

CBE360^o

SURVEY TOOLKIT

*A Guide to Using the Student Experiences
and Teacher Practices Competency-Based
Education Surveys*

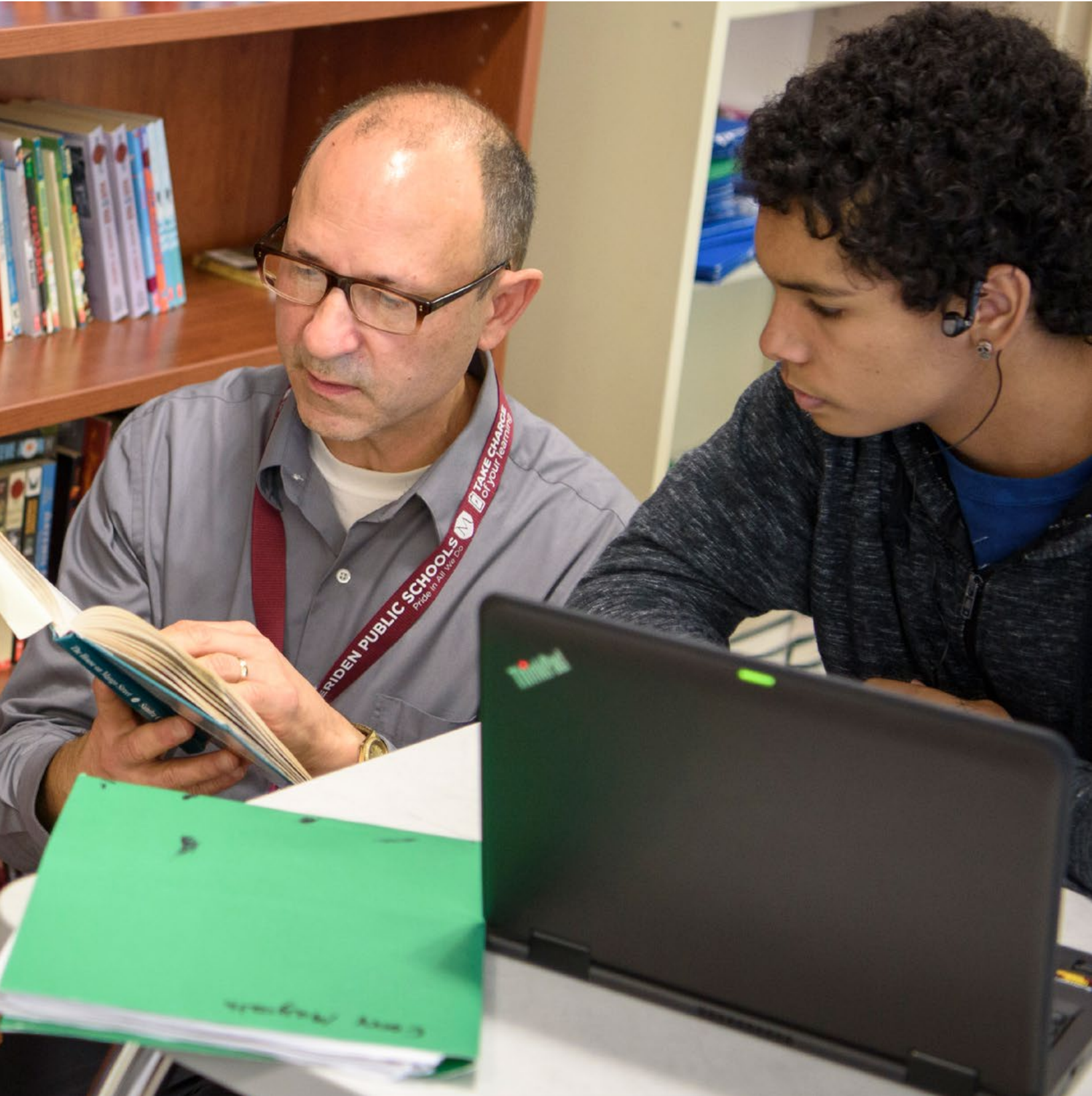
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This CBE 360 toolkit is designed to help schools and districts understand and use the student CBE experiences and teacher CBE practices surveys. The toolkit is organized around five key steps.



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INTRODUCTION

Competency-based education (CBE) is gaining popularity in schools nationwide as educators seek ways to ensure that each individual student is well prepared for college and careers (Patrick, Worthen, Frost, & Gentz, 2016). CBE is a “personalized approach that focuses on awarding credit on the basis of a student’s demonstrated mastery of competencies—regardless of how long that learning takes” (Surr & Redding, 2017). As students work toward achieving competency at their own pace, they typically experience higher expectations for their learning coupled with more individualized support, greater autonomy, flexibility, responsibility, and a clearer sense of their learning goals. Research suggests that these types of classroom conditions are associated with increased student engagement, motivation, self-efficacy, and other learning capacities that help predict academic success (Farrington et al., 2012).

To date, few tools have been available to help educators and researchers measure progress toward implementing practices associated with a CBE approach. The Student CBE Experiences (SCE) Survey and Teacher CBE Practices (TCP) Survey, developed by American Institutes for Research (AIR) for the *Study of Competency-Based Education* (see Box 1), help to fill this gap. The student and teacher surveys were designed to provide high-quality *formative data* to gauge progress and guide improvement efforts across various stages of CBE implementation. They can be used to explore the perspectives of teachers and students, identify differences in experiences and

practices across subgroups of respondents or across subject areas, and measure practices in individual courses or in multiple courses in multiple CBE feature areas—giving districts and schools a 360-degree view of their CBE implementation. The surveys capture teacher classroom practices and student experiences at the secondary level in six domains, which we refer to as *feature areas*.¹

Six CBE Feature Areas

- ◆ Learning targets
- ◆ Measurement of learning
- ◆ Instructional approaches and supports
- ◆ Assessment of learning
- ◆ Pacing and progression
- ◆ When and where learning takes place

The student and teacher surveys show promise as reliable and valid measures of CBE practices in these six feature areas. As outlined in the final report for the AIR study, some of the measures of CBE practices in the student survey were positively associated with changes in students’ learning capacities during their first year of high school. For example, students’ reports that the learning targets in their mathematics

¹ The original survey was designed for and administered to ninth-grade students. However, it was written and piloted with language appropriate for students beginning in the sixth grade. See the Technical Appendix: Teacher CBE Practices (TCP) and Student CBE Experiences (SCE) Surveys. There is evidence from cognitive interviews and study data that the survey is suitable for use across both middle and high school age groups.



class were clear were related to favorable changes in students' intrinsic motivation and belief in the utility of their mathematics class. In addition, an analysis of items in the teacher and student surveys showed that groups of items could be combined to form “**item sets**” that could be used to measure broad features associated with CBE implementation such as flexible pacing and progression or the clarity of learning targets.² These findings suggest initial evidence for the reliability and validity of the student survey measures. For a detailed description of the survey development process, please see [Technical Appendix: Teacher CBE Practices \(TCP\) and Student CBE Experiences \(SCE\) Surveys](#). Given the growing interest in CBE, and with the support of the Nellie Mae Education Foundation, AIR and the College and Career Readiness and Success Center are making these survey tools available to educators and researchers to help guide high-quality CBE implementation and expand our collective understanding of the nature of CBE implementation in districts and schools.

This toolkit is designed to help schools and districts understand and use the student and teacher surveys and is organized around the following five steps. A *CBE 360 Survey Toolkit Checklist* aligned to these five steps is included in [Appendix A](#).

STEP 1

Decide if the CBE surveys are right for you

STEP 2

Adapt the surveys and administration process to fit your needs

STEP 3

Administer the CBE surveys to students and teachers

STEP 4

Explore your survey results

STEP 5

Make sense of (and use!) your survey findings

² To test whether individual survey items could be combined to capture these broader constructs, we began analyses of the survey data by performing exploratory factor analysis (EFA), a statistical technique that is used to uncover the underlying relationships between survey items. When each item has a factor loading that is at least 0.4 on a single factor, this indicates that, taken together, the items measure a single construct. We also calculated Cronbach's alpha for item sets to ensure that the items within a set had internal consistency (i.e., items were closely related). Cronbach's alpha is also commonly used as a measure of an item set's reliability.



Box 1: American Institute for Research's Study of Competency-Based Education.

In American Institutes for Research's (AIR's) [*Study of Competency-Based Education*](#), funded by the Nellie Mae Education Foundation, researchers sought to understand which competency-based education (CBE) practices, if any, are associated with positive changes in students' "learning capacities," or the skills, behaviors, and dispositions that students need to learn effectively, during their first year of high school.

For this study, AIR conducted a careful examination of CBE in selected high schools in three states participating in the Innovation Lab Network facilitated by the Council of Chief State School Officers. The study included 10 public high schools self-identified as implementing CBE and a set of eight comparison high schools. In all schools, AIR invited teachers of core subject areas to take the CBE Teacher CBE Practices Survey in spring 2015. Ninth-grade students completed a survey that measured learning capacities in fall 2014 and spring 2015 (so that researchers could measure change over time), as well as the Student CBE Experiences Survey in spring 2015.

For a detailed description of the survey development process, please see the Technical Appendix.

Researchers compared the implementation of CBE practices across the CBE and comparison schools and examined whether changes in student learning capacities during the ninth grade were associated with students' experiences of CBE practices. The study found positive relationships between students' self-reported exposure to CBE and changes in their learning capacities. The study also found wide variation in the implementation of CBE practices across and within CBE and comparison schools. Many schools that identified as CBE did not consistently and uniformly implement the core CBE features across all classrooms. And, many teachers in schools that were not labeled as CBE reported implementing practices typically associated with a CBE approach. The findings suggest that labeling a school as CBE is not enough. To ensure that students experience CBE in the classroom, schools should examine the extent to which CBE practices are being implemented consistently in all classrooms.

STEP 1

Step 1: Decide If The CBE Surveys Are Right For You

Are the Student CBE Experiences and Teacher CBE Practices surveys right for your school or district? The information that follows summarizes the main features and uses of these surveys and will help you to determine whether the surveys will meet the needs of your school or district.

STEP 1

DECIDE IF THE CBE SURVEYS ARE RIGHT FOR YOU

- Do the surveys measure CBE features of interest to your school or district?
- What are the key characteristics of the surveys?
- Are the CBE surveys suitable for your school or district's assessment purposes?

Do the surveys measure CBE features of interest to your school or district?

To determine whether the student and teacher surveys are right for you, you will want to confirm that the CBE feature areas addressed in the surveys are well aligned with those your school or district is working to implement. The student and teacher survey tools measure the six key feature areas of CBE identified through the [Study of Competency-Based Education](#). Please see Box 2 for explanations of these six CBE feature areas. The student and teacher survey tools aim to capture practices and experiences in all six CBE feature areas. However, both surveys can be customized and shortened to reflect the specific needs and priorities of your school or district. You may choose to administer only the subset of items associated with the CBE features you are most interested in assessing. For example, surveys can be customized to capture only practices related to pacing and progression or just assessment practices. A shorter survey means a shorter administration time.

Important Note:

Both surveys can be customized and shortened to reflect the specific needs and priorities of your school or district.

Box 2: Six core features of competency-based education classrooms

AIR’s study of competency-based education identified six core feature areas associated with a CBE approach.

CBE FEATURE AREAS	WHAT THIS LOOKS LIKE IN THE CLASSROOM
Learning targets	...are explicit, shared with students, and based on rigorous college and career readiness standards.
Measurement of learning	...is based on the mastery of specific learning targets—rather than a student’s level of participation, effort, or time in the classroom.
Instructional approaches and supports	...are individualized to the needs of the student, relevant and varied, and offer students ample opportunity to exercise independence and responsibility for their own learning.
Assessment of learning	...offers students flexibility and choice in when and how they show what they learned.
Pacing and progression	...gives students flexibility for taking more or less time to learn and requires that they show what they have learned before earning credit.
When and where learning takes place	...lets students learn and earn credit for activities that take place outside the school building and school day.

What are the key characteristics of the student and teacher surveys?

When determining whether the student and teacher surveys are a good fit for your school or district, the characteristics below, including the respondent pool, survey length, schoolwide versus course-specific focus, and number and type of academic subjects addressed, should be considered.

• Characteristics of the Student CBE Experiences Survey

The student survey includes four sections and a total of 89 items and takes approximately 30 minutes to complete (including time for instructions). The survey is appropriate for middle and high school students.³ In the first section, students are asked to answer a series of demographic background questions. In the second section, students are asked about selected CBE-related experiences in their school. The remaining two sections ask more in-depth questions specifically about students’ CBE experiences in their mathematics and English courses. These survey sections can be modified to ask about only mathematics or only English or can be adapted to solicit student reports of their experiences in other subjects and courses

³ Because the language level of the survey is grade six and above, the survey is not appropriate for elementary school students.

(e.g., science or social studies).⁴ See [Appendix B1 Student CBE Experiences \(SCE\) Survey](#), to view student survey items in a survey format. See [Appendix C, Student CBE Experiences and Teacher CBE Practices Surveys Construct Map](#), to view how student survey items are organized by the six CBE feature areas.

• **Characteristics of the Teacher CBE Practices Survey**

The teacher survey consists of four sections and a total of 80 items and takes approximately 20–30 minutes to complete. The survey is appropriate for middle and high school teachers. In the first section, teachers are asked to answer a series of background questions about their teaching experience. In the second section, teachers are asked to report on CBE practices across all of the courses they teach. Next, teachers are asked to report on schoolwide policies and practices associated with CBE. Finally, in the fourth section, teachers are asked to report on their practices in one specific core subject and course (e.g., select one course they teach in mathematics or in English, social studies, or science). The survey can be customized to have teachers report on a specific subject area, a specific course, or multiple courses. It also can be shortened to have teachers just report on their CBE practices across all their courses (i.e., Section 2 only). See [Appendix B2, Teacher CBE Practices \(TCP\) Survey](#), to view teacher survey items and [Appendix C, Student CBE Experiences and Teacher CBE Practices Surveys Construct Map](#), to view how teacher survey items are organized by the six CBE feature areas.

The key characteristics of the CBE student and teacher surveys are shown in Box 3.

Box 3: Competency-Based Education (CBE) surveys at-a-glance			
Survey respondents	<ul style="list-style-type: none"> • Middle or high-school students • Teachers of core academic classes in middle or high school 		
CBE features measured	<ul style="list-style-type: none"> • Learning targets • Measurement of learning • Instructional approaches and supports • Assessment of learning • Pacing and progression • When and where learning takes place 		
Number of survey sections and items	<table border="0"> <tr> <td style="vertical-align: top;"> <p>Student Survey</p> <ul style="list-style-type: none"> • Demographic background information—“About You” • School CBE experiences—“My Experiences in School” • Math—“What I Think About My Math Course” • English—“What I Think About My English Course” </td> <td style="vertical-align: top;"> <p>Teacher Survey</p> <ul style="list-style-type: none"> • Teacher background information—“About You” • “Your Experiences as a Teacher—All Courses” • “Schoolwide Policies and Practices” • Single, selected subject and course—“Your Experiences as a Teacher—One Course” </td> </tr> </table>	<p>Student Survey</p> <ul style="list-style-type: none"> • Demographic background information—“About You” • School CBE experiences—“My Experiences in School” • Math—“What I Think About My Math Course” • English—“What I Think About My English Course” 	<p>Teacher Survey</p> <ul style="list-style-type: none"> • Teacher background information—“About You” • “Your Experiences as a Teacher—All Courses” • “Schoolwide Policies and Practices” • Single, selected subject and course—“Your Experiences as a Teacher—One Course”
<p>Student Survey</p> <ul style="list-style-type: none"> • Demographic background information—“About You” • School CBE experiences—“My Experiences in School” • Math—“What I Think About My Math Course” • English—“What I Think About My English Course” 	<p>Teacher Survey</p> <ul style="list-style-type: none"> • Teacher background information—“About You” • “Your Experiences as a Teacher—All Courses” • “Schoolwide Policies and Practices” • Single, selected subject and course—“Your Experiences as a Teacher—One Course” 		
Survey administration time	Approximately 30 minutes or less for all sections (can be shortened to fewer sections).		
Timing of survey data collection	Suggested frequency and timing is once or twice during the year; it is recommended that surveys not be administered during the first and last three weeks of the school year.		

⁴ Future versions of the survey are expected to include an option to ask students about CBE practices in all six feature areas across all courses.



Are the CBE surveys suitable for your school or district's assessment purposes?

The student and teacher surveys can provide valuable *formative* data on the extent to which the six feature areas of CBE described above are being implemented in secondary classrooms. They can be used to gauge progress and guide improvement efforts across various stages of CBE implementation. The surveys were designed to give districts and schools a sense of the CBE teacher practices and student CBE experiences across classrooms and schools using simple, easy-to-interpret, descriptive analyses of survey responses.

• Are the CBE surveys right for your phase of implementation?

The surveys are appropriate for various stages of implementation and can capture the variation in instructional practices that is typical for schools working to adopt a CBE approach. For schools and classrooms that are just starting to implement CBE, the surveys can help to identify the extent to which practices are starting to take hold. For those who have been implementing CBE for some time, the surveys can provide in-depth information on the quality and consistency of CBE implementation across schools, subject areas, and classrooms. The surveys are appropriate for a range of secondary grade levels, subject areas, and courses.

• Can the CBE surveys help answer key questions of interest regarding your CBE implementation?

The surveys also can be used for the following purposes:

- To explore and compare the perspectives of teachers and students
- To identify differences in reported experiences and practices across subgroups of respondents (e.g., across grade levels, between boys and girls) or across subject areas
- To measure teachers' perceptions of their practices in a specific course or in multiple courses
- To provide a snapshot of schoolwide practices

Important Note:

The surveys were not designed as a high-stakes assessment for the evaluation of teacher performance, nor were they designed to capture student learning outcomes. Therefore, the surveys should be used only for formative purposes to help guide implementation, gauge progress, and inform continuous improvement efforts.

Although the surveys have not been used or tested specifically as a pre-post measure, the [Study of Competency-Based Education](#) found that surveys were able to capture variation in teacher practices and student experiences both within and across schools. The wide variation in responses found in the study is a promising indicator that the teacher and student survey measures may be able to detect differences in classroom-level practices and student experiences from fall to spring or from one year to the next.

STEP 2

Step 2: Adapt the CBE Surveys and Administration Process to Fit Your Needs

Once you have determined that the CBE surveys are appropriate for your school or district, the next step is to consider *how* you will use the surveys. The surveys were designed to be appropriate for a range of contexts and different CBE implementation levels. Nonetheless, depending on your purpose and target respondent groups, you may find that it is best to customize the surveys and their use to fit your particular needs and context. In this section, we provide guidelines to help you decide how to adapt the CBE surveys and administration process to fit your needs.

STEP 2

ADAPT THE SURVEYS AND ADMINISTRATION PROCESS TO FIT YOUR NEEDS.

- Who will respond to the survey?
- Which CBE features and academic subjects will you include in your survey?
- What other demographic or CBE-related information will you collect?
- When will you administer the survey?

Who will respond to the survey?

- **Will you survey teachers, students, or both?**

The Student CBE Experiences (SCE) survey captures **students' self-reported experiences of CBE practices**, and the Teacher CBE Practices (TCP) survey measures **teachers' perceptions of their practices**. Depending on your goals and purposes, you may want to collect data only from students, only from teachers, or from both.

- **Will you survey ALL teachers and students? Or will you focus on particular grades or other subgroups of interest?**

Your district or school may have an interest in collecting responses from all students and all teachers,⁵ or you may want to focus data collection on selected grades or other subgroups of interest. For example, if you are implementing your CBE model gradually, you may want to collect data only from those grades or subjects that are currently implementing CBE.

- **Modifying the surveys to facilitate group comparisons:** Items 1 through 5 on the student survey and items 1 through 4 on the teacher survey ask general demographic and background questions about the respondent. Consider what types of comparisons you may want to make across groups (e.g., by grade level, academic department) to ensure that you include the appropriate identifying background questions in your surveys. You may want to modify or add to the existing questions to allow for an analysis by groups (e.g., for the teacher survey, you may want to explore whether changes in practices are associated with participation in a specific professional learning program; therefore, you may want to ask whether teachers participated in that program).

Which CBE features and academic subjects will you include in your survey?

- **Which CBE features are of most interest to your school or district?**

The surveys cover six features of CBE. We encourage you to consider whether all six CBE features are of interest to your school or district—or if you prefer to focus your data collection efforts in selected areas. For example, if your school is just starting CBE implementation and is focused only on establishing learning targets and implementing mastery-based grading, you may be interested in only those two feature areas.

- **Modifying the surveys to focus on specific CBE features:** Each of the six CBE feature areas has a unique set of items. The surveys can be administered in their entirety to capture all features, or you may select only the items associated with the CBE features you are most interested in assessing. Once you have selected your CBE feature areas of interest, please refer to [Appendix C Student CBE Experiences and Teacher CBE Practices Surveys Construct Map](#) to choose which individual survey items or groups of items (“item sets”) to include in your survey and which to leave out. By selecting only those items that measure your CBE areas of interest, you will reduce the time burden of survey administration and will be better able to focus on only those aspects of CBE you are most interested in implementing right now.

Important Note:

Be sure to use all of the survey items associated with each CBE feature area. For example, if you are interested in pacing and progression, use all four items in that set!

⁵ Depending on your needs and resources, you may also want to consider sampling students rather than having all students respond to the survey. Please consult with your district research office regarding appropriate sampling approaches.



- **Which, and how many, academic subjects and courses are of interest?**

Consider whether you wish to measure CBE implementation in a specific class or subject, across multiple classes or subjects, or to get a snapshot of schoolwide practices.

- **Getting a snapshot of schoolwide practices:** If you simply want to get a snapshot of CBE practices across your school or district, the teacher survey has a subset of questions about **schoolwide practices**. These items can be used on their own to provide a general overview of CBE practices and experiences in a school or district (see [Appendix C](#) for the subset of schoolwide practice items). Please note that the student survey does not yet have a comparable set of schoolwide items.
- **Customizing the subject area or course in the teacher survey:** The second section of the teacher survey includes questions about teachers' instruction across all of their classes, while the fourth section asks teachers to choose one course before responding to questions that focus more in-depth in each of the six CBE feature areas. If you wish teachers to answer questions about a specific course, you will want to include *Section 4: Your Experiences as a Teacher* and specify which subject or course teachers should consider when responding (e.g., the course they teach that is most aligned to CBE or a course that represents their typical instruction). If you wish teachers to respond to in-depth questions about multiple individual courses and/or subjects, you may repeat the course-specific questions so that teachers can enter information about additional courses. If you choose this option, you may want to select specific CBE features to focus on rather than asking teachers to report on their practices in all six CBE feature areas (see [Appendix C](#) for the list of teacher survey items organized by the six CBE feature areas).
- **Customizing the subject area or course(s) in the student survey:** The student survey includes subject-specific questions for mathematics and English language arts (ELA). If you wish to survey students about a different subject, you may modify the name of the subject or course referenced in each survey item appropriately (e.g., replace “math” with “science”). To examine CBE practices in multiple classes, you can repeat the same set of questions for each subject or course. If you choose this option, you may want to select specific CBE features to focus on rather than asking students to report on their experiences in all six CBE feature areas to ensure that the survey length does not exceed its current length of 89 items. See [Appendix C](#) for the list of student survey items organized by the six CBE feature areas).



What other questions or information will you collect?

- **Customizing the survey introduction:** The introduction provides a generic description of the survey. You should add to and/or modify this language to describe the purpose of survey administration, the ways in which the survey data will be used, and the extent to which confidentiality of responses is ensured.
- **Customizing the survey terms:** AIR carefully tested the item wording in the student and teacher surveys during the development process and initial administration. To maintain reliability, you are encouraged to administer the survey items as written. However, we recognize that schools and districts often refer to CBE and related practices using many different terms. For example, some schools may use the terms “proficiency-based learning” or “mastery-based grading.” Although we have designed the surveys to accommodate some common differences in terminology, some modifications to terminology may need to be made.⁶ Therefore, in the instruction sheet for the surveys (see [Appendix B1 Student CBE Experiences Survey](#) and [Appendix B2 Teacher CBE Practices Survey](#)), we have provided a list of specific terms that can be modified and/or substituted to fit your local context. If there are other terms that you believe may be interpreted in different ways by different respondents, you may want to contact AIR for a more detailed definition of survey terms or for further assistance in determining potential modifications to survey item wording or terminology.
- **Adding questions:** Additional questions can be added to obtain feedback on other, similar topics of interest. Just remember that respondents may become fatigued during a lengthy survey, so we caution against making the survey too long.⁷

When will you administer the survey?

If your aim is to do **an initial assessment of current CBE implementation**, you may want to plan a single survey administration time point. This could be at the beginning, middle, or end of a school year. Districts or schools with this aim may want to simply administer the survey without requiring identifiers for survey respondents; in other words, administer an anonymous survey.

If your aim is to **examine changes in student experiences or teacher practices over time**, plan for a pre-post administration.⁸ In this scenario, you would administer identical survey questions in the fall and spring, and then calculate changes in responses to these questions. You also may want to consider multi-year survey administrations. If you use a pre-post or multi-year approach, you will need to devise a way to identify survey respondents so their pre- and post-responses can be linked. For example, you may assign individual usernames and passwords that respondents enter at the beginning of both the pre- and post-surveys; or you can send individualized web addresses for the pre- and post-surveys that are linked to respondents’ identification numbers (IDs). See Step 3, for additional information about identifying respondents.

⁶ For example, AIR has provided a glossary within the survey to ensure that respondents interpret relevant terms in a similar way.

⁷ We suggest that survey length not exceed 30 minutes in a single administration.

⁸ Please see page 10. The student and teacher surveys show promise for measuring pre-post change but have not yet been tested to confirm their suitability for this use.

STEP 3

Step 3: Administer the CBE Surveys to Students and Teachers

Careful planning for data collection is essential for a smooth and consistent administration process and to ensure that the data you have collected are high quality. In this section, we provide tips and guidelines to help you plan your survey administration process.

STEP 3

ADMINISTER THE SURVEYS TO STUDENTS AND TEACHERS.

- Obtain consent
- Assign respondent identifiers and protect confidentiality
- Determine survey administration dates, times, and logistics
- Prepare online (or paper) survey
- Prepare for survey administration day
- Orient staff to administer the student survey
- Administer survey to students and teachers

Obtain consent

Depending on district policy, parental consent for students to complete the survey may or may not be required. In some cases, parental consent will be required if responses to the survey will be identifiable (see the following section on Respondent identifiers and protecting confidentiality) or if your district or school wishes to share data (de-identified) with AIR to inform further survey development. In either case, you should work closely with your district research office and internal review board to understand all consent requirements. An example consent form is provided in [Appendix D Consent Guidance and Sample Parent/Guardian Consent Form](#); however, the consent form is a sample that should be modified to comply with your district's policies and procedures related to respondent confidentiality. Even if consent is not required, all surveys should be voluntary. The current student and teacher surveys include consent language to elicit consent from all respondents. No student or teacher should complete the survey if they have not consented to do so.

Respondent identifiers and protecting confidentiality

If you are interested only in aggregate results, then anonymous responses to the survey should be sufficient. If you are administering the survey online, a single link to the survey can be created and distributed to respondents (i.e., to students and to teachers) to access the survey, and responses can be anonymous. Remember, if you wish to compare groups of respondents (e.g., different grade levels or classrooms), then it will be essential to add demographic questions (e.g., grade level of the respondent, gender of the respondent) within the survey so that responses can be grouped and compared accordingly during the analysis phase because you will not be able to link survey responses to other forms of data.

Important Note:

If you plan to assign survey respondent identifiers, work with your district office and internal review board to ensure that sufficient data security and confidentiality safeguards and consent procedures are in place.

However, if you wish to link individual student or teacher survey responses with other data or information, or track survey responses over time (e.g., from fall to spring or across multiple years), then it will be necessary to create unique links to an online survey and/or assign individual respondent IDs for administration. Most online survey platforms provide an option to enter e-mail addresses and IDs, which allows you to e-mail unique survey links to individual respondents. Alternatively, you can create individual IDs and passwords that respondents must enter to access a single survey link. If you plan to identify survey respondents, you will need to follow consent procedures established by your district's internal review board to protect the confidentiality of students and teachers. Unique IDs should be different from students' or teachers' social security numbers or student/employee IDs, and the links between respondents' names and/or e-mail addresses and IDs should be kept secure.

Determine survey administration dates and times

The student and teacher surveys should be administered after enough time has passed for respondents to be able to report on typical instructional practices and experiences (i.e., at least four weeks into the school year). For an end-of-year administration, keep in mind that the last few weeks of the school year are often filled with special activities and should be avoided if possible. We recommend confirming specific survey administration dates prior to the start of the school year so that teachers and administrators can plan ahead to avoid disruption and conflicts.

For the teacher survey, you may e-mail the survey to teachers and ask that they complete it on their own time by a certain due date (e.g., by the end of the week). Alternatively, we suggest providing dedicated time at a faculty meeting or professional learning event for teachers to complete the survey—doing so can ensure more timely responses and higher response rates.

For the student survey, we recommend avoiding testing periods and times when special projects or activities are planned. Each individual student will only need 20-30 minutes to complete the survey, however, the number of survey participants, the number of survey items (i.e., length of the survey), and the availability of technology will determine the number of days needed for survey administration within your school(s). In most cases, a single administration day should be sufficient if one-to-one technology is available (e.g., if all students have tablets). Alternatively, students can be rotated through a computer lab throughout a series of days to ensure that all students have time to take the survey online.

The student survey was designed to take approximately 20–30 minutes to complete all sections. We recommend allocating a total of 30–45 minutes (e.g., one class period) to allow time for all students to hear the survey instructions, log onto computers, access links, and complete the survey. We suggest having students



remain in their seats and engage in a quiet activity (e.g., reading a book) once they finish to avoid disturbing those who are still working.

The teacher survey was designed to take approximately 30 minutes to complete. The survey can be e-mailed to teachers to complete during free periods or administered during a school meeting or professional learning event. Teachers should complete the survey in a quiet place during non-instructional time.

Prepare online survey

The student and teacher surveys were designed for online administration. Online administration helps to ensure confidentiality, allows for easier administration and data access, and reduces the chance of error during data entry and analysis. AIR has created an online template in SurveyMonkey, available upon request. This template can be copied to your own SurveyMonkey account, and questions and text can be modified as appropriate. Alternatively, the item text can be copied and pasted from the downloadable Word version of the surveys into other online survey platforms such as Vovici, SurveyGizmo, or Google Forms.

If online administration is not feasible for your school or district, then the surveys can be administered in paper form. If so, you should carefully consider how to maintain confidentiality of responses and make a plan for data entry.

Important Note:

If you have shortened the survey, administration time also will be reduced accordingly. It is good to allocate five minutes for survey instructions and then at least one minute for every two survey questions you have included in your customized survey.



Prepare for survey administration day

To ensure an efficient administration process, careful attention to logistics is crucial. If you are planning to administer the survey across classrooms or schools, consider how you will ensure that all students complete the survey under similar conditions. For schoolwide administration, appointing a coordinator to communicate with individual teachers, coordinate use of computer facilities, answer questions, and troubleshoot problems will help keep the process running smoothly and increase the response rate. For districtwide administration, assigning a district-level coordinator to work with school-level staff will ensure greater consistency in the administration process.

Important Note:

To ensure there is sufficient bandwidth for online survey administration, consult with your IT staff ahead of time.

Orient staff to administer the student survey

Prior to taking the survey, students must be given a short orientation and explanation. In addition, staff should be given prior preparation on how to facilitate student survey administration. In [Appendix E Student CBE Experiences Survey Administration Instructions](#), we provide instructions and materials you will need to administer the student survey, including survey administration instructions to deliver to students and guidelines and tips for teachers or other staff who will be administering the survey. The appendix provides a sample introduction to be read to students prior to administration and strategies for handling situations that may arise during administration (e.g., if a student asks what a question means or if a student is having difficulty reading the survey). The guidelines should be used by the staff member(s) who administer the survey to students to ensure consistency with the administration processes used by your school or district.



Step 4: Explore Your Survey Results

The student and teacher surveys can provide valuable information without complex or time-consuming analyses. The surveys have been designed such that simple frequency counts, averages, and other descriptive analyses (completed in a software application such as Excel) can give users summary information regarding CBE practices and student experiences across classrooms, grades, and schools. Ultimately, the analyses you perform will depend on the questions you wish to answer about the implementation of CBE in your district or school and the time and capacity of your district or school's staff. The following sections provide tips and instructions for exploring your survey results.

STEP 4

EXPLORE YOUR SURVEY RESULTS.

- Examine responses to individual survey items
- Examine responses to item sets
- Disaggregate survey responses by subgroup
- Organize and display survey results in tables and graphs

Examining responses to individual survey items

Tables summarizing the responses to each item are useful tools for reviewing students' perceptions of specific CBE experiences and teachers' reported CBE practices (see Table 1). To complete a summary table, you may want to consider the following:

- **Frequencies or percentages.** Percentages are calculated by dividing the number of respondents who selected each response option by the total number of respondents who answered that survey item and multiplying by 100. The range of percentages will represent the variation in student or teacher responses across the answer choices for each item (See example in Table 1).

- Averages.** You can also include an average value for some survey items. For example, you could assign values to the answers in Table 1, such as 1 = *Don't Agree*, 2 = *Agree a Little*, 3 = *Mostly Agree*, and 4 = *Agree a Lot*. To calculate an average value for each item, sum the values across all responses and divide by the total number of respondents who answered the item. In Table 1, the average value for each individual item ranges from 3 to 3.65 indicating that, on average, respondents *mostly agreed*, and for one practice approached “agreeing a lot.” The resulting averages provide a quick snapshot of the items with the highest levels of agreement, with the caution that averages do not tell the full story (See Box 4).

Table 1. Sample Table Summarizing Individual Survey Items

How much do you agree with these statements about your math course?	Don't Agree	Agree a Little	Mostly Agree	Agree a Lot	Average Value 1=Don't agree 4=Agree a Lot
I am allowed to start the next topic or unit when I am ready, even if it is before other students. (n=60)	3 5.0%	5 8.3%	37 61.7%	15 25.0%	3.07
I can take extra time to finish a topic or unit if I need to, even if other students have already moved ahead. (n=60)	7 11.7%	8 13.3%	10 16.7%	35 58.3%	3.22
I get to decide how fast or slow I move through the course material. (n=60)	0 0.0%	8 13.3%	5 8.3%	47 78.3%	3.65



Box 4: A Tale of Two Averages

When averaging survey responses, it also is important to look at the breakdown (or percentages) of the responses across the response options. Consider two scenarios in which you might calculate an average item value of 3, or *mostly agree*:

- In one scenario, most of the responses were *mostly agree*, a few of the responses were *agree a little* (2), and a few of the responses were *agree a lot* (4). In this scenario, the average value of 3 generally reflects the opinions of the respondents.
- In a second scenario, however, two thirds of responses were *agree a lot* (4) and one third of responses were *don't agree* (1). In this scenario, the average value for the survey item is still 3, but this average value does not closely reflect the opinions of the respondents—it does not demonstrate the wide variation in responses and the substantial portion of respondents who *don't agree*. In this case, reviewing the distribution of responses is critical.

Examining responses to item sets that capture CBE feature areas

Many of the CBE survey items were designed to capture students' experiences and teacher practices related to broader features of a CBE approach (e.g., the clarity of learning targets). Within most of the six CBE feature areas, the student and teacher surveys include three or more items that are intended to be combined to form an item set that measures a *construct* (i.e., practice or experience areas) related to these CBE feature areas (see Table 2). Item sets are used when a practice or experience area is more complex than what could be captured by a single item.

Using item sets to measure these constructs is more reliable than using just a single survey item because each item in a set addresses a different aspect of the practice or experience area. For example, three survey items in the student survey all relate to students' experiences of having learning targets in their math course (see Table 2). Together, these three items assess the extent to which students believe learning targets are clear. Appendix C includes a list of items and item sets for the constructs within each CBE feature area.

Table 2. Sample Item Set: Clarity of Learning Targets

	In my math course...
39. How much do you agree with these statements about your math course? (Response options include: Don't agree, agree a little, mostly agree, and agree a lot.)	a) I understand exactly what I need to learn to pass and get credit.
	b) I know exactly what I am trying to learn when I work on a math assignment.
	c) I know ahead of time what knowledge and skills I will need to demonstrate on a math test or assessment.

Creating an average rating for item sets that capture practice or experience areas

One way to examine results for a practice or experience area is to calculate an average response for the set of items associated with a given construct. See Table 3 below for an example. To calculate an average for a set of survey items, first assign a numerical value from low to high for each response option (e.g., 1 = *Don't Agree*, 2 = *Agree a Little*, 3 = *Mostly Agree*, and 4 = *Agree a Lot*). Then, for each individual student or teacher respondent, calculate the average response across the set of items. Finally, to calculate the average across multiple students or teachers, add together the student or teacher averages and divide by the total number of respondents. As shown in the last row of Table 3, a mean of the student means will provide an overall average rating for that set of items (e.g., $[2 + 2.67 + 3.67 + 2.67]/4=2.75$).

Within the student and teacher surveys, a number of item sets share the same response options. For example, many item sets have the same agree scale response options (e.g., don't agree to agree a lot). For these, you may compare averages across the sets to see which areas are more prominent (e.g., to see if the average value of clarity for learning targets is higher in math than in English).

	In my math course...	Student 1	Student 2	Student 3	Student 4
39. How much do you agree with these statements about your math course? Response options include: 1 = Don't agree, 2 = agree a little, 3 = mostly agree, 4 = agree a lot.	a) I understand exactly what I need to learn to pass and get credit.	3	3	4	3
	b) I know exactly what I am trying to learn when I work on a math assignment.	2	4	4	3
	c) I know ahead of time what knowledge and skills I will need to demonstrate on a math test or assessment.	1	1	3	2
	Student-level Average Value	2	2.67	3.67	2.67
	Average Item Set Score for All Students	$(2 + 2.67 + 3.67 + 2.67) / 4 = 2.75$			

Counting item set responses:

Some item sets have answer choices that represent distinct categories that cannot be meaningfully averaged (e.g., “My teacher decides,” “My teacher and I decide together,” “I decide”). Instead of averaging, one option for summarizing responses for this type of item set is to count the number of items within the item set for which a respondent chose a particular response option. For example, you may be particularly interested in how often students report that their teacher makes decisions. In Table 4 below the item set related to decision making includes six survey items. Each student responding to this set of items could select *My teacher decides* for 0 to

6 of these items, giving each student a potential total of 6. To summarize findings for a classroom, school, or district, you could then report an average *count* for this response (e.g., students, on average, reported that the teacher decides in about 2.5 of the 6 classroom decision areas).

Another option for this type of item set is to collapse answer choices to help summarize findings. For example, if you are interested in the extent to which students have the opportunity to contribute partly or wholly to decisions for the items presented in Table 4, you could collapse the last two categories into one, *My teacher and I decide together or I decide*. In this case, you would count the number of items within the item set for which the respondent answered either *My teacher and I decide together or I decide*. Again, this would range from 0 to 6. In this example, you could report that “students, on average, reported *playing a role in decisions* for about 3.5 out of the 6 areas.”

Table 4. Two Options for Counting Item Set Responses

In your math course, who decides? (Response options include: 1 = My teacher decides, 2 = My teacher and I decide together, 3 = I decide)				
	Student 1	Student 2	Student 3	Student 4
a. Which topics you will learn each day in class?	1	2	1	1
b. Which activities or coursework you will do during class?	2	2	3	1
c. What kinds of help or support you need in your math course?	2	2	2	3
d. The due date for your coursework?	1	1	2	2
e. How you will show what you learned (for example, whether you will take a test or do a project)?	2	2	1	3
f. When you will take a final exam or assessment to show what you have learned in the course?	1	1	3	2
Count for each student – My teacher decides	3 items (50%)	2 items (33%)	2 items (33%)	3 items (50%)
OPTION ONE: Average count for all students – My teacher decides	2.5 items on average			
Count for each student – My teacher and I decide together OR I decide	3 items (50%)	4 items (67%)	4 items (67%)	3 items (50%)
OPTION TWO: Average count for all students – My teacher and I decide together OR I decide	3.5 items on average			



Disaggregate survey responses by subgroup

You may choose to calculate item summaries (percent distributions, count, or average ratings) for subgroups of respondents (i.e., disaggregate your data) to compare responses across groups. For example, you might want to know whether ninth graders responded differently about their math courses than tenth graders. For the teacher survey, you may be interested to determine whether classroom teachers who participated in a particular professional development initiative reported different practices than teachers who did not. For these comparisons, you would separate the data into the groups you want to compare and calculate the summaries separately for each group. You may also want to display these comparisons using a bar graph (see sample graph 3 on page 27).



STEP 5

Step 5: Make Sense of (and Use!) Your Survey Findings

Once analyses are complete, it is time to derive meaning from—and make use of—your results. Although each classroom, school, or district may have its own approach to using data, in this section, we provide some suggestions and guidelines for reporting on, interpreting, and using the results of the CBE surveys.

STEP 5

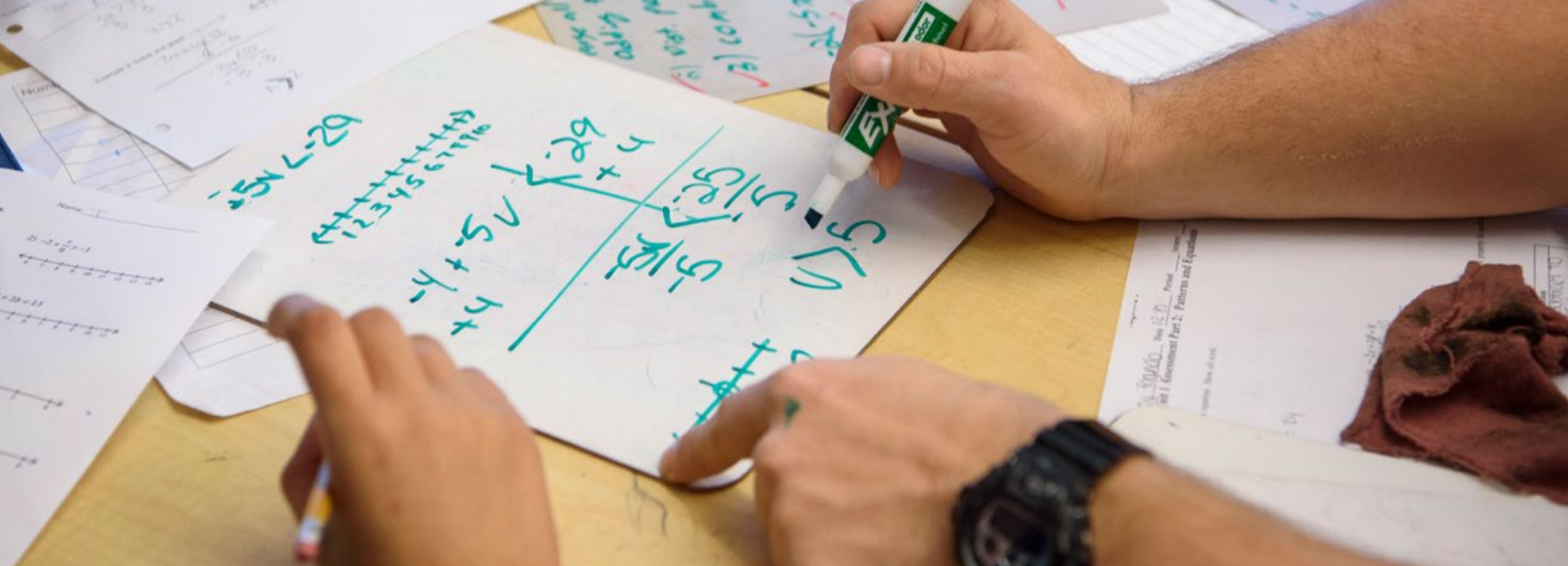
MAKE SENSE OF (AND USE!) YOUR SURVEY FINDINGS

- Plan your data interpretation approach
- Engage stakeholders in interpreting survey findings
- Synthesize findings and identify target audiences with whom to share results
- Communicate (and use) your findings to improve CBE implementation

Planning your data interpretation approach

As discussed earlier in this toolkit, the student and teacher surveys can be used for a variety of purposes. Most importantly, the results can be used by districts, schools, and individual teachers to illustrate and explore the extent of alignment of instructional practices and student experiences with desired CBE features. As such, they can be used to assist teachers' and schools' efforts to begin implementation of CBE, to identify gaps in established CBE approaches, and to plan professional learning and supports to strengthen CBE implementation.

Before beginning the interpretation phase, carefully consider who should be involved with the interpretation process and when and how interpretation will take place. Consider who would benefit from seeing the data, who



is best suited to help interpret the data, and who will be using the data to inform CBE improvement efforts moving forward. You may want to take advantage of existing structures for data interpretation and use, including professional learning communities, grade-level team meetings, and leadership team meetings. You may want to use tools and protocols for data interpretation that are familiar to educators in your school or district.

As you embark on data interpretation, we offer a few cautions. When interpreting results, be careful in forming conclusions or drawing inferences. For example:

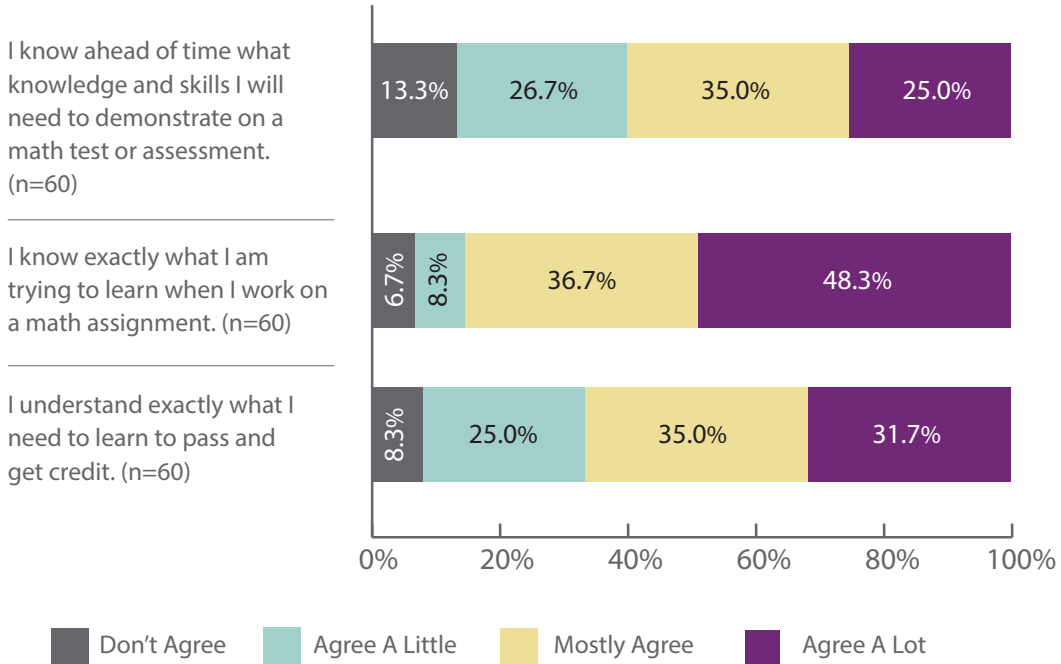
- Small differences (less than 5%) between classrooms or schools may not be meaningful on a practical level. Look for consistent patterns of differences in responses (e.g., ratings are lower on all items and item sets related to providing individualized support to students).
- Percentages rely on the number of students or teachers who respond to survey items. When comparing percentages across subgroups, or looking at change over time, it is important to consider how many teachers or students actually responded to a question. With few respondents, small differences in the *number* of responses can result in large differences in *percentages* of responses.
- If you look at relationships (correlations) between survey responses and measures of student performance, be careful not to attribute impact directly to CBE experiences. There may be many other factors or changes within the school context that affect student performance. Please consult with your district research office to plan your use of the surveys and appropriate claims that can be made based on your results.

Synthesize findings and identify target audiences with whom to share results

Creating easy-to-interpret reports of results can allow a variety of stakeholders to understand and act upon the findings quickly and efficiently. Once the target audience is identified, tables and charts can be customized to present the most relevant data in the most straightforward fashion. For example, school leaders may want to see charts comparing item-set averages across grade levels, but teachers may be most interested in the results for specific items for their own classrooms in comparison to the rest of the school. All tables and figures should include information about the number of students and teachers who responded to survey items (often designated with the letter “n”) so that the audience is aware of the number of responses used to calculate percentages and averages. On the following pages, we provide several examples of simple display options (in addition to the tables above). Summary tables and graphs can be used by teachers, staff, and school leaders as a basis for discussion and action.

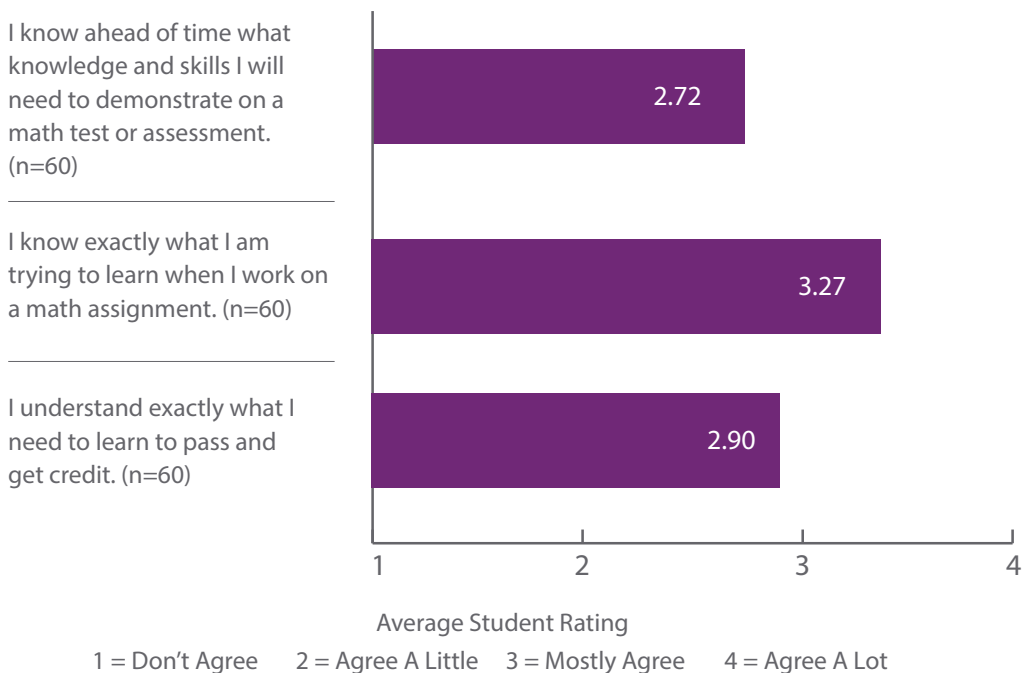
Sample Graph 1: Distribution of student responses for clarity of learning targets

How much do you agree with these statements about your math course?



Sample Graph 2: Average student rating for items in clarity of learning targets

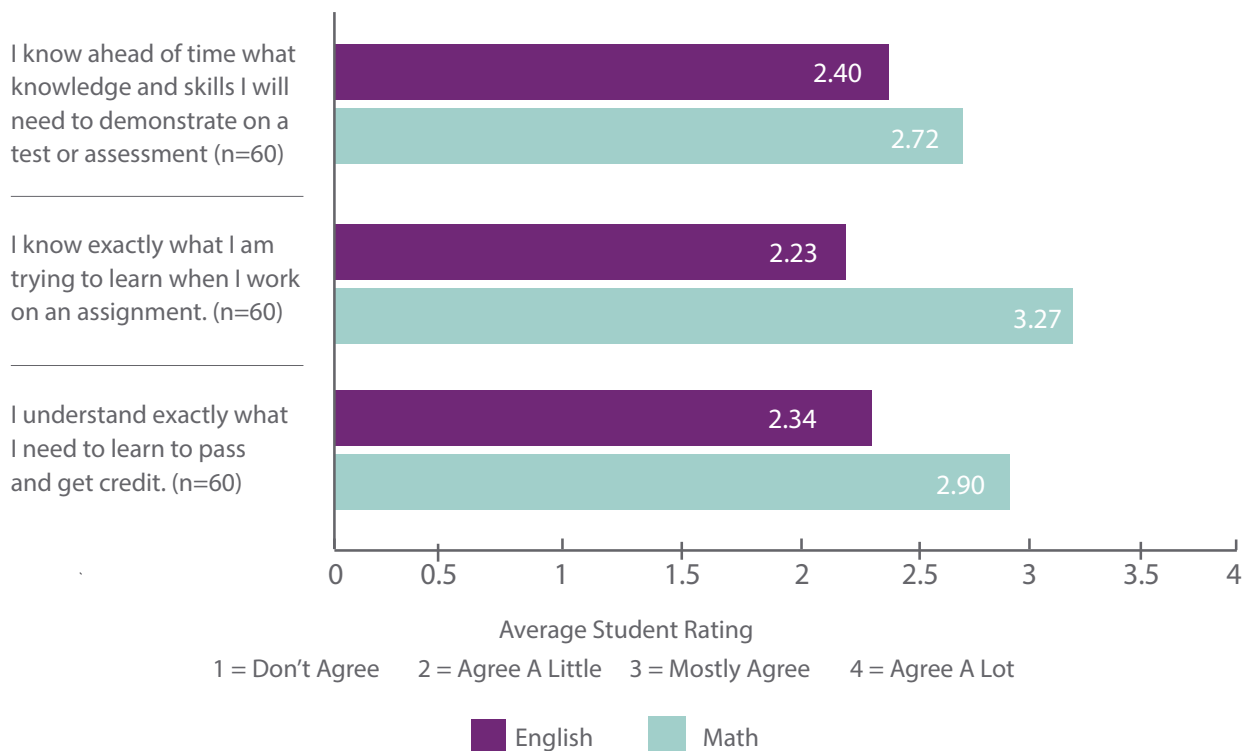
How much do you agree with these statements about your math course?





Sample Graph 3: Comparison of average ratings for learning target items for english and math

How much do you agree with these statements about your math/english course?





Sample Graph 4: Percentage of students reporting a role in classroom decisions

In your math course, who decides...

When you take a final exam or assessment to show what you have learned in the course? (n=60)

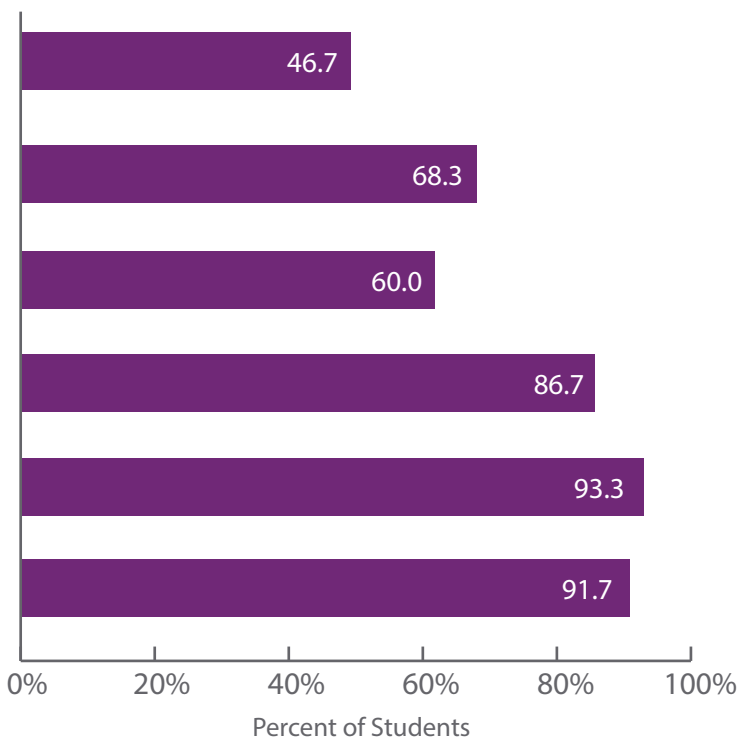
How you will show what you learned? (n=60)

The due date for your coursework? (n=60)

What kinds of help or support you need in your math course? (n=60)

Which activities or coursework you will do during class? (n=60)

Which topics you will learn each day in class? (n=60)



"Percent of Students responding either "my teacher and I decide together" or "I decide"

Engage stakeholders in interpreting findings

Many schools have embraced a collaborative approach to data exploration. Schools may have grade-level teams, departmental teams, professional learning communities, or other groups that meet to discuss data and their implications for practice. Engaging key stakeholders in the interpretation of findings will help to ensure buy-in to any future supports, policy changes, or modifications to your district or school's CBE approach that may result from the survey findings.

Each time a group examines new data, it is good to start with a few simple questions:

- What do you see?
- What meaning are you making of what you see?
- How do, or might, others see these results differently?
- What further questions do the data raise for you?

Below, we provide additional sample discussion questions that groups may want to use when exploring results of the survey.

1: Looking at variations in implementation across CBE feature areas

- Which CBE features are being implemented by teachers the most? The least? Why do we think these variations are occurring?
- To what extent do teacher reports align with reported student experiences of CBE? If differences are evident, why might teachers and students be reporting the implementation of CBE differently?
- What actions could we take to increase levels of implementation in these CBE areas? What actions could we take to ensure that students' experiences reflect teacher reports of implementation?

2: Looking at how reported practices and experiences differ across grades/subject areas and student characteristics

- How do students' experiences of competency-based learning differ...?
 - ... across grades?
 - ...across content areas (ELA/math)?
 - ...by student characteristics (e.g., gender, special education status, free and reduced-priced lunch eligibility, prior achievement levels, ELL status)
 - ...by participation in CBE classes, or classes where teachers had CBE professional development?

3: If survey responses are tracked over time how have teacher practices and student experiences of CBE changed over time?

- Are we seeing any differences in teacher reports of CBE implementation from fall to spring or from one year to the next? What about changes in student experiences?
- Did the extent of change reported by teachers—or in student experiences—vary across subjects, grades, or other characteristics?
- Were there CBE areas that didn't improve? If so, why is this the case? What strategies could we use to boost teacher implementation or alter the way students experience these features?



Communicate (and use) your findings to improve CBE implementation

The student and teacher surveys provide valuable formative information that can be used to improve CBE implementation in your school or district. The analysis and interpretation process will potentially bring to light gaps in CBE approaches that need to be implemented, particular feature areas to further develop or strengthen, or areas where educators and school leaders would benefit from more support or professional learning. As the data interpretation process wraps up, it will be important to identify concrete next steps to make use of the findings from the survey. These may include:

- identifying additional target audiences with whom to share the results,
- setting goals and prioritizing CBE feature areas of focus moving forward,
- planning appropriate supports and professional learning opportunities,
- identifying potential policy changes to support CBE implementation, or
- planning future survey administration dates to monitor changes in practice.



Ready to get started?

This toolkit has provided an overview of key steps to help schools and districts determine whether the student and teacher surveys are a good fit for their needs; adapt and administer the surveys; and analyze and interpret the survey data. Once you are ready to move ahead with administering the surveys, the following resources provide additional information and guidance to ensure a smooth and effective administration process:

- [Appendix A, CBE 360 Survey Toolkit Checklist](#)—Use this checklist to confirm that you have taken all five steps necessary to prepare for survey administration and that you take full advantage of the survey data you have collected.
- [Appendix B1, Student CBE Experiences Survey](#), and [Appendix B2, Teacher CBE Practices Survey](#)—In these appendices, we provide paper versions of the survey instruments. These can be used to copy and paste items into an online survey platform or modified, printed, and copied for paper administration. At the front of these appendices, we provide *CBE Survey Modification Guidelines* that specify ways in which the surveys can be modified to fit your district or school's context.
- [Appendix C, Student CBE Experiences and Teacher CBE Practices Surveys Construct Map](#)—This resource is essential if you wish to select a subset of feature areas. This map specifies which items and item sets are aligned with each of the six CBE feature areas.
- [Appendix D, Consent Guidance and Sample Parent/Guardian Consent Form](#)—This example consent form can be modified to align with your district or school's requirements for consent and confidentiality.
- [Appendix E, Student CBE Experiences Survey Administration Instructions](#)—These guidelines will help you plan for survey administration. They include instructions and scripts to ensure a consistent and efficient administration process.
- [Technical Appendix: Teacher CBE Practices \(TCP\) and Student CBE Experiences \(SCE\) Surveys](#)—This resource provides the technical properties for the surveys and details regarding survey development and testing.
- **Online survey template**—This SurveyMonkey template can be copied into your district or school's SurveyMonkey account and modified as needed. Please contact the CCRS Center (CCRScenter@air.org) for more information.



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