had the effort rubric before the paper was completed, so they knew that effort was going to count as part of their grade. Once they had something tangible, they seemed to respond: ‘OK, she really has a rubric for effort, so she’s really going to use it,’ and their work did come out a lot better.” Indeed, students’ self-assessment of their effort increased substantially from the first to the second use of the rubric, from just 60 percent to more than 80 percent rating themselves as having demonstrated a high level of effort.

The rubric also enabled teachers and students to identify, on an individual basis, particular areas of difficulty and strength, which they could use in reflection conferences. Comparing students using the rubric allowed Kaylonda and Michelle to see, for example, that “asking questions” was an area in need of improvement for the majority of their students. One challenge this identified for them was to encourage the lower-scoring students to ask more questions, which they did in part by verbally showing appreciation for students’ questions during class.

Regarding the efficacy of the process of reflection and effort assessment as a whole, Kaylonda said, “It helps the students learn how to teach themselves... Now they’re identifying their own successes and creating their own action plans.” In a similar vein, Assistant Principal Wilburn Smith noted: “There were students we’d been trying to move for years but weren’t able to, that we were able to move this year with the pilot work.”

Key Takeaways from Michelle and Kaylonda:

- **Language promoting the growth mindset** builds students’ self-esteem.
- **Celebrating mistakes** as part of effort encourages students to participate vocally.
- **Reflection sheets** push students to go beyond initial goals to repeatedly take on new challenges.
- **Consistent use** of effort rubric and reflection sheets strengthens the impact of these tools.

Background on the Pilot Team

The pilot team at P.S./I.S. 268 consisted of two teachers, Kaylonda Marin, who teaches Special Education, and Michelle Mills, who teaches seventh-grade English, along with the school's assistant principal, Wilburn Smith, and the school's principal, Lissa Grant Stewart. Collaboration among the team's administrators and teachers made the pilot at P.S./I.S. 268 critical not only for Michelle's and Kaylonda's students but also for the school as a whole. Through the pilot, Kaylonda was able to incorporate new resources and approaches into her work with students with special needs in particular, while Michelle was able to test these new approaches from the standpoint of a general education teacher. The team compared their experiences during facilitated sessions as well as informally throughout the pilot, both with one another and in discussion with the team's administrators.

This ongoing comparison and collaboration fostered a supportive, step-by-step process of implementation and refinement, which was important not only for the practice of Michelle and Kaylonda but also for that of the full faculty. During the first half of the pilot, the team discussed their work informally with other colleagues at, for instance, grade team meetings. In March, the team's administrators made time for the team to share its in-progress work and findings from the pilot with the faculty during a half-hour presentation on mindset theory, phrases to use to promote the growth mindset, and the impact of their work on students in terms of reflection and effort. In May, the four teammates met to plan their approach involving the faculty more deeply in work to promote the growth mindset in the 2014–15 school year. As the year came to a close, Michelle and Kaylonda led hour-long sessions with teachers of grades three to eight to review the year's work and strategies for implementation in the fall and onward. Lissa and Wilburn helped underscore effort as critical to the academic culture at P.S./I.S. 268 by amending the grading policy such that effort would replace participation (15–20 percent of grades) and noting that participation would be considered a component of effort. Ms. Stewart and Mr. Smith also decided to design faculty schedules to give two academic behaviors groups (grades three through five and grades six through eight) common planning time to work on approaches to promoting the growth mindset in students.

Preflection Sheet

Name: _____

Date: _____

1. On the last assignment, something I did well was...

2. On this assignment, I will improve at this by...

3. On this assignment, it will be challenging to...

4. I will take on this challenge by...