April 2019

Empowering Teacher Teams to Improve Instructional Practices

Accelerating Learning for Overage, Under-Credited Adolescents with Cycles of Lesson Study

A School Improvement Model Based on the Work at East Brooklyn Community High School

NYC Department of Education

An initiative of the
New York City Multiple Pathways Institute

Lesson study is a collaborative research-based approach to professional development designed to achieve long-term instructional growth. *Empowering Teacher Teams to Improve Instructional Practices* provides an overview of the lesson study structure and in-depth examinations of each step in its process, along with tips, tools, and practices to implement it effectively. The approaches described here are based on the work of educators at East Brooklyn Community High School coming out of the school's participation in the New York City Multiple Pathways Institute, a professional learning initiative for schools serving overage, under-credited students who have struggled to find success in school.

A video about East Brooklyn lesson study practices can be found at
www.multiplepathwaysnyc.com/resources

Overview of This Monograph

This monograph describes the processes and practices used within lesson study efforts at East Brooklyn Community High School for consideration and adaptation by educators interested in utilizing lesson study in their own contexts.

Chapter 1 provides background on lesson study as a research-based practice with origins in Japan and an overview of the process as it looks at East Brooklyn Community High School. Chapter 2 gives a detailed account of the school's steps for building a school-wide practice of lesson study. Chapter 3 describes selecting a target skill to frame a team's efforts within cycles of lesson study. Chapters 4, 5, and 6 describe the core stages of lesson study work that come together into cycles of designing, testing out, and refining new instructional strategies. Chapter 7 describes how teams periodically share their learning from lesson study to spread ideas and practices across the school. A final section includes key conditions for successfully enacting lesson study in a school.

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Based on the practices of the leadership and faculty of
East Brooklyn Community High School

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The New York City Department of Education's Multiple Pathways Institute

Launched in 2012, the Multiple Pathways Institute (MPI) is an innovative, district-level, professional learning model that engages principals as partners in driving school improvement in high schools that exclusively serve students who have fallen behind in their education. MPI's research-aligned approach centers on building the instructional capacity of teachers by providing three years of customized professional learning. Schools receive job-embedded coaching and technical assistance, leadership development, and membership in a professional learning community that leverages the resources and expertise of peers. Graduates of the program cite higher daily attendance, increased state test scores, and a rise in graduation rates as just some of the student outcomes impacted by their involvement in MPI.

Applying to MPI begins with the principals from each school committing to sustained and active involvement in designing and advancing their school's work. Building from their school-wide improvement goals, they identify one instructional goal and a new system or structure that will support meaningful school-wide change.

In order to provide comprehensive support that fosters long-term advancement in teaching and learning, the Multiple Pathways team uses a partnership approach to maintain networks of schools. The team has collaborated with professional development partners reDesign, LLC, and Eskolta School Research and Design since MPI's inception.

- **Job-embedded instructional coaching and school-wide systems building.** Schools receive on-site coaching and technical assistance through a cooperative approach that transforms teacher practice and reshapes school structures to support these new practices. Coaches build the capacity of the pilot team through co-constructing cycles of continual improvement using observation, modeling, practice, and reflection.

- **Sustained over time.** Schools participate for three years, then graduate and mentor new cohorts of schools, hosting site visits and providing 1:1 support to schools during professional learning community events.

- **Explicit principal involvement.** Principals commit to participating in professional learning with their pilot team, which enables them to develop their instructional leadership skills as they support coaching and systems design, and the eventual expansion of effective teacher practice school-wide.

- **Results-driven professional development.** School teams collect and analyze formative and summative evidence of student learning and use it to inform changes in instructional practices.

- **Personalized school support.** Principals annually create and adjust a detailed work plan that identifies their instructional goals and an implementation plan for improving teacher practice.

- **Professional networking.** Schools participate in a series of annual cross-school events where principals and pilot teams learn together through collaborative inquiry and hold their peers accountable as they tackle challenges to improving instructional practice.

School leadership totally revamped professional development

in East Brooklyn Community High School's fifth year, instituting a community-wide practice of lesson study in place of prior staff meeting routines. Each year since, the school's graduation rate has climbed, achieving an 83 percent increase over a four-year span.

The results were no coincidence. Lesson study, an instructional-improvement practice with origins in Japan, consciously builds a culture of collaboration. Instead of out-of-class time going into one-off professional development sessions, East Brooklyn Community High School teachers began working in teams that met consistently throughout the year, testing out and refining approaches together over an extended period of time. Staff describe a dramatic improvement in the quality of their instruction from that work. One of the school's founding teachers explains, "I've developed strategies that have been total game changers for me and had a huge impact on student learning. Things that I just would not have come up with on my own without the support of my lesson study team."

East Brooklyn Community High School

East Brooklyn Community High School (EBCHS) is one of New York City's Transfer Schools serving students who have fallen off track in prior high schools. The school is located in Brooklyn and enrolls 185 students from its neighborhood of Brownsville and the surrounding areas. The student body is nearly 100 percent students of color with about one-third designated for special education services and a large majority eligible for free or reduced-price lunch.

Colorful murals on the school's exterior greet students and set the tone for the welcoming and energetic classrooms found within. From its inception, EBCHS has emphasized a message of positive community engagement alongside rigorous academic expectations, which students credit with helping them succeed where other schools did not. The school is run in partnership with SCO Family of Services, which provides socio-emotional supports, internship opportunities, and college and career planning in addition to other community-based services for students and their families.

Patrick McGillicuddy, the school's founding principal, has always upheld teachers as the driving force of the school's instructional program, and in the first years of the school he set up several different formats for professional learning to support instruction. While these were positive experiences, they did not reach the degree of depth or sustainability McGillicuddy was striving for. In 2013, EBCHS utilized its participation in New York City's Multiple Pathways Institute to launch a multiyear effort to develop the lesson study practices described here, putting the school on a path to collaborative instructional improvement and improved student outcomes.

The Impact of Empowering Teacher Teams through Lesson Study

Talk to EBCHS teachers about their experience with lesson study, and a strong theme of appreciation quickly emerges. Teachers express "a sense of trust and camaraderie," of feeling "invested," and being "involved in deep and meaningful work." The school has always been a place that cultivates constructive working relationships, but the adoption of lesson study has cemented that collaboration and given it the framework to flourish. "Lesson study is the way to do PD, there's just no comparison," one teacher excitedly explains. "The learning that comes out of it is so much richer than our prior PDs."

This culture of professional learning ripples through all aspects of the school. Most immediately, the efforts of lesson study translate into improved instructional practices on the part of teachers. Teachers acknowledge it can be easy to stay in one's own personal comfort zone of adequate instruction but say lesson study provides

a mechanism to engage with new ideas in an interactive effort with colleagues. “The level of innovation is so far beyond what I would have ever been able to achieve on my own,” relates one EBCHS teacher. Another teacher, pointing to the ability of lesson study to inspire new approaches, says, “You have these great practices that you created with multiple people that you are constantly bringing back to your own classroom.”

Lesson study has also proven to be a force for teacher retention, as it serves the instructional practice of veteran and early-career teachers alike. For experienced teachers at risk of plateauing in their practice, lesson study provides an injection of fresh ideas and perspectives to consider, as well as teacher leadership roles for seasoned teachers to step into. At the same time, newer teachers get to directly tap into the instructional thinking of their more experienced colleagues while simultaneously making their own valuable contributions through the testing and debrief process. This ability to engage a variety of experience levels has brought strength, satisfaction, and stability to the school’s faculty, and McGillicuddy reports happily, “We’re in our ninth year, and a number of teachers have stayed, which can be a challenge to do.”

The real measure of any instructional change, however, is its impact on student achievement, and EBCHS leaders point to definitive gains in student outcomes they attribute to their lesson study efforts. Beyond the aforementioned steady rise in graduation rates, the school exhibits a particular element of success with students who are farthest behind academically. Analyses of the school’s graduation data based on the credit and state exam profile of the student body show that EBCHS students with the most needs notably outpace the graduation results of similarly situated students across the city. In the latest New York City School Quality Report, EBCHS posted a +23-percentage point difference between their graduation rate and the statistically expected graduation rate of their students: the highest difference of any NYC Transfer School.

When discussing this success, EBCHS teachers and leaders point to how lesson study compels them to closely study and tie instructional decisions directly to what they see happening for students in classrooms. It fosters instructional approaches specifically focused on meeting students where they are. Or as McGillicuddy explains, “I hear from the students all the time… They feel like teachers are very responsive to their needs, which is what lesson study is all about.”

1

A Framework for Professional Learning

Professional learning that results in long-term improvement is a persistently difficult mark to hit. A recent report found only 20 percent of professional development offerings meet the federally defined standards of being sustained, classroom-focused, and responsive to participant contexts (Combs & Silverman, 2016). Lesson study exists as an alternative. Within it teacher teams move through cycles of design, observation, and debrief—collectively building lessons and then observing those lessons as a team—gathering and discussing ideas for improving instruction at each step.

In this way, lesson study, "engages teachers in a research process" that facilitates deep and collaborative thinking that improves their teaching, (Dubin, 2009) while consciously building community values like openness, trust and professionalism. Tad Watanabe, professor of mathematics education, calls it "as much a culture as a professional development activity" and believes that when done well, lesson study pushes teachers to put student performance at the center of their instructional strategies rather than just planning for coverage of content (Richardson, 2004).

Lesson study allows teachers to simultaneously develop individually and as members of a community of sustained improvement.

It is a powerful shift. Research has shown a school community's sense of collective efficacy—the shared belief that "unified efforts can overcome challenges and produce intended results"—can have dramatic impact on student achievement (Donohoo et al., 2018). By cultivating exactly these values, lesson study provides a path toward this efficacy, allowing teachers to simultaneously develop individually and as members of a community of sustained improvement.

Introduction to Lesson Study at EBCHS

In early 2013, EBCHS began experimenting with lesson study within a single teacher team. Over the following years, the school slowly adapted the basic framework of the practice into a uniquely powerful school-wide program led by content-area departments and supported by school leadership. This handbook starts by examining the foundations needed to implement lesson study (*see Chapter 2*), then examines the specifics of EBCHS's system in-depth, breaking down its practice into five stages and providing guidance and resources for executing each:

Stage One: A school-wide focus leads to departmental-level skills. Each year, as the new school year approaches, EBCHS leadership identifies a school-wide focus area based on a review of student performance data. Each department then selects a content-area target skill within that focus area that they believe will lead to student improvement in the overall instructional focus. (*see Chapter 3*)

Stage Two: Teams collaboratively plan a single lesson. Teams discuss instructional approaches designed to teach the target skill and co-create a lesson that engages students. When planning, teams use protocols and routines to deliberately draw on all teacher voices so that the group feels collective ownership over the lesson that emerges. (*see Chapter 4*)

Stage Three: Group observation of the lesson examines student impact. One teacher on the team is selected to deliver the lesson to their class while others closely observe individual students during the lesson, taking detailed notes about how they engage with the skill in question. (*see Chapter 5*)

Stage Four: Teams collectively debrief the lesson. Teachers meet to discuss the observation, sharing low-inference notes on areas of student success and struggle. These reflections are then used to refine the lesson and instructional approach for further testing in subsequent lesson study cycles. (*see Chapter 6*)

Stage Five: Departments share team insights school-wide. After testing instructional ideas through two full cycles of planning, observation, and debrief, teams compile their learnings to present at a full school session. These school-wide sessions allow the entire community to review and question the findings each team encountered when testing strategies on the common focus area. (*see Chapter 7*)

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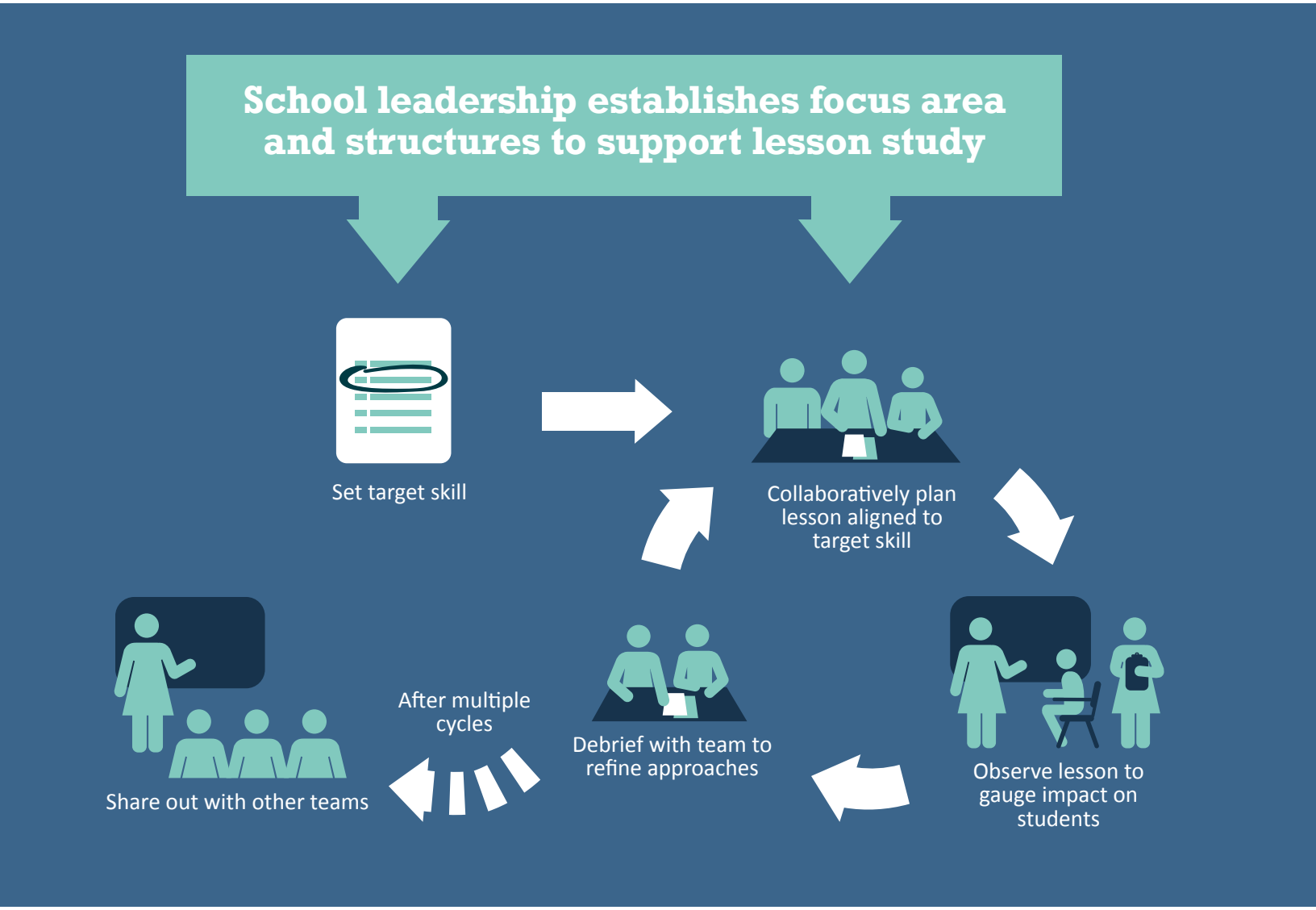
Stages of EBCHS's School-Wide Practice of Lesson Study



2 Laying the Foundation for Effective Lesson Study

The deliberate, long-term process of lesson study makes it a more powerful professional learning experience than one-off professional development sessions, but also introduces many moving pieces that require a concerted effort to implement successfully. Effective lesson study programs build from existing school culture to establish a foundation of openness and collaboration and then ground teacher efforts in a coordinated approach. School leaders keep the process on track by selecting focus areas that address student needs and are rooted in skills.

When EBCHS made the decision to shift into lesson study, school leadership worked with a set of external coaches to help establish teams, putting together protocols and routines that have grown into an organized practice sustained by teams. At this point, five years later, external coaching has gradually receded and teachers themselves are deeply involved in identifying the focus area that drives their efforts and in the ongoing coordination that allows lesson study to flourish in the school.

Building a School-Wide Lesson Study Practice

1 Cultivate Teacher Mindsets

Develop openness to peer-to-peer learning. Lesson study can only be applied to its full potential when teachers take a learning stance and embrace collaborative work around student growth. Without this mindset, lesson study risks becoming a perfunctory process that may sufficiently fill professional learning time but does little to improve practices. School leaders looking to adopt an effective lesson study practice must first embrace the importance of cultivating positive teacher mindsets around continuous and collaborative improvement.

Start by building relationships through group tasks. Strengthen teacher relationships by setting up group tasks around topics that build trust and collaboration. Set a tone of curiosity around instructional practice by posing questions about pedagogy and sharing readings and resources that spark motivation to explore new approaches. School leaders can seize opportunities to be open about their own areas of growth and examples of learning to help establish professional vulnerability as a norm. Each school will have a unique set of strengths and weaknesses, but deliberate efforts to identify them will increase teacher readiness for lesson study.

IN PRACTICE

At EBCHS, an important stepping stone on the way to implementing lesson study was the school's culture around classroom observations. Not only was it routine for teachers to be present in each other's rooms, school leaders had worked to create a positive experience around supervisory observations by making it an interactive process that opened up authentic conversations about instructional practices and how to give and accept responsive feedback. Framing lesson study as a means to deepen these instructional explorations created a natural path to teacher buy-in.

A challenge EBCHS faced as they adopted lesson study was an existing culture of autonomy around the development of curriculum and assessment. This attitude led to some skepticism about a practice where working collectively on lesson planning was essential. However, by emphasizing how lesson study was about learning with others about the student experience—and not about pushing a particular instructional agenda—and seizing on the collegial trust present in existing inquiry groups, school leaders at EBCHS brought teachers on board for trying out the process.

2 Develop Structures for Coordinated Work

Use group protocols to structure steps. Mindsets for collaborative learning set the stage for lesson study, but effective implementation also requires structures that keep the lesson study process on track and coordinated. As each step in the lesson study cycle calls for its own kind of team meeting, create a series of protocols to offer an initial approach at each stage to keep teams progressing through the process constructively. For example, EBCHS developed a series of activities to ensure everyone's voice is heard during collaborative planning, as well as agendas that ground debrief conversations in student-based evidence (see subsequent chapters for details). Additionally, EBCHS has established a standardized timeline for lesson study where teams complete two cycles of planning, observing, and debriefing within each twelve-week academic term.

Empower point people to lead the process. Begin this process by naming point people for each lesson study team. These should be community leaders who are motivated to think through professional learning approaches and who have respected voices with the building. Encourage these point people to solidify the protocols for meetings and position them as the major support to push teams to follow through on expectations. Then, as teams move through lesson study, meet regularly with point people to stay connected to each team's progress, troubleshoot challenges that arise, and maintain consistency of the approach across the school.

IN PRACTICE

At EBCHS, the principal and assistant principal bring together the point people from each departmental team on a monthly basis. They set an agenda to check in on the team's progress and set expectations for upcoming steps. For instance, early in a cycle, the group will discuss what strategies teams are aiming to test out, and later in a cycle, they'll report learnings to help plan the school-wide share-out. Additionally, these meetings are utilized as a forum for reflecting on experiences with lesson study steps, developing new procedures to test out, and ultimately refining the protocols that anchor the EBCHS lesson study process.

3 Determine a Skills-based Focus

Identify a school-wide focus area. With mindsets and structures established, a school is poised to improve instructional practices and now needs to ensure it addresses a high-leverage student-learning need. Sticking with a focus area helps a team expand upon their insights from one lesson study cycle to the next as opposed to shifting from topic to topic for isolated learnings that do not get developed. Moreover, when teams across the school are all targeting a similar learning need, it magnifies the professional learning as teams explore the focus area from multiple angles and can build off each other's findings. Similarly, a consistent focus area also facilitates coordination of the process across teams, which strengthens its coherence and impact across the school.

Root the focus area in student needs. Before beginning cycles of lesson study, review data on student performance and observations

of classrooms to narrow in on student-learning needs that can most benefit from improvement. To move toward a focus area for lesson study, consider the academic skills underlying the learning needs. This emphasis on skills over content is key for identifying a focus area that will be applicable across content areas while also being specific enough to give teams meaningful direction. Additionally, team learnings on skills are transferable beyond just the lesson at hand.

Finalize with teacher input. Draw in the perspectives of teachers through discussions and/or surveys to deepen the considerations of school needs and narrow in on a skills-based focus area that connects to teacher experience. Having teacher voice represented in the determination of a focus area cultivates ownership and motivates engagement in the subsequent lesson study steps.

IN PRACTICE

At EBCHS, leadership has always worked from the stance that buy-in increases organically when staff members see themselves working on something of critical importance to their own classrooms, so when deciding on a focus area for lesson study, leaders work hard to canvass teachers to make sure all viewpoints are heard. EBCHS leaders note that initiatives from the district can pull the school in multiple other directions, but they uphold one clear focus area for lesson study and privilege teacher voice in setting that focus. The EBCHS principal comments, "Of course we can improve in other things, but I've always had a belief that we need to stick to one thing to see real movement. It's hard in this environment, but the best person to figure out the needs of the students is the teacher in the room—there's no formulaic answer."

▶▶ In the spring before initiating the next school year's lesson study, the principal and assistant principal ask teachers which student skills could be most worth examining with lesson study. They review this alongside other considerations of student performance and then engage department point people to ensure that potential focus areas would have a place within their respective academic contexts. Lastly, during start-up professional learning sessions in the week before school begins, leadership share and discuss readings with teachers to help build a common understanding of the focus area and spark the process of building related instructional ideas.

4 Launch with Outside Support

Use external coaches to support rollout. Over time, lesson study will take hold as a self-sufficient school-wide practice driven by teacher teams. However, in the early phases, external support provides an important boost. Utilize external coaches to facilitate teacher teams through the full process until they have built sufficient ease with the steps. This frees teachers up from having to navigate unfamiliar process points while also trying to engage in the intellectual demands of collaborative planning and reflecting. Additionally, external coaches can introduce a fresh perspective on instructional practices and bring new sources of information that broaden the scope of what teachers explore through lesson study.

Launch with a pilot group. When first rolling out lesson study, leverage these external coaches to guide a small pilot team through an trial run of the lesson study cycle with ample space and support to reflect on and adapt steps. In forming a pilot group,

consider teachers who will be open to the vulnerability that comes with being observed, who will readily raise ideas and concerns to inform further implementation, and who will hold influence with colleagues once they report on their experience. In addition to being advocates to help spread the practice more broadly, their pilot effort can work out the kinks for the school's context, adapting steps to their unique environment.

Scale up teams and scale down coaching. Utilize the pilot experiences to build enthusiasm and set up structures to launch multiple lesson study teams across the school. Draw upon external coaches to facilitate each team's early experiences and ensure those coaches are involved in cross-team coordination efforts. Then, as implementation continues, set a time frame for external coaches to step back from direct facilitation into advising team point people, then eventually releasing full responsibility to the teachers of the team to manage their own processes.

IN PRACTICE

External coaches played a prominent role in the launch and development of EBCHS's lesson study practice. As school leaders first became interested in trying out lesson study as an approach to professional learning, they turned first to the science department, which had been working successfully with an outside facilitator to develop instruction more targeted to specific skills. The science team started moving through lesson study steps and reported that it resonated with their prior process and proved helpful in deepening that work.

The following school year, EBCHS school leaders secured outside facilitation to launch lesson study in each departmental team. The principal soon realized this called for a different approach to using coaches compared to prior years when he had just communicated goals and maintained a general awareness of their plans. Now he instituted regular meetings of external facilitators to norm expectations for lesson study meetings, share agendas, and check in on progress. Over time, department point people took a more active role in these coordination meetings. At the end of the second year, EBCHS teachers had built up capacity, and the involvement of coaches dissipated, leaving teams duly equipped to carry out the process on their own.

Leadership Involvement Makes a Difference

As a school rolls out lesson study, the direct involvement of school leaders provides an important boost to implementation. Join a lesson study team to move through the process with the teachers and keep a pulse on how the steps are playing out. This provides much more information than hearing a postmortem report and creates opportunities to reinforce key expectations. Listen for plans staying connected to focus areas, observations staying low-inference, and debriefs staying couched in student evidence. When necessary, realign discussions before they go too far off track.

School leaders participating in lesson study meetings get additional perspective on the pedagogical thinking of teachers to enrich their instructional leadership. Given the collaborative nature of lesson study, leaders must be aware of the dynamics they bring as a supervisor and weigh how to contribute without disrupting the collegiality of the process. But EBCHS leaders emphasize that the benefits of direct participation are worth it for the school as well as for themselves. Or as one school leader says, "It's the part of my job that I really enjoy. I get to work on teaching and learning and interact with students. It sustains me."

3

Identifying a Target Skill for the Team to Study

Overview of this Stage

Purpose:	Teams select a specific angle of the focus area to study that is both meaningful to their work and allows them to maintain a connection to other teams' learning.
When it happens:	At the beginning of the school year and then revisited at the beginning of each academic term after two cycles of lesson study.

Once a school-wide focus area has been established, the first step in the lesson study cycle can begin. In this opening stage, each teacher team breaks down the focus area into related skills that are applicable for their discipline and selects one target skill to investigate in their own cycle. By selecting a single skill and naming discrete, observable components, teams build a deeper understanding of what they seek to develop within their students.

At the beginning of the school year at EBCHS, each team examines the school-wide focus area from multiple angles. "We start by asking, 'Where are students struggling and what is a really important aspect that will have the greatest impact on student learning,'" one teacher explains. Out of this discussion, each team narrows in on their own target skill, defining accompanying "look-fors" that describe successful demonstration of that skill. Finally, after EBCHS teams complete two full cycles of lesson study within an academic term, they take stock of their learning and revisit the target skill to decide if they should shift it in any way to make the best use of their lesson study cycles in the next term.

"We start by asking, 'Where are students struggling and what is a really important aspect that will have the greatest impact on student learning?'"

Setting Up a Target Skill for Lesson Study

1 Explore the School-Wide Focus Area

Unpack the focus area from multiple vantage points. School-wide focus areas must be general enough to be applicable in multiple subject areas and often encompass several interrelated skills that could each be avenues for a lesson study. As a team, delve into the focus area to distinguish the cognitive steps and abilities underlying the focus area. EBCHS uses several strategies to guide this exploration: reading research on the focus area, analyzing student work to identify points of struggle, completing a relevant task as a team to reflect on the skills involved, and engaging students through conversation and observation to learn about their experiences in the area directly. Within these approaches, use protocols that prompt fresh thinking, draw out multiple perspectives, and organize discussions toward concrete conclusions about the high-leverage skills involved.

2 Select a Target Skill That Addresses Needs

Identify high-leverage skills. Exploration will highlight multiple facets of the focus area, but each team must narrow in on one specific skill to serve as the center point of their cycle. Draw from the ideas generated from the readings, observations, and practice runs to determine a precise skill to target. Reflect on places students have shown a need for improvement to make sure the target skill will be addressing an important gap in performance. Put an emphasis on skills that are revisited most frequently in the curriculum to have ample chances to try out strategies and give preference to skills that are easily observed so teams get good data during testing. For instance, a skill around reading comprehension might not be as readily apparent during a lesson as a skill like use of academic vocabulary.

Select a skill meaningful to the team. Discuss as a team the opportunities and challenges presented by possible skills and build consensus on a target skill to move ahead with. If no skill is emerging as a clear choice, use decision-making activities such as straw-polling that surface preferences and help the team narrow down options and arrive at a conclusion. At EBCHS, teams are given leeway to select their target skill and teachers appreciate having that agency while still participating in the collective focus area. It bolsters the sense of professionalism surrounding lesson study, since as one teacher relates, “We are not all expected to do the same thing in the same way.”

3 Name Look-Fors That Describe Student Success

Create clarity by defining what the skill looks like in practice. As the team prepares to study the target skill, it is important to have a common understanding of what high-quality demonstration of that skill looks like. Naming concrete look-fors gives students clear expectations when working on the target skill and gives teachers an anchor that keeps planning, observations, and debriefs aligned to the target skill. To begin developing look-fors, set up a task involving the target skill for team members to complete together and note the specific actions that go into demonstrating the skill. Create time to also watch students doing the task and gather further ideas for describing relevant look-fors. Review related materials such as assignments and rubrics on the skill, either from existing resources or external research, to help hone the language of the look-fors into clear, observable criteria that will serve as a useful reference point for the steps of lesson study ahead.

IN PRACTICE
The EBCHS Lesson Study Target Skill Identification Agenda

(*see page 20*)

At EBCHS, teams utilize their first two or three meetings of the school year to engage in different modes of exploration that end with defining a target skill. EBCHS teachers caution against "getting stuck in the weeds" when attempting to delineate the skills entailed in a focus area but speak to the benefits of moving through multiple structured activities to help the team build a common understanding of the skills at-hand.

For instance, to dig into the EBCHS focus area of student discussion, the math team read an article titled "How to Start Academic Conversations" and discussed it using a protocol to surface ideas for discussion. Then they staged their own discussion around a math problem to surface the skills they used, ultimately naming six separate skills from identifying a key topic to paraphrasing and summarizing. As they considered places where students in their math classes had shown struggles, the team chose "clarify and elaborate" as the specific target skill related to student discussion that they would address with their lesson study.

In a follow-up meeting, the team watched a video of students engaging in discussion and used a protocol to describe the instances they saw students clarifying and elaborating and noted the exact language students use to do so. The team processed these observations to name look-fors for their target skill, including "If a classmate shares an idea, I always ask them to elaborate" and "If I don't understand someone's elaboration, I ask them for a specific example."

Lesson Study Target Skill Identification Agenda

East Brooklyn Community High School

Objectives:

1. To better understand specific discussion skills described in the article
2. To notice exemplary language and discussion skills used by the department during a practice discussion

Time	Agenda Item (Bridge, Artifact, Reading, Student Work Analysis)
10 min	**Icebreaker**
15 min	**Statement of Goals** **School-Wide Goals: Supporting Discussion** • Increase number of opportunities for students to discuss • Make inventory of subskills needed for discussion; norm them across departments if possible • Support students in having better academic conversations **Math Department Lesson Study Target Skill** What specific discussion subskill would we like to target as a department?
25 min	Shared reading "How to Start Academic Conversations" Modified 4A's Protocol—Read and annotate: author's **assumptions**, ideas you **agree** with, ideas you'd **argue**, and ideas to **act** upon • Share ideas and discuss considerations for target skills
45 min	**Team Activity to Set Target Skill** • Complete the problem as a group, utilizing discussion **The Problem: Betsy the Bug** Betsy the bug starts on the bottom left corner of a standard 8 x 8 chessboard. She moves randomly (once every minute) to an adjacent square either to the right or above her present square (with equal probablilty) until she reaches the top right corner of the board. Charlie the cockroach starts at the top right corner of the board at the same time that Betsy is at the bottom left corner. He moves randomly (once every minute) to an adjacent square either to the left or below his present square (with equal probability) until he reaches the bottom left corner. What is the probability that Betsy and Charles share a square at some point in their journeys? (Make sure to fully explain your answer.) • Reflect on the experience to name the steps/skills we utilize **Note moments/quotes from discussion** | **Related step/skill for discussion** | • Discuss which step/skill serves as a useful target for lesson study
10 min	**Next Steps** • Record a video of students engaged in discussion • Next meeting: Observe student discussion to describe "look-fors"

4 | Collaboratively Planning a Lesson

Overview of this Stage

Purpose:	Planning collectively strengthens the learning process by promoting risk-taking, experimentation, and openness to improvement.
When it happens:	Early in a cycle, after a target skill is established and during the three to four weeks leading up to when a lesson will be observed.

Once the team has defined the impact on students it is hoping to have within the target skill, it is time to devise a way of creating that impact. In this stage, two important things are created: a lesson plan and collective ownership. Avoid the temptation to take one team member's existing lesson and offer feedback on it, which may feel like an efficient avenue to a lesson plan but will erode the effectiveness of the learning process by failing to instill collective ownership. Instead, leverage all voices of the team in a creative and deep thought process of generating instructional ideas, narrowing in on a strategy, and building it into a concrete lesson plan the full team is ready to test for effectiveness.

At EBCHS, teams carry on from their research around the target skill directly into further explorations of related instructional possibilities. Utilizing planning activities that demand everyone's involvement, EBCHS teams lay out a broad set of ideas over a series of meetings then whittle them down to specific lesson details to test. Over time, teams have fallen into a collaborative rhythm through this process that has pushed teachers' instructional practices. One EBCHS teacher comments, "It feels like when we are planning lessons together, we are one brain… even when we disagree."

Collective attention to all the details ensures a complete plan that is ready to be implemented and reinforces the shared ownership of the lesson, which opens the team to learning.

Collaborating on Lesson Plan Development

1 Identify an Instructional Strategy to Test

Generate a range of ideas. To kick off the collaborative planning process, cast a wide net to consider various instructional ideas that could have an impact on students in the target skill. Review and discuss resources from team members' experiences as well as external research and exemplars that can stoke creative thinking. Use activities that draw out everyone's voice, for instance breaking the team into pairs to maximize the development of ideas in a given time, then share back with the full team for further discussion and elaboration.

Consolidate thinking to try something new. To move toward a decision on which approach to use for the full lesson study, first identify two to three potential ideas for team members to do trial runs of in their classes between team meetings. Discuss reflections on these trial runs to home in on a strategy that is feasible to implement in the curriculum and promising in terms of its impact on the target skill. Additionally, use this stage to experiment with innovative practices. An experienced EBCHS teacher explains, "Lesson study allows me to take a break from the curriculum that I'm used to and try something new."

Continue to refine the plan based on experience. After completing a cycle of observing and debriefing the first lesson, the team returns to the collaborative planning stage. However, this second time around calls for a slightly different approach now that there is lived experience to build upon. Maintain only the elements of the instructional strategy that proved to be effective. Find places to apply refinements rising out of the recent debrief, and revisit earlier ideas that were not used in the first

IN PRACTICE

The EBCHS Building Strategies Meeting Agenda

(*see page 27*)

EBCHS teachers use a specific protocol to plan out an instructional strategy. The process often starts with an outside resource like an article related to the focus area or sample classroom materials that can spark new lines of thinking. After reviewing the resource, teams engage in structured discussions to elicit reactions and set up constructive conversations. For example, see the accountable talk-listening prompts in the Building Strategies Meeting Agenda.

If the team is doing this planning after a lesson study cycle in the same focus area, they include time to review their recent debriefs and elicit ideas on how the team could continue developing the instructional approaches. The Building Strategies Meeting Agenda includes an explicit prompt to synthesize the team conversation after each generative activity to help move the process toward decisions about what to try next. Then the team concludes with everyone committing to try out one idea from the discussion to maintain collective investment and keep the process moving.

lesson. Typically this base of knowledge means teams spend much less time on idea generation in the second cycle and are ready to begin outlining and testing plans for the refined strategy sooner.

2 Collaboratively Outline Lesson Activities

Find a fit in the curriculum. Thoughtfully matching the instructional strategy to a specific place in the curriculum makes for natural incorporation and leads to a clear demonstration of the skill. Without that alignment, complications may arise in delivering the instructional strategy that can make it difficult to learn from observations of the lesson. Look over upcoming curricular plans that are far enough out that the team will be able to meet two or three times to prepare the lesson for observation. Identify a place that entails the target skill and involves topics that will provide a good setup for the instructional strategy.

Map out lesson activities. With the curricular context in mind, the team turns to working together to design activities that will include the instructional strategy. Formulate an objective for the lesson that is contiguous with the unit of study and aligned to the target skill. Revisit earlier discussions of the target skill to think through how to enact the instructional strategy in a way that will give students a clear understanding of expectations and opportunities to demonstrate the look-fors. This may include developing a mini-lesson and/or modeling activity to introduce the target skill as well as creating practice tasks and supports to allow students to show their learning. It may be efficient for the team to work in pairs to concurrently outline different components of the lesson, but always include time to bring ideas back to the full team for final decisions to maintain a sense of collective ownership over the plans that take shape.

3 Preview Lesson Ideas with Students

Stage a trial run. Before finalizing the lesson plan, take time to test out the ideas to surface and work out kinks. Convene a small group of students who will be willing participants outside of class—providing food or other school recognition can help recruitment—and set them up to complete the key activities the team has planned for the lesson. Carefully observe their reactions and the steps they take to move through the activity, particularly noting places of confusion or struggle. If it proves too complicated logistically to do a trial run with students, do the activities as a team to still learn from a live-action test.

Gather input. Immediately following the trial run, interview participants to gain their insights on ways to improve the activities. Have them repeat back their understanding of the task and expectations and ask for descriptions of where they got lost. Reflecting on places where confusion or struggle were evident prompt participants to share suggestions of how activities could have been clearer or more effective. This step brings an additional layer of quality control that can make for more straightforward delivery and observation on the day of the full lesson.

IN PRACTICE

The EBCHS Trial Run Meeting Agenda

(*see page 29*)

After EBCHS teachers have worked together to develop a specific instructional activity for their target skill, they complete a trial run of the activity with a group of students (and sometimes teachers, as shown in the Trial Run Meeting Agenda). EBCHS teachers use this small trial and subsequent debrief with questions like "What ideas did you have while doing the activity?" to gather reflections that strengthen the activity for its full-scale delivery in an upcoming lesson. Additionally, with the trial run fresh in their minds, teachers sharpen their look-fors and get ready to finalize the details of the complete lesson.

4 Refine Activities to Set Up Full Lesson Plan

Revisit lesson outline. Build off the trial run to address areas of the instructional strategy that were generating confusion or struggles. In particular, make sure instruction around the skill connects to the activity, directions to students are clear, and supports are available to help students of different abilities engage with the activity. Additionally, make final adjustments to the language of look-fors to make sure they represent concrete expectations, and do a final check of alignment to confirm the activity presents opportunities for students to demonstrate each look-for in ways that will be evident to observers.

Detail a full lesson. Once the core activities of the instructional strategy have been solidified, finalize the plan for the minute-by-minute delivery of the full lesson. Working as a team, set up the lesson opening and the flow from there to instruction, time for the activity, and all the way through the closing. This collective attention to all the details ensures a complete plan that is ready to be implemented and reinforces the shared ownership of the lesson, which opens the team to learning from the upcoming observation and debrief.

Stick with Protocols

Collaborative lesson design is intellectually rigorous work that can be both stimulating and taxing. To allow teachers to feel open-minded and vulnerable enough to authentically engage in the process together, utilize protocols that include openings to decompress from the day reinforce a nonjudgmental framing for the planning steps. If defensive emotions do emerge, redouble efforts to adhere to the protocols and ensure all members of the team feel true ownership over the lesson plan. As a teacher from EBCHS explains, "If you follow the protocol, you don't have to worry about being critiqued because all feedback is on the lesson that was collaboratively created, not on you."

Building Strategies Meeting Agenda

East Brooklyn Community High School

Objective: Reflect on prior cycles of lesson study to build strategies to try in next lesson

<table>
<tr><th>Time</th><th>Agenda Item (Bridge, Artifact, Reading, Student Work Analysis)</th></tr>
<tr><td>10 min</td><td>Opening
Directions: What is one (school-related) thing each of us will leave in 2017? What is one thing each of us will bring into 2018?</td></tr>
<tr><td>15 min</td><td>Remembering
A. What happened last time? Directions: Think back on our Lesson Study work in T1. Where did students excel? Where did students struggle? This will help us focus our efforts. A reminder, here was our target:
• Our goal is to promote discussion development, with a particular focus on listening.
<table><tr><th>How did students benefit from our work?</th><th>In what areas/skills do they need more work?</th></tr><tr><td></td><td></td></tr></table></td></tr>
<tr><td>45 min</td><td>Honing Focus
A. Where do we want to go next?
i. How do we take students from what they demonstrated in Lesson 1 to what we want them to demonstrate as active listeners who learn from and challenge others?
Run the Future Protocol.
Each write down some ideas about what we’d like to do next and share out.
ii. Brainstorm some ideas for next steps
B. Reading. Read from pages 1 to 9 in the article Response: Effective Classroom Discussions Don't Happen 'Magically,' asking, “What are the best ways to organize and lead classroom discussions?”
C. We will read then try to summarize the information that could be useful or apply to Lesson 2. As people share out, we will try the verify, clarify…
Accountable Talk
<table><tr><td>Clarify:</td><td>_____, I heard you say _____. Am I getting that right?</td></tr><tr><td>Verify:</td><td>_____, is it fair to summarize your point by saying _____?</td></tr><tr><td>Challenge/Support:</td><td>_____ said _____, and I would challenge/support that point/conclusion with _____.</td></tr><tr><td colspan="2">SYNTHESIS:</td></tr></table></td></tr>
</table>

<table>
<tr><th>Time</th><th>Agenda Item (Bridge, Artifact, Reading, Student Work Analysis)</th></tr>
<tr><td>40 min</td><td>
<h2>Brainstorm</h2>
What do we need to model, support through guided practice, and then measure?
<table>
<tr><th>Idea</th><th>Value/Benefit</th></tr>
<tr><td></td><td></td></tr>
</table>
SYNTHESIS:

Connection to current curriculum:
</td></tr>
<tr><td>10 min</td><td>
<h2>Calendar Check</h2>
Review the calendar and think about what needs to happen next.

Application: What is one idea or strategy from today’s meeting that you will give an initial try in class?
<table>
<tr><th>Educator</th><th>Think/Idea/Strategy</th></tr>
<tr><td>1.</td><td></td></tr>
<tr><td>2.</td><td></td></tr>
<tr><td>3.</td><td></td></tr>
<tr><td>4.</td><td></td></tr>
<tr><td>5.</td><td></td></tr>
</table>
</td></tr>
</table>

Trial Run Meeting Agenda

East Brookly Community High School

Objective: Planning our first instructional activity on classification

Focus Area: Discussion

Time	Agenda Item (Bridge, Artifact, Reading, Student Work Analysis)
10 min	**Opening/Icebreaker:** Science Trivial Pursuit Cards
45 min	**Attempting the student task overview:** Three teachers and two students will attempt to classify a group of animals and debate which categories to set up • Observing teachers will take notes on what kinds of language the participants use and what roles they take on • Debrief with the whole group 1. What ideas/questions did you have while listening to the conversation among the participants? 2. What were the participants able to do when it came to the discussion? 3. What discussion skills did we not see? 4. What are specific phrases used that might move the discussion forward?
15 min	Break
45 min	**Developing Look-Fors:** • Questions to the whole group and to the students • Teachers will discuss what the skill look-fors should be based on our observations and debrief of the discussion activity Students: 1. What do you think makes for a successful discussion? 2. What should be our Look-Fors for discussion? 3. What should be the different roles in the discussion?
5 min	**Closing** Each teacher shares their thoughts about today's meeting
Next Steps: The science department will meet again to use the feedback and ideas shared in this meeting to plan the full lesson	

NOTES:

5

Observing the Lesson to Gauge Student Impact

Overview of this Stage

Purpose:	Observations of individual students allow the best way to understand what students are actually learning when engaged in the strategy being tested.
When it happens:	During a regularly scheduled lesson, with logistical setup in the days leading up to it.

With a collaboratively planned lesson in place, the lesson study process turns toward testing out the effectiveness of the plan. The format is simple: one teacher on the team implements the lesson while the others observe. However, where traditional classroom observations focus on the teacher's actions, lesson study observations intentionally focus on student impact to gauge lesson effectiveness through students' actions, reactions, and work products. This observational data will lay the groundwork for understanding how well the planned strategy led to the intended student learning in the target skill and where there are areas in need of improvements.

To gather a focused set of observational data, lesson study observations narrow in on individual students. This forces observers to gather more nuanced details of how the lesson plays out for individuals, what they say and do, providing "insight into student thinking and how students perceive the lesson," in the words of one EBCHS teacher.

"Observation here means a different thing. We're not watching colleagues or their teacher moves, we're watching students and gauging their learning."

At EBCHS the focus on student impact rather than teacher instructional practices creates a shift in the culture of classroom observation. Rather than worry about being evaluated by their peers, teachers see lesson study observations as a source of information that can improve their practices. Or as Pat McGillicuddy, the principal, says, "It is a gift having someone who observes a kid for you that whole lesson and is able to tell you what's happening for that kid."

Getting the Most out of Lesson Observations

Plan Ahead to Target Observations → **Capture Student Experience during the Lesson** → **Probe Student Understanding During Follow-Up**

1 Plan Ahead to Create Targeted Observations

Identify focus students. In the days leading up to the observation, review the class roster to identify a set of individual students who will yield an informative set of observations for the lesson being tested. Consider student skill level in the focus area and patterns of participation that may lead to different experiences of the lesson, and select a range of students whose circumstances should be served by the lesson. For example, in a lesson focused on citing evidence, teachers could observe one student who has struggled to select relevant evidence, another with below-grade-level reading skills, and another who has shown proficiency with related tasks in the past.

Match teachers with students. Ensure the number of students selected matches the number of observers so that each observer has one individual to focus on through the lesson. Ideally all those involved in the collaborative planning of the lesson take part in the observation, but if not, experience at EBCHS has shown that a minimum of three observers who are focused on three students are needed to have a successful reflection after the observation.

Prepare logistically. Work with school administration to arrange coverages and other logistical considerations for making teachers available to observe the lesson. As a final piece of preparation, give students in the observed lesson a heads-up that there will be visitors in the classroom and explain

their presence is for the teacher alone, helping to improve their instruction.

2 Capture Student Experience during the Lesson

Record student responses. At the start of class, situate teachers near their assigned student to clearly see and hear them. EBCHS observers usually introduce themselves and explain they are there to see if this lesson works for the student. As the lesson plays out, note student actions and spoken words during each component of the lesson. Because the lesson study process is rooted in observations of student impact, avoid the instinct to focus on the teacher, as is the norm in many other observations. As one EBCHS teacher explains, "Observation here means a different thing. We're not watching colleagues or their teacher moves, we're watching students and gauging their learning."

Stay objective. The notes recorded about students in this stage are not the place to make evaluative statements on performance such as "The student does a great job responding to prompt." Instead, maintain a "low-inference" stance, and objectively record the facts of what students are saying and doing. For instance, instead of recording an inferential statement like "The student has given up on the task," an observer can write, "Student does not write a response." It may seem like a subtle difference, but an objective account of what is happening for the student provides the foundation for an authentic group debrief after the lesson.

Focus on look-fors. Additionally, to ensure the notes lead to productive reflection on the strategy being tested, use the look-fors the team established earlier as a lens for focusing observational data as the lesson carries on through each component. Do not feel the need to capture every single action and word of the student being observed—too much observational data to sift through in the debrief can be as difficult as too few—instead focus on capturing important moments that touch on look-fors.

IN PRACTICE
The EBCHS Observation Template

(*see page 35*)

At EBCHS, teachers use the Observation Template to organize and share relevant information in preparation for an observation. Teachers record the names of students selected for observation, list relevant background information and potential learnings from their case, and then assign the student to an observer. Additionally, teachers use the header space of the template to record basic framing information on the lesson—such as the topic, target skill, and look-fors—allowing for ease of reference during the observation.

During observations, teachers record their low-inference notes for their assigned student within a note-catcher section of the Observation Template. This section includes columns for each target student so that each observer has a separate place to enter their notes, but the observers all work in the same document so that all the notes are organized together for easy reference in the subsequent debrief. Additionally, the note-catcher is divided into multiple rows, each labeled with a different part of the lesson like Intro, Mini-Lesson, etc. This helps observers keep track of which portion of the lesson goes with their recorded notes.

3 Probe Student Understanding Using Follow-Up Questions

Clarify in the moment. Student words and actions during the class period speak to the impact the lesson is having but might not always provide a full picture of what students are thinking. During the observation, find opportunities to ask non-disruptive questions of students to surface their thoughts and ideas. For instance, in a part of the lesson where the teacher asks questions to the class, even if the student being observed isn't called on, an observer can quietly ask their student "How would you have responded to that?" and record the response in the notes to capture additional evidence of how much the student is understanding.

Gather student reflections. Once the lesson is complete, ask the student being observed one or two questions to gather their reflections on the lesson. Use questions like, "How did that go for you?", "What did you learn in that lesson?" or if time allows, more targeted questions like, "What part of the lesson really helped you?" and "What could your teacher do to help you be more successful?" Additionally, to supplement the perspective on the student's experience, make a copy or take a picture of relevant work the student produced during the lesson.

IN PRACTICE

At EBCHS, teachers have found these interactions with students during and right after the class are critical, allowing deeper insights into student learning. One teacher comments, "Even when you think you can anticipate what's going on in the lesson, it turns out you can't." Teachers will routinely think out reflection questions to pose to their students at the end of the lesson like "Which part was most helpful to you?" and include them at the end of the Observation Template in a section that also provides space for observers to record student answers. This provides additional perspective on the impact of the lesson on students, which aids teachers in getting the most out of the next step of debriefing the lesson.

Observation Template

East Brooklyn Community High School

Date: 11/27/17
Teacher: M & R **Class:** Living Env 3, 5th period (Room 201)
Lesson: Speciation **Target Skill:** Demonstrate active listening

Anticipated Performance of Focus Students *What do you predict they will be able to do? Where might they struggle? How has lesson been differentiated/scaffolded in response?*		
Focus Student 1	**Focus Student 2**	**Focus Student 3**
S—dislikes group work and participating—interested to see how the protocol addresses and mitigates these issues or merely exacerbates them.	D—writing and speaking skills are grade level, though sometimes struggles in precision; will be interesting to see how he clarifies and expands his thinking in response to his peers.	J—struggles to expand his thinking; interested in how he incorporates what his peers have to say and whether or not he can keep to the protocol.

Specific Skill "Look-Fors" for this Lesson:

Discussion Look-Fors for today:

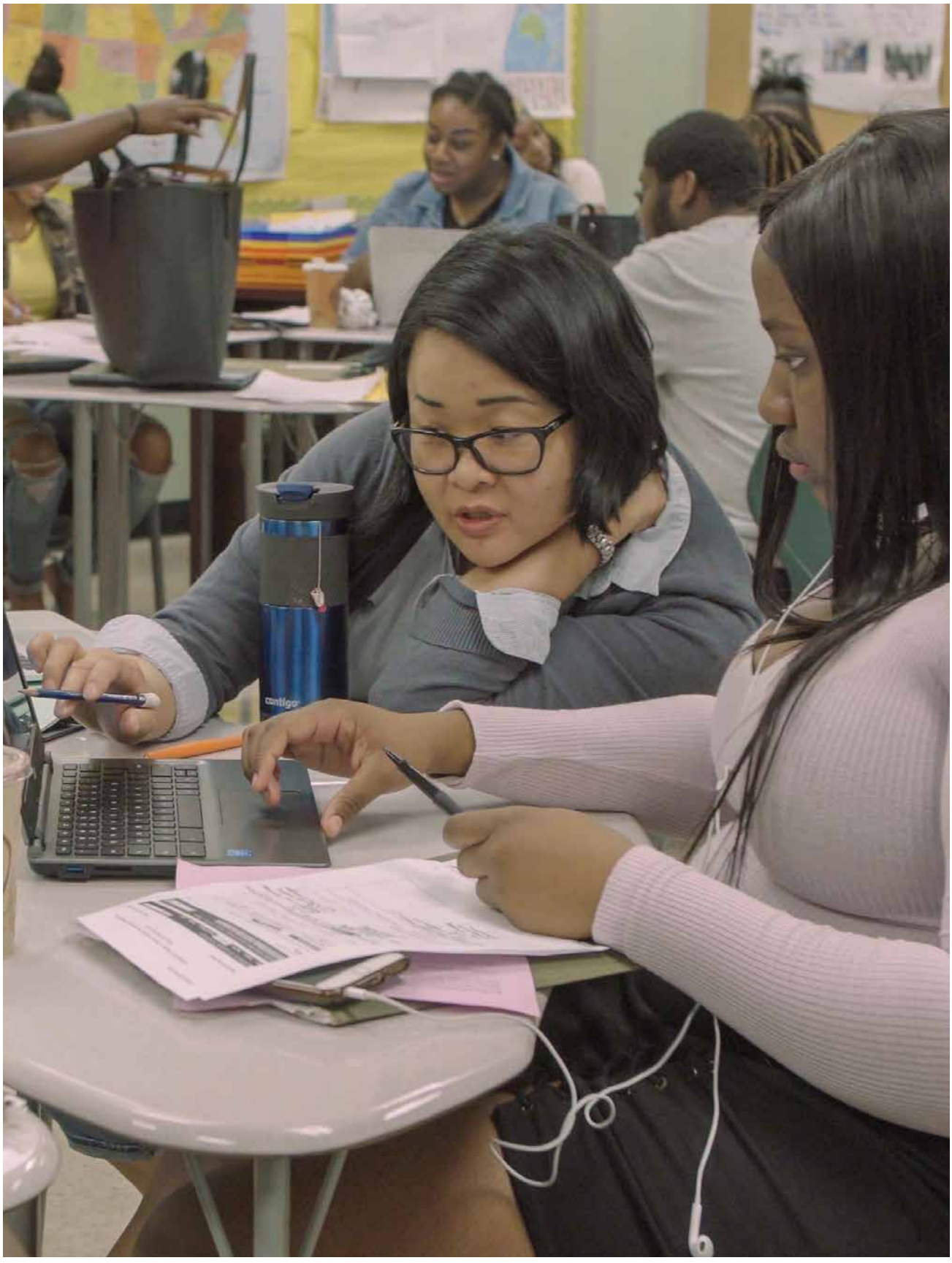
- **Paraphrase:** I demonstrate that I am an active listener and participant by paraphrasing what someone else in the group says before adding my thoughts/evidence
- **Build on**: I demonstrate that I am an active listener and participant by building on what someone else in the group says by adding my thoughts/evidence
- **Challenge**: I demonstrate that I am an active listener and participant by challenging what someone else in the group says by playing "devil's advocate"

Observed Performance of Focus Students Based on Look-Fors **(to be filled out by observers)**			
	Focus Student 1	**Focus Student 2**	**Focus Student 3**
Intro **Going over look-fors**	• She did read the board, also told me to, not speaking much, but seems to be following along & said she understands the directions	• Read second bullet point out loud • (M goes over Look-Fors and guidelines for the activity, using the cards to paraphrase, build on, or challenge) • (M shows a chart and asks which student is doing well and who needs "a little work")	• Asked what he is supposed to be doing, points at the yellow/green/pink papers • Facilitator sheet—grading how you're doing, paraphrasing things, getting more points • S and G complete task….A explains to him what he's supposed to do

	Focus Student 1	Focus Student 2	Focus Student 3
Group Work	• S first to agree with statement, also challenged statement about suicide, made more challenges, and even checked with the facilitator to make sure she had enough checks in each category • Towards the end of the round she engaged more, she agreed with M's challenges but did not paraphrase as I was suggesting *(because of her slight withdrawal, I was wondering if it was something personal)* • She was back in the flow for the 3rd round practicing her paraphrasing, we didn't get to do as much practice, M was demonstrating the different skills with our group & before we knew it the bell rang.	Topic one: person got genetic testing and found out she had 5 years to live • Gave his opinion: "yes she should have gotten tested so she could know that she had a genetic disorder and she can prepare and know what to do in the span of years" • B (facilitator) is wondering where to give the point • M asks B to respond to what D said, B paraphrases what D says • B tells J to build on—he builds on (so she can be prepared for the future) • D says can I challenge myself? I encourage him to do it. • D says what if she actually has 10 years to live and the doctor can be wrong • M paraphrases • B says "it's basically like they're forcing us to have different opinions"	**Discussion #1:** • Paraphrased by repeating what T said • Agreed, but put out the yellow paper... fixed it with the help of T—I agree because of what you said about antibiotics • I would want to know how much time I had so that at least I know • M tells him—this time listen to what people are saying and challenge them **Discussion #2:** • T puts down a green and J asks, "do you even know what genetic testing is?" • AA challenged and asked what if this mandatory testing is used by the government to decide things, like if you can work a certain job? • Doesn't it depend on how severe it is?
Class Discussion	**Round 1** • O shared with the class how the group thought that knowing that you would soon die would just stress the person out for the rest of their life & decrease the quality of their lives **Round 2** • K shared out for the group, S doesn't think that people who find out they have genetic diseases or disorders should be prevented from having children	• B is listening, Jovan has his head down, L seems to be listening • D shares out for the group—we agreed that testing was right because... • D wants to challenge what another group says, M says not right now, we're just practicing sharing out • (We have a debate about whether or not the colored papers and checklist are necessary or useful) • D says he feels that they shouldn't need those reminders, they should be able to remember on their own how to have a discussion.	

Questions to ask students

1. Which part of this task was most helpful to your learning? Why?
2. Which part of this task is most challenging? Why?
3. What could your teachers do to help you be more successful at this task?
4. Why do you think your teachers are having you do this task? How might this help you in the future?



6 Debriefing the Lesson to Develop Improvements

Overview of this Stage

Purpose:	Discussing student actions observed during the lesson leads to reflections on the impact of instructional approaches and ways to make improvements.
When it happens:	In a team meeting within a few days after the lesson observation.

With observational data on the lesson in hand, teams are now in position to debrief the impact of the lesson and the implications for future work. Teachers explore where students succeeded and struggled, and how effective the strategy turned out to be, gleaning concrete and actionable insights for participants. But, because the lesson was collaboratively planned by the group and the observations were intentionally focused on the students, no individual teacher is on the spot having his or her work critiqued. This sets the conditions for an open reflection where teachers can dig into areas of difficulty without being hindered by feelings of judgment.

At EBCHS, teams convene to debrief the lesson as soon as possible after the observation, ideally within one or two days. The school has established a detailed protocol that structures the debrief sessions and keeps participants focused on what students actually said and did in response to the planned instruction. Teachers credit these structures with creating natural, productive debriefs. One teacher comments, “Our debriefs never feel forced or contrived. In fact, without protocols it felt forced because we did not know where we were going.”

The debrief is not the end of the lesson study process but the launching point for applying learning to future instruction.

Reflecting Together to Refine Instruction

1 Establish Roles for Team Members

Consider skills to set roles. Assign roles to participants to ensure all aspects of the debrief process stay on track. These include:

- a moderator who manages the group's progress through the protocol and maintains focus
- a recorder who synthesizes learnings out of the discussion and records them for future reference
- a timekeeper in charge of intervening if the group has stayed too long on one step.

When getting started, consider team members' individual skill sets and experience to place people in roles where they can best contribute to a productive debrief. However, once the team has built consistency and momentum within the process, rotate roles to build team members' capacity and shift the perspectives being offered in each role.

Draw on outside coaches. Often, in the team's initial experiences with lesson study, it is helpful to have an external person like a district instructional coach or educational consultant with the relevant skills serve as moderator and recorder of the debrief. For example, in the first year of EBCHS implementing lesson study, each team had an external moderator who led the team through the steps of the protocol and kept the conversation aligned with the objective of unpacking student observations to identify ideas for improvement. Their involvement helped to cultivate a safe and constructive environment to reflect on instruction and set an example for those roles, which EBCHS teachers now fulfill internally within their own teams.

2 Discuss Student Successes and Struggles

Highlight examples individually. Begin the reflection process by individually reviewing observation notes and student work products to surface specific examples of what did and did not work for students during the lesson. This is a crucial step to ensure the ideas generated by the team are grounded in the students' experiences of the lesson. Use the look-fors as a lens for identifying a focused set of examples that will be most informative for the debrief (for instance a situation where a student clearly demonstrated the target skill or a moment when a student voiced uncertainty about a task).

Share with the team. Once individuals have identified relevant examples on their own, build a group understanding. Create an opportunity for each observer to contribute by utilizing a go-around or other turn-taking activity. This builds a full picture of key observations for the team to consider before

they shift to discussing improvements. In addition to naming successes and struggles that were evident, prompt participants to identify examples that were surprising. These areas often provide the most insights for teachers. As one EBCHS teacher puts it, "It's when your hypothesis is wrong that the richest learning happens."

IN PRACTICE

The EBCHS Lesson Study Debrief Protocol

(*see page 43*)

At EBCHS, teachers start a debrief session by reading back over the notes in the Observation Template and highlighting passages that represent telling moments in the students' experience. They use a color-coded system, highlighting evidence of success in green, evidence of struggle in red, and other notable examples in orange. Additionally, teachers review student work products and note areas of success and struggle. This process pushes teachers to refamiliarize themselves with the observational data and sets up visual cues within the notes that ease reference to examples during the discussion.

The EBCHS moderator then shifts the team from individually reviewing notes to sharing examples by inviting a team member to name instances of student success they have highlighted. This continues until all observers have shared areas of success and the recorder has placed them in a shared document—often right below the Observation Template to keep all materials for the lesson together. The moderator repeats the process for areas of student struggle, prompting for questions and clarifications along the way to ensure everyone has a clear picture of the observed students' experience. Finally, in a similar manner the group discusses surprises and the moderator once again steers the conversation away from digressions or pre-emptive jumps to suggesting improvements.

3 Develop Potential Improvements

Identify areas to improve. Once the team gains a clear picture of where students experienced successes and struggles in the lesson, move the discussion toward generating ideas for changes or additions to the instructional approaches. There are often multiple patterns in the student experiences that could be interesting to explore, but prioritize areas that speak most directly to the target skill and have the highest potential to be implemented in future lessons. The recorder plays an important role at this stage to help narrow the team's attention to a targeted set of areas for improvement, especially if a clear decision needs to be made between several good options for discussion.

Craft refinements. Discuss potential refinements to the lesson that could help students overcome the areas of struggle in the target skill. Draw from ideas raised in prior stages of lesson study, past teaching experiences, related articles or other resources, and the perspective of any outsiders who may be participating with the team. As ideas surface, develop them into specific instructional moves, which can range from small shifts in the strategy just tested to completely new approaches. For instance, within a debrief about a lesson where students engaged in a discussion activity within groups, the Science Department surfaced that many groups were operating inefficiently in ways that disrupted their ability to carry out the full activity. For the next round of testing the activity, teachers decided to set up explicit roles for group members and provide more direct guidance for how students should play their roles.

4 Identify Next Steps

Plan for implementation. The debrief is not the end of the lesson study process but the launching point for applying learning to future instruction, whether in another round of planning and testing a refined version of the strategy or simply within the ongoing classroom practice of individual team members. Conclude the debrief by reviewing the instructional ideas that have been raised in response to student experiences of the lesson and identifying places to implement them. If the team plans to continue into another round of lesson study on the same target skill, decide which refinements will be tested and how they will be incorporated into the upcoming collaborative planning. If the team is not moving directly into another round of lesson study with the same target skill, record the ideas surfaced in the debrief to be available for future reference and sharing.

Debrief the process. Additionally, reserve time for the team to take a step back and reflect on their experience of lesson study and ways to improve the team's progress through the steps. This is a short but important step, bringing further authenticity to the group's collaboration. An EBCHS teacher relates, "It's not just about improving the teaching; it's about improving the process."

IN PRACTICE

Teachers at EBCHS characterize the debrief stage of lesson study as "where the real work happens" and they point to its benefits for all teachers involved. It surfaces potential adjustments, big or small, that the teacher who delivered the lesson may have not considered without the additional perspectives, and pushes all teachers to think about how they teach the target skill. At the same time, teachers caution against expecting definitive silver bullets that easily lead to monumental student outcomes. The process is an intellectual puzzle that can be inconclusive but rewards those who keep moving through it faithfully. As one EBCHS teacher puts it, "Trust the process—even if the strategies are not working. You learn from it."

Speak from Student Evidence

Often at the debrief stage, teachers unfamiliar with lesson study have an urge to jump straight into speculating about causes of issues and postulating fixes. Anticipate and avoid this by prompting participants to directly link their contributions at this stage to specific student words and actions. For instance, build upon observations like "Student A did not mention any examples out of the reading." But if instead an observer offers a statement like "Student A is a struggling reader who needs literacy support," probe for them to share the concrete observations underlying their idea.

By maintaining a focus on student impact, the discussion will remain both evidence-based and nonjudgmental. If at any point the teacher who delivered the lesson starts to feel defensive, steer the discussion back to student examples—and consider whether or not collective ownership of the lesson was actually established during the planning stage.

Lesson Study Debrief Protocol

East Brooklyn Community High School

1. Everyone in the Lesson Study Team should access the shared Observation Template notes.
2. The observers will review their notes on their Focus Student and
    i. highlight in Green examples of student successes.
    ii. highlight in Red examples of student struggles.
    iii. highlight in Orange surprises or "interesting teacher moves."
3. Other Lesson Study Team members present will choose a Focus Student to focus on and to do the same.
4. The moderator will then take notes on members' responses to the following prompts:
    i. What progress did each Student make? What student successes did we observe?
    ii. Where did we observe students struggle? How did the technique being developed help or hinder? (Maybe a bit of both.)
    iii. What surprises were there?
    iv. What aspect(s) of the teaching technique could be adjusted next time to improve the progress of each focus student?
    v. So what should we try next time?

Sample Debrief Notes

Student Work—Summary

Students were able to . . .

- Name the skills and tell the difference between them
- To some extent, do all of the skills
- Use the sentence prompts
- Hold each other accountable in terms of collecting the points
- Bring knowledge from previous units into the discussion
- Take turns speaking, use impulse control

Students struggled with . . .

- Distinguishing between the skills
- Science concepts (e.g., understanding "genetic" illness)
- What to say when they needed someone to clarify
- Listening actively to each other in order to actually respond
- Getting the discussion going and keeping it moving by asking people to speak (teachers often took this role)

GLOWS—what worked?

- M going over the "look-fors" for each skill in detail before the discussion
- M showed them a sample eval sheet and asked them how each "fake" student did in the discussion and what they need to work on
- Colored slips
- Eval sheet (points tracker)
- Students liked having the Spanish and Creole on the slips
- Teaching etiquette and social skills

GROWS—what didn't seem to work?

- They struggled with the 3rd topic because of their misconceptions about the topic ("What is genetic testing?").
- All students picked challenge as the thing they wanted to do more, but very few were able to do it. They said they didn't know how to correctly word their challenges.
- Not actually listening to each other
- Did not move the discussion forward without me (the adult) intervening
- Struggled to pull others into the discussion
- L did not participate at all despite my many attempts to convince him

IDEAS:

- Videotape teachers having discussions to use to help students critique discussion skills
    - Students could "grade" (criticize) each teacher's performance
    - Could be used as a pre-assessment at the beginning to see where they are at
    - Emphasize the importance of actually LISTENING
- Get students to practice making observations daily
- Making connections to other units, science topics -->include this explicitly as a Look-For
- Make sure students have enough content for the discussion—review and use notes in the discussion
    - Think through what concepts and vocab they will need
    - Review before the discussion
- Make guidelines for facilitator clearer for how to move the discussion forward
- Ask students:
    - Would you like to . . . paraphrase, build on, challenge, etc.?
    - Would you like to add something?
    - What do you think?
- Have specific days where we focus on improving one specific skill at a time
- Have students self- and peer-assess about the skill
- Do a "guess the skill" activity, or just practice asking students to identify skills as they come up
- Start with 3 skills and keep adding more (up to 6)

Next Steps

- Focus on having students practice the discussion skills with controversial topics that involve more content
- Focus on one subskill of discussion (e.g., challenge). Model for students how to do it, have them self-assess and assess one another in terms of the quality of the challenges, not just if they are doing that skill, give students sentence starters for that subskill.


EXPRESSIVE SKILLS
RECEPTIVE SKILLS
FINGERSPELLING
PARTICIPATION
ACADEMIC BEHAVIOR

7 | Sharing Learnings across the School

Overview of this Stage

Purpose:	School-wide coherence authentically grows as the whole staff meets to share and reflect on their respective work within the common focus area.
When it happens:	At the end of an academic term, after multiple cycles of lesson study.

As teams refine and solidify their ideas about effective instruction within the focus area, it benefits the whole school to have those learnings spread between teams. Convening teams to share with each other pushes them to concretize their takeaways into an actionable form, which can advance their own practice as well as transmit learning to others working on related ideas: sparking new ideas for subsequent lesson study cycles, as well as more consistent practices across the building. Additionally, the sharing process bolsters collegial accountability and transparency as teams learn what others are planning and just how hard they are working.

At EBCHS, the full faculty convenes for a structured share-out meeting at the end of each academic term, typically after teams have completed two cycles of lesson study on a particular target skill. From early on, school leaders recognized great learning was happening in teams and knew they needed to create opportunities for that to spread. EBCHS's principal explains, "We know it is going to benefit students to have a common practice across the board, so a challenge for me as a school leader has been, How do I get the practices to spread?" The answer, these share-outs, have become a uniquely important stage of adult learning within the overall lesson study process.

Setting Up Cross-Team Share-Outs

1 Consolidate Learnings to Share

Distill insights for sharing. At the completion of two cycles of lesson study, take a step back as a team to reflect and identify important takeaways. Create a presentation that showcases the instructional ideas the team has developed and an experiential activity that will engage colleagues with the tools and strategies developed in recent lesson study efforts. As the date of the share-out approaches, develop a short pitch that will give colleagues a brief overview of the strategy, the materials involved, and the key lessons learned through the lesson study process. At the beginning of the share-out meeting, deliver the pitch so colleagues from other teams know what the presentation will offer.

IN PRACTICE

At EBCHS, teams utilize the last two to three meetings of each academic term to synthesize their learnings with an eye on sharing with colleagues. At one point in the school's history, this entailed preparing extensive slide-based presentations to describe the team's process, but teachers found it hard to pull many useful insights out of share-outs of this nature. Now, teams instead distill their learnings into an activity that models their instructional strategy with colleagues as participants, which ▸▸ they find to be a much more fruitful way to learn from each other. Teams identify the materials and approaches that best capture their takeaways from recent lesson study and craft a 20-minute activity to exemplify the student experience. Additionally, teams review past debrief notes to prepare a brief explanation of the main successes and challenges they encountered through their process.

2 Learn from Other Teams

Split the team to cover more ground. Listen to other teams' pitches, then confer with team members to decide on how to deploy everyone across the experiential presentations. Consider how to achieve the greatest exposure to other strategies and who from the team could be most connected to the potential insights from each presentation.

Learn like a student, give feedback like a teacher. In the presentation, engage with another team's strategy from a student perspective and keep track of what in the experience feels helpful and what feels potentially confusing. Once the strategy has been modeled, debrief with others attending the presentation to discuss initial impressions of the strategy and ideas for how it could be applied within other teams. Share ideas with the presenter for them

to use in refining the strategy and to hear further insights from them about their experience developing and implementing the strategy.

IN PRACTICE

The Lesson Study Share-Out Agenda

(*see page 50*)

As each academic term concludes at EBCHS, there is a school-wide meeting for teams to share their lesson study learnings. The school follows a strict agenda for breakout presentations and then team debrief. Where in the past, each team gave a full presentation to the whole group, that is now confined to brief 5-minute overviews from each team that provide enough info for teachers to decide how to break out. Then team presentations run concurrently for 40 minutes of modelling an instructional strategy and sharing background thoughts for participants to respond to. The last segment is time for teams to pull their thoughts together and lay out next steps, which get displayed for other teams to see and comment upon as the meeting closes.

3 Plan Future Lesson Study Cycles

Connect back. After participating in other teams' presentations, reconvene as a team to share insights from the presentations and discuss implications for upcoming lesson study efforts. Go around to make sure ideas from each presentation get raised for team consideration and then discuss potential ways the learnings from other teams could be incorporated into the instructional ideas the team is currently working on. Identify a set of promising ideas and name concrete next steps that give those ideas a place in the collaborative planning process as the team moves into a new cycle of lesson study.

The Next Level of Interdisciplinary Work

As an experiment to expand on the cross-team share-outs, EBCHS set up interdisciplinary lesson study teams that consisted of a mix of teachers from each subject area moving through lesson study steps together for one whole academic term. These teams came together after initial cycles of lesson study within traditional departmental teams, and teachers brought the insights from their own department into the interdisciplinary group.

Moving beyond the one-off interactions of a share-out meeting, teachers got to collaborate across subject areas in a much deeper manner through multiple meetings to co-plan, observe, and debrief together. This led to more extensive cross-pollination of instructional ideas and additionally opened opportunities for teachers to see and consider nuanced differences in lesson study approaches that colleagues brought from their own departmental practices.

An EBCHS history teacher commented, "Working with math and science teachers, was like, 'Oh, you have completely different ways of looking at what I teach,' and it just heightened what we were doing." Teachers returned to department teams in the following term, bringing with them a fresh set of ideas to explore in ongoing lesson study efforts.

Lesson Study Share-Out Agenda

East Brooklyn Community High School

1. **Presentation of Topics** (20 min total, 5 min for each department) Each department takes turns to describe:
   - the target skill of their lesson study
   - the strategy they tried
   - who they think their share would be useful for.

   (The teacher who delivered the lesson study lessons will be the presenter.)

2. **Department Check-In** (2 min) Plan who will go to which presentation and what they hope to get out of it.

3. **Presentations** (40 minutes) Please include the elements below, in any order or manner you think will be effective. Slideshow not necessary, but feel free to include.

   i. **Background Information** (5 min)

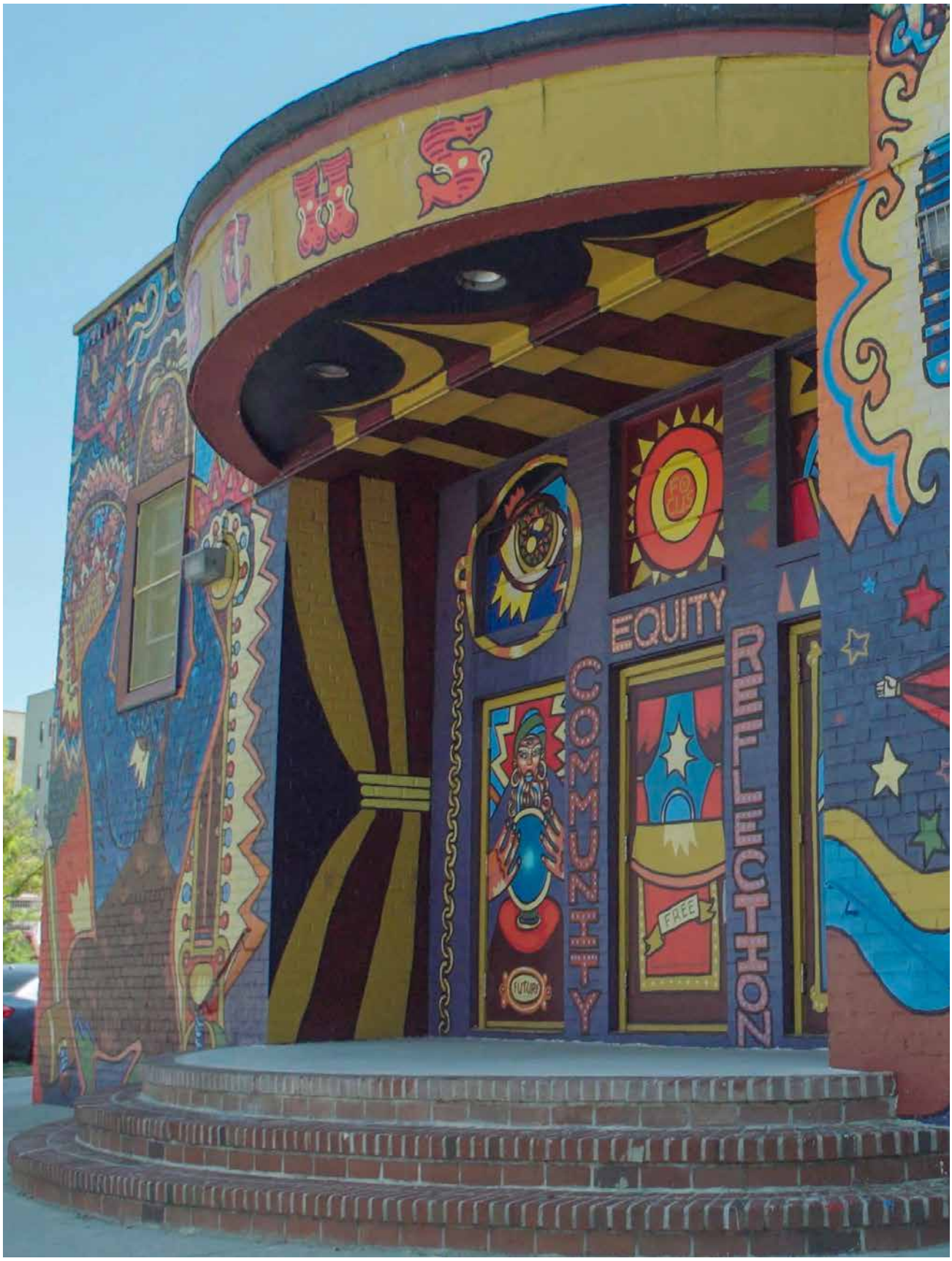
   ii. **Attempt the strategy, 'Be the Student"** (20 min)
   - The presenter should bring student sheets/resources/project to give teacher-students a chance to experience the lesson ***as*** students.

   iii. **Small Group Discussion** (10 min)
   - What did the strategy help you to do or learn?
   - What was challenging? Where did you get stuck?
   - How/When could you apply this to your subject area?

   iv. **Presenter Share** (5 min)
   - Strengths and struggles
   - Next steps or planned revisions to the strategy
   - Final takeaways

4. **Department Share** (15 min)
   i. Back with department groups, each member sums up the strategy they saw and tried to department-specific applications.

5. **Graffiti Share** (15 min)
   i. Create a visual ***describing how your department has improved the lesson study process this year and the work you still want to improve on in term 3.***
   ii. Post, circulate, comment.


EQUITY
COMMUNITY
REFLECTION
FREE

Conditions That Support Success

While EBCHS's lesson study practice has grown more effective over time, several attributes of professional culture and school structures existed from the beginning, providing a valuable foundation for the successful implementation of lesson study.

A Culture of Respect and Collaboration: Lesson study requires teachers to collectively set goals, share ideas, and reflect on successes and struggles—all structures impossible to achieve without the ability to work together productively. At EBCHS, there have long been routines of teachers collaborating on teams. It is a small school with low turnover and many founding staff still on board, creating strong relationships and allowing teachers to take leadership roles in multiple aspects of the school's operations. Additionally, prior to adapting lesson study, teachers often visited each other's classrooms during instructional periods: both out of the incidental convenience of finding a scarce place to work and during more structured co-teaching initiatives. This led to an established comfort level with teaching in front of colleagues, which made lesson study observations feel less intimidating for teachers.

Leadership Values Teaching and Teachers: At its core, lesson study values teachers as professionals who will grow pedagogically when empowered to develop their own craft. At EBCHS the principal prioritizes teaching and learning among the many other demands of leading the school and has always strived to be directly involved with teachers' pedagogical practices. Additionally, the principal constantly upholds the agency of teachers in the setup, leadership, and implementation of professional learning. Teachers have embraced the responsibilities involved and the principal hires teachers with an eye for people with aligned values and a readiness to collaborate in such a work environment. McGillicuddy comments, "The approach here is rooted in the fact that teachers are professionals and they improve through a rich process that is not micromanaging but grounded in their deep thinking. That's always been the belief here, and now (with lesson study) we have a structure that matches this belief."

Consistency in School Approaches:
Lesson study becomes most effective when it is implemented with fidelity and consistency, allowing findings to be retested, reapplied, and revisited within similar contexts so learning spreads and deepens over time. At EBCHS, all courses are built around the same outcomes-based framework which emphasizes skills and reinforces a related set of curricular and instructional planning approaches across the school. This common foundation is a catalyst for collaborative teacher planning around target skills and paves the way for learnings from one lesson to be applied in other classrooms. Additionally, the EBCHS staff has intentionally developed norms and routines that capture and reinforce practices they have found to be effective for implementing the steps of lesson study. These establish clear and predictable processes that make it easier to engage in the more intellectually risky and emotionally vulnerable aspects of lesson study while also maintaining the consistency across teams that enables school-wide coordination.

Long-Term Commitment to Process:
The most profound effects of lesson study play out slowly over multiple iterations as the cycles of design and testing deepen over time. Educators seeking a quick fix or looking to mandate instructional approaches are unlikely to be served by the process. In its first years, EBCHS would name a new professional learning initiative each year and follow traditional structures of discrete sessions from varied providers to support each new goal. Breaking out of that traditional mode and gaining comfort with a single structure for professional work was a turning point that EBCHS staff credits with allowing lesson study to take hold in the school. Leadership dedicates virtually all staff professional time to the lesson study process, including two hours of weekly meeting time for departments to meet, and has developed a patient trusting approach, allowing positive results to emerge over time. This has laid the groundwork for teachers to embrace the process without other professional distractions and pressures and to invest in themselves as educators.

"The approach here is rooted in the fact that teachers are professionals and they improve through a rich process that is not micromanaging but grounded in their deep thinking. That's always been the belief here, and now (with lesson study) we have a structure that matches this belief."

—Patrick McGillicuddy,
Principal, East Brooklyn Community High School