

Overview of the FAME Formative Assessment Process



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“Formative assessment is a planned, ongoing process used by all students and teachers during learning and teaching to elicit and use evidence of student learning to improve student understanding of intended disciplinary learning outcomes and support students to become more self-directed learners.”

CCSSO FAST SCASS, 2018

Introduction to this Resource

Educators are increasingly interested in learning more about the formative assessment process, since it is highlighted in many school instructional improvement efforts, and the research-based benefits for student learning outcomes are becoming more widely known. However, there are also many misconceptions and different ideas about what formative assessment is and isn't, as well as how to best implement the necessary changes in instructional practice. This Overview of the FAME Formative Assessment Process has been developed to provide more clarity for educators and administrators about the formative assessment process. It is our hope that it encourages each reader to choose to learn more about and learn to use the formative assessment process.

This resource includes a definition and other information about the formative assessment process, a description of the Formative Assessment for Michigan Educators (FAME) program, and access to a collection of FAME Learning Points about each element of the FAME formative assessment process. A word of caution at the outset: the successful implementation of the formative assessment process does not come from just reading or thinking about it. Instead, it comes from working over time to examine and reflect on current instructional practices and how these can be adjusted.

An important way that this can occur is working collaboratively with colleagues to examine and reflect on each other's instructional practices, an opportunity that the FAME program has afforded for more than a decade. This resource was developed as part of the Formative Assessment for Michigan Educators (FAME) program. This resource, ultimately, is designed to highlight the value and benefit of being part of the FAME program to support your learning about the formative assessment process.

The Formative Assessment Process Defined

While formative assessment has been defined in different ways in many books and articles, some which even conflate the formative assessment process with "formative assessments" (more accurately described as interim/benchmark tests), the FAME program uses this definition:

"Formative assessment is a planned, ongoing process used by all students and teachers during learning and teaching to elicit and use evidence of student learning to improve student understanding of intended disciplinary learning outcomes and support students to become more self-directed learners." (CCSSO SCASS FAST, 2018)

This definition offers a number of important clues about how the formative assessment process works:

- Educators must carefully plan to embed the formative assessment process in daily classroom instruction.
- It is an ongoing process used daily during instruction and learning.
- The focus is on student learning, and
- Students must be active, engaged learners.

- Students work with their teacher(s) to identify areas of strength and areas in need of improvement.
- Feedback, provided by teachers and students themselves through self- and peer assessment, presents students with the opportunity to demonstrate their learning and work towards intended goals.

Impact of the Formative Assessment Process

Use of the formative assessment process has been shown to improve student learning (Black & Wiliam, 1998) and student involvement (Brookhart, 2013). Paul Black and Dylan Wiliam (1998a; 1998b) demonstrated the impact of thoughtful classroom assessment on student learning and achievement, especially for low-achieving students. Formative assessment can also help teachers to be more reflective about students' understandings (Furtak, 2012) and more likely to support students in identifying barriers to learning (Marshall & Drummond, 2006). There is a consensus on the active role teachers and students must play in understanding students' current thinking and understanding and moving instruction and student learning toward clear learning goals in the research literature on formative assessment.

Formative Assessment for Michigan Educator Program

The Formative Assessment for Michigan Educators (FAME) program is a statewide professional learning program designed to support teacher learning about and use of the formative assessment process. The overarching goal of the FAME program is to help educators learn about and use the formative assessment process in classroom instruction. The Michigan Department of Education (MDE) conducts FAME workshops and provides other services for educators to help them develop school-based Learning Teams. The program provides resources on formative assessment research, theory, and practice to promote teachers' capacity to reflect on, implement, and refine their instructional and assessment practices in the classroom. To achieve these goals, FAME provides support to Learning Teams in which a group of educators and a Coach work collaboratively to learn about and practice the formative assessment process in local contexts.

Work of FAME Coach and Learning Teams

New Learning Teams form every year and engage in learning and implementing the formative assessment process over the course of several school years. The multi-year learning process is essential for participants to go beyond "head knowledge" to reflection and enhancements of their instructional practices. Such instructional changes typically take two or more years to be able to learn to use effectively on an on-going basis.

To begin the first year, new Learning Teams attend a full-day professional learning session known as the "Launching into Learning," where they will learn more about the FAME program and the formative assessment process. Once they have attended the Launch,

Learning Teams begin to meet regularly to engage in collaborative inquiry about how the formative assessment process can best be enacted in Team members' classrooms. Most Learning Teams meet monthly on their own schedule for one to three hours, and continue their learning over the next two years or more. Typically, Learning Teams use the resources that the FAME program provides while at the same time setting the course for learning that benefits the members of the Learning Team most.

Joining FAME

Visit FAMEMichigan.org to request and complete a New FAME Coach application.

FAME Components and Elements

Three Guiding Questions

Research by Sadler (1989) and by Hattie and Timperley (2007), along with a literature review by Gotwals et al. (forthcoming), indicate that the main formative assessment practices may be characterized into three large, observable formative assessment-practice dimensions structured around three guiding questions that teachers and students should ask themselves as they move through the learning process:

1. **Where are we (teacher and students) going?**
Use of learning targets and goal setting
2. **What does the student understand now?**
Evidence of student understanding
3. **How do we (teacher and students) get to the learning target?**
Closing the gap/responding to students

FAME Components

The content and structure of the FAME program is outlined by five Components of formative assessment practice, building on the three guiding questions above:

- Instructional Planning
- Learning Target Use
- Eliciting Evidence of Student Understanding
- Formative Feedback
- Instructional and Learning Decisions

FAME Elements

Each FAME Component includes one or more Elements that provide greater specificity on the formative assessment process. Table 1 outlines the five Components and provides a brief description of each Element of the FAME program, framed by the three guiding questions.

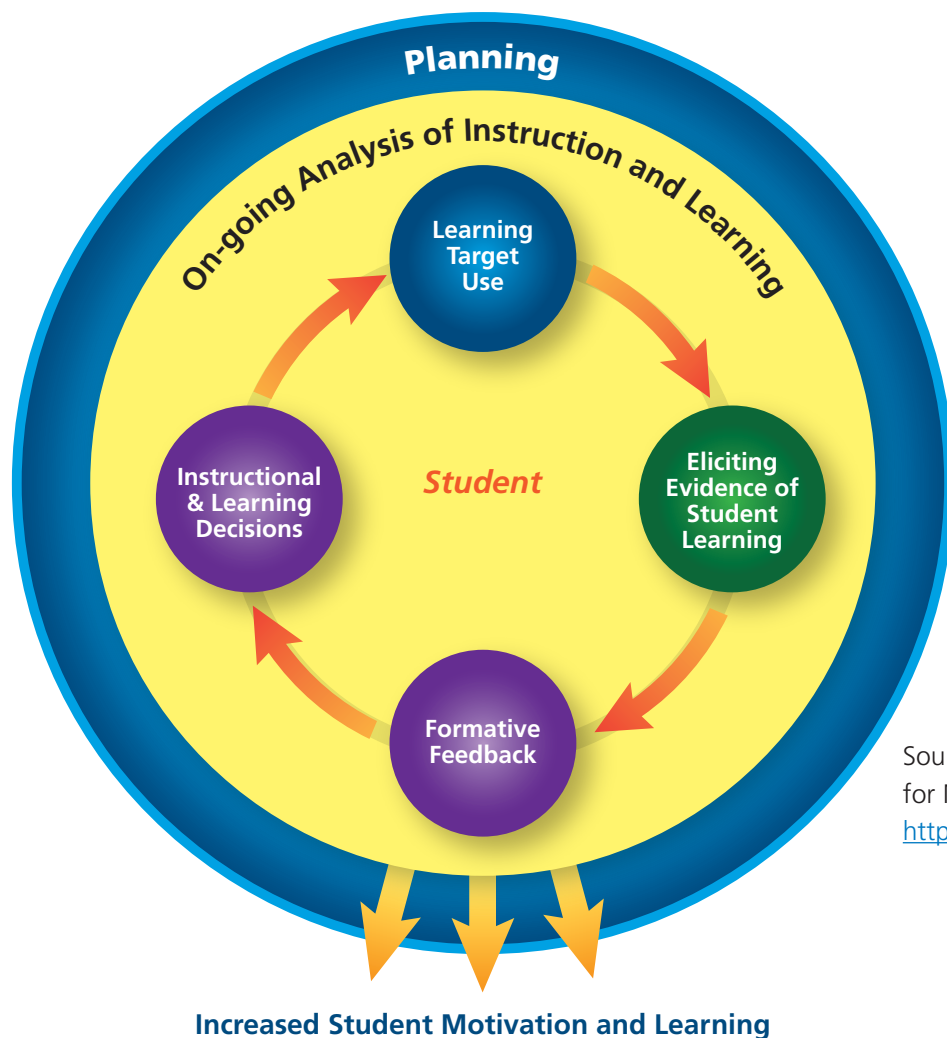
Table 1: FAME Components and Elements

Guiding Questions	FAME Components and Elements
<i>Where are we (teacher and students) going?</i>	Planning 1.1—Instructional Planning: planning based on knowledge of the content, standards, pedagogy, formative assessment process, and students. Learning Target Use 2.1—Designing Learning Targets: the use and communication of daily instructional aims with the students 2.2—Learning Progressions: connection of the learning target to past and future learning 2.3—Models of Proficient Achievement: examples of successful work for students to use as a guide.
<i>What does the student understand now?</i>	Eliciting Evidence of Student Understanding 3.1—Activating Prior Knowledge: the opportunity for students to self-assess or connect new ideas to their prior knowledge 3.2—Gathering Evidence of Student Understanding: use of a variety of tools and strategies to gather information about student thinking and understanding regarding the learning targets from <i>all</i> students 3.3—Teacher Questioning Strategies: the intentional use of questions for students to explain their thinking or to connect their idea to another student's response 3.4—Skillful Use of Questions: a focus on the purpose, timing, and audience for questions to deliver content and to check students' understanding
<i>How do we (teacher and students) get to the learning target?</i>	Formative Feedback 4.1—Feedback from the Teacher: verbal or written feedback to a student to improve his or her achievement of the learning target 4.2—Feedback from Peers: feedback from one student to another student about his or her learning in relation to a learning target 4.3—Student Self-Assessment: the process in which students gather information and reflect on their own learning in relation to the learning goal. Instructional and Learning Decisions 5.1—Adjustments to Teaching: teachers' daily decisions about changes to instruction 5.2—Adjustments to Learning: students' use of feedback for improvement.

Source: FAME Learning Guide, 2018

Figure 1: The Formative Assessment Process**Formative Assessment Guiding Questions:**

- Where are we going?
 ● What does the student understand now?
 ● How do we get to the learning target?



Source: Formative Assessment for Michigan Educators (FAME)
<https://FAMEMichigan.org>

In FAME, each Element of the formative assessment process is connected to others. They are presented in pages 9 – 44 in separate FAME Learning Point documents for the sake of understanding. Although the Elements can be reviewed separately, it is essential that they are used together as part of a unified formative assessment process, since they build upon and reinforce one another.

Therefore, we recommend reviewing all of the FAME Learning Points to develop an overall understanding of the formative assessment process, and then exploring additional resources and professional learning opportunities to study certain components to deepen understanding. Teachers may also want to enlist their colleagues in learning about the formative assessment process by forming a FAME Learning Team!

This Overview provides detailed information on each of these Components and Elements.

Learning to Use the Formative Assessment Process

As mentioned earlier, educators working together on learning teams, such as FAME Learning Teams, is a key to providing the support that teachers need to learn to effectively use these new instructional practices, and thus, implement the formative assessment process well. This is the reason why participation in the FAME program is stressed. Research has found that the focus of the conversation in teacher professional learning communities matters in building knowledge (Popp & Goldman, 2016). When teachers discuss their assessment practices in meetings, they show more knowledge-building than when teachers review their instruction on their own. Even in discussions focused on isolated formative assessment instructional practices, it is important for educators to work together to understand the connections to the formative assessment process. Educators will benefit from opportunities to learn about and discuss these materials in communities of practice.

Teacher Dispositions, Knowledge, and Skills

Specific dispositions, knowledge, and skills are important as a teacher implements the formative assessment process. Teachers develop knowledge over time, and their knowledge in different areas is used as they make a myriad of instructional decisions throughout the day. A number of key areas of knowledge are highlighted below.

- **Formative Assessment Process Knowledge** — Teachers need to know about the components and elements of the formative assessment process, and how they work together, so they can integrate these strategies through planning and delivery of instruction. Teachers must know how to align the formative assessment process with instructional goals so that they can maximize the opportunities to gather and use evidence of student understanding to inform subsequent instruction.
- **Disciplinary Content Knowledge** — Deep understanding of the content of the discipline is integral to the formative assessment process. The connection between the two is critical to support student learning. Understanding learning progressions or multiple paths of student learning between and within the standards is essential to the formative assessment process.
- **Pedagogical Knowledge** — In addition to content knowledge, teachers need to develop familiarity with multiple methods of teaching, the instructional moves necessary to adapt instruction to student learning, and the ability to identify which teaching model is appropriate for a given purpose. Competence in different instructional strategies that address diverse student needs is also essential to help students close the gap between their current status and learning goals in a specific content area.
- **Knowledge of the Students** — To effectively plan and adapt instruction to student learning, teachers also need to have considerable knowledge about the students and their previous learning. This includes levels of student prior knowledge, skills, and understanding of concepts in a particular content area. In addition,

teachers must know students' levels of metacognitive and self-regulation skills, and students' individual attitudes about learning, themselves, and the subject (Harlen, 2006). An awareness of other factors about the student such as level of language proficiency and specific social, emotional, physical, and learning needs is also important. Additional resources should be referenced to assist the teacher to plan and deliver teaching and learning aligned with the formative assessment process for all students, including students with disabilities, English learners, academically at-risk students, and gifted/talented students.

Student Agency

While teacher understanding of the formative assessment process is critical, the focus on students in the formative assessment process is also important. Observations and conversations about teaching and learning should ultimately look at what students say and are able to do. Are they engaged in taking ownership for their learning? Can they describe the learning targets in their own words and explain their current level of understanding in relation to the learning targets? There are also a number of ways the teacher can further involve the student in the formative assessment process to explicitly teach the student skills and practices as the students develop greater ownership and responsibility in the learning process.

Student agency and student self-regulation are important in learning and assessment:

- A. **Student agency** refers to students taking ownership for their own learning. Students determine whether and how hard to work in learning, assess where they are in their learning, and use the self-assessment information to achieve at higher levels.
- B. **Student self-regulation** refers to students who can determine where they are on the trajectory of learning, determine what is needed to continue learning, and have the motivation to keep learning, even when they are struggling to understand. This is a useful life-long skill.
- C. Increasing student agency and self-regulation are primary goals of the formative assessment process.

In the formative assessment process, students take increasing responsibility and ownership of their learning. They develop awareness of their current levels of knowledge and skill and look at what they may need to do to master the learning content. Students are not asked to judge and evaluate their work. Instead, students are taught how to inquire, reflect on, and provide feedback to themselves and their peers that will help them improve. This leads to very different behavior and involvement from the students. They are not just completing the work, trying to figure out the right answer for the teacher, or striving to get good grades; they are actively involved in thinking and developing understanding of the content and their learning processes.

Student agency and self-regulation are an essential part of learning to use the formative assessment process and is emphasized in the FAME program

Supportive Classroom Culture

A supportive classroom culture is key to the effective implementation of the formative assessment process. This begins with a climate of trust in which students' ideas and questions are valued. Students benefit from understanding that their thinking is important, that understanding the content is more important than getting the right answers on a test, and that they have important ideas to contribute to one another.

Students are most successful with formative assessment when they have a sense of ownership and responsibility for their learning, such as when the teacher and the students co-construct the learning targets and success criteria. Teachers can begin with small opportunities and build the sense of ownership and supportive classroom culture over time. As students engage in formative assessment, a supportive classroom culture is also enforced.

Some aspects of the formative assessment process may create new experiences for students as well as their teachers. In the formative assessment process, students can assume the role of co-investigator into their learning of specific academic content. They can be actively engaged in accessing prior related learning, expressing their knowledge about content, thinking about their current level of understanding, responding to teacher and peer feedback, and taking purposeful next steps in their learning. Because this new role is unlikely to come naturally for students, teachers will need to intentionally build classroom environments that support student development as formative learners. Participation in the FAME program can assist teachers in developing classroom environments that can best support students as formative learners.

FAME Element Learning Points

The three guiding questions, five FAME Components, and 13 FAME Elements provide a continuum for how teachers may develop their practice to implement the formative assessment process in their classrooms. Given that educators may be at varying places in their understanding of the formative assessment process, this resource can be used to support individual learning or collaborative work.

Teachers can benefit from trying out new ideas in one or two areas initially, and then build on these over time. Students can also benefit from learning about the formative assessment process and the change in their role as a learner.

Component 1 – Planning

Planning is a fundamental component of the formative assessment process. Planning for formative assessment needs to be purposely integrated into ongoing instructional planning. While there are many different aspects of planning for formative assessment, the intentionality of advanced planning for the use of the formative assessment process is key.

Planning is the act of consciously mapping out when, why, and how all aspects of the formative assessment process will occur during a lesson, a series of lessons, a unit, or even a school year. Planning includes both when to employ elements of the formative assessment process, and what to do to move student learning ahead given the range of where students may be in their understanding when checked by the teacher.

In the formative assessment process, planning includes the knowledge of tools and strategies that may be used in both formal (planned) and informal (in the moment) assessment and interactions to gather evidence and inform instruction (Cowie & Bell, 2001). The formative assessment process involves intentional planning as well as predicting and being prepared for what might happen in a lesson.

The Instructional Planning Component includes one Element:

- 1.1 Instructional Planning** is planning based on knowledge of the content, standards, pedagogy, formative assessment process, and students.

“The formative assessment process involves intentional planning as well as predicting and being prepared for what might happen in a lesson.”



FAME

FORMATIVE ASSESSMENT FOR MICHIGAN EDUCATORS

LEARNING POINT

Planning: what role does it play in the formative assessment process?

Effective instructional planning in the formative assessment process is informed by the teacher's knowledge about what students already know

“A planned process: formative assessment involves a series of carefully considered, distinguishable acts on the part of teachers or students, or both.”

—W. James Popham

and can do. The teacher then intentionally plans the steps in his or her lesson based on:

- a target for learning,
- instruction to be provided,
- when and how evidence of student learning will be gathered.
- how this evidence will be analyzed, and
- what types of change in instruction and student learning might be necessary, depending on what the evidence of student learning might show

The teacher also must plan for the student's role in the learning process, such as how students will be involved in understanding the learning target,

student self- and peer assessment, and helping students to make adjustments to learning.

Planning in the formative assessment process includes the knowledge of tools and strategies that may be used in both formal (planned) and informal (in the moment) assessment and interactions to gather evidence and inform instruction (e.g., Cowie & Bell, 2001). Thus, planning is an important, often overlooked step in intentionally preparing for all elements of the formative assessment process and anticipating what might happen in a lesson.

Planning defined

As outlined above, instructional planning in the formative assessment process can be described as systematically preparing for teaching and learning, including the identification of instructional targets, instructional methods, and the systematic and ongoing evaluation and management of the instructional and assessment processes.

“I used to jump right into a lesson without really knowing how I would know what students learned and

To learn more

Formative assessment: What do teachers need to know and do?

Margaret Heritage. *Phi Delta Kappan*, 89(2), 140–146.
<https://bit.ly/3yvGOPJ>

ALN Learning Point: What constitutes a high-quality, comprehensive, balanced assessment system.

Michigan Assessment Consortium (2016)
<http://bit.ly/BalancedSystem>

Learning Point: What do we mean by Formative Assessment?

Michigan Assessment Consortium (2017)
<https://bit.ly/3yvGOPJ>

didn't learn. One of the areas I've been working on is planning my assessment map for each unit or series of lessons. This allows me to be more organized and understand what assessment data can be used formatively." – 4th grade teacher

Instructional planning tools

The formative assessment process includes various components and elements that are interconnected to support student learning. Intentional planning is key for a teacher to ensure the students understand:

- the target for their learning
- the criteria for meeting that target, and
- ways to receive support when needed.

A planning template, such as the Instructional Planning Recording Form shown in Figure 1, can be a useful tool to help teachers think through the various components of formative assessment when planning.

Developing proficiency with instructional planning

in the formative assessment process Teachers seeking to develop competence with instructional planning must focus on several key aspects of planning:

- when or how evidence of student learning will be obtained
- different levels of student understanding that might be shown, and
- how the lesson might change as a result of evidence of student understanding.

This planning includes anticipating various ways students might respond to the lesson and how to proceed if learning does not progress as planned. It also requires knowledge of tools and strategies that can be planned in advance or used in the moment as needed. Finally, becoming proficient with planning

enables the teacher to become more explicit about making connections with past and future learning goals for students.

A list of indicators of successful practice are shown in Figure 2 for teachers to use as they develop proficiency with instructional planning.

Figure 1: Formative Assessment Planning and Recording Form

Figure 2: Indicators of Successful Practice for Instructional Planning in the Formative Assessment Process

Indicators of successful practice

The indicators of successful practice outline the key aspects of planning in the formative assessment process. They can be used for self-assessment and to set goals as a teacher develops proficiency with instructional planning in the formative assessment process.

- The teacher intentionally plans in advance.
- The teacher's planning reflects formative assessment process knowledge, content knowledge, pedagogical knowledge, and knowledge of students.
- Planning includes when and how evidence of student learning will be obtained and used.
- The teacher plans for when student learning does not progress as planned.
- Students are able to build knowledge over time.

The information presented here supports learning about the 5 Components and 13 Elements of the formative assessment practice, as defined by Michigan's Formative Assessment for Michigan Educators (FAME) program.

[illegible]

Component 2 – Learning Target Use

In using learning targets, the teacher is clear about what students are to learn and has shown students what constitutes acceptable performance. Learning Target Use is critical for students to respond to the guiding question: Where am I going?

This component of the formative assessment process provides both the teacher and students with a clear understanding to guide the next steps of learning. It enables students to understand what they need to learn and how they are going to get there.

Students must first understand the learning target before they are able to participate in other aspects of the formative assessment process, such as peer and self-assessment or the use of feedback to gauge their progress and make adjustments to learning. Many experts in the field agree that one of the most important things for students to learn is the intention of the lesson, the content they will learn, why they are learning the content, the depth of understanding to which they need to learn it, and how to demonstrate their new learning (Moss & Brookhart, 2009; Seidle, Rimmele, & Prenzel, 2005; Stiggins, Arter, Chappuis, & Chappuis, 2009).

The Learning Target Use Component includes three Elements:

- 2.1 *Designing Learning Targets*** helps the teacher and students become clear about the aim(s) for the daily lesson.
- 2.2 *Learning Progressions*** help the teacher and students make connections between past, current, and future learning targets in a trajectory of learning.
- 2.3 *Models of Proficient Achievement*** ensure students have a clear understanding of what successful work looks like so that they have a model to work towards.

“This component of the formative assessment process enables students to understand what they need to learn and how they are going to get there.”



FAME

FORMATIVE ASSESSMENT FOR MICHIGAN EDUCATORS

LEARNING POINT

What are learning targets?

Why are they important in the formative assessment process?

Learning targets written in student-friendly language are used to help students understand what they are learning and how to reach the target. They describe what success looks like once the target is reached. When learning targets are connected to past and future learning, they can also help students to understand the planned sequence of instruction.

Within the Formative Assessment for Michigan Educator (FAME) program, the “Learning Target Use” component supports teachers in the use of learning targets. Teachers become clear about what students are to learn, and they show students what constitutes acceptable performance. The use of learning targets is critical for the students to respond to the guiding question: Where am I going?

This component of the FAME program provides both the teacher and students with a clear understanding to guide the next step of learning. It enables students to understand what they need to learn and how they are going to get there.

Why are learning targets important?

Learning is positively impacted when students understand the intended purpose of a lesson. Overall, learning targets play a central role in effective teaching and meaningful learning to raise student achievement through the formative assessment

process (Brookhart, Moss, & Long, 2011; Moss & Brookhart, 2009). The teacher and students are guided by learning targets as they work together in the formative assessment process to collect and interpret evidence of student understanding to improve learning outcomes.

Students must first understand the learning target before they are able to participate in other aspects of the formative assessment process. Many experts in the field agree that one of the most important things for students to learn is the intention of the lesson, including the content they will learn, why they are learning the

content, the depth of understanding to which they need to learn it, and how to demonstrate their new learning (Moss & Brookhart, 2009; Seidle, Rimmele, & Prenzel, 2005; Stiggins, Arter, Chappuis, & Chappuis, 2009).

Learning targets defined

Learning targets are student-friendly descriptions of the knowledge, skills, and reasoning that students need to learn or accomplish in a given lesson. Learning targets can be thought of as lesson-sized chunks of knowledge and skills that lead to broader learning goals for students (Leahy, Lyon, Thompson, & William, 2005). Embed

To learn more

Formative assessment: What do teachers need to know and do?

Margaret Heritage. *Phi Delta Kappan*, 89(2), 140–146.
<https://bit.ly/3yvG0PJ>

What do we mean by formative assessment?

ALN Learning Point (Michigan Assessment Consortium, 2016).
<http://bit.ly/LP-FormativeAssessment>

What are learning progressions?

ALN Learning Point (Michigan Assessment Consortium, 2018).
<https://bit.ly/LP-Progressions>

Learning targets: How students aim for understanding in today's lesson

Connie M. Moss and Susan M. Brookhart. (ASCD, 2012)
<http://www.ascd.org/Publications/Books/Overview/Learning-Targets.aspx>

ding learning targets in instruction involves intentional planning and implementation as well as a clear purpose for instruction.

Teacher's instructional practice

Learning targets guide a teacher's instructional decisions and formative assessment practices. Designing learning targets includes the following elements*:

1. **Description of what students will learn** (also known as a learning target or learning target statement)
2. **Learning experiences students will engage in to demonstrate their attainment of the new knowledge and skills** (this is often referred to as performance task or performance of understanding)
3. **Criteria so that students know they have reached the learning target** (also referred to as success criteria)
4. **Connection of the lesson to previous and future learning experiences and targets** (see ALN Learning Point on Learning Progressions) so students understand why they are learning what they are learning and what learning will follow the current lesson
5. **Instruction of the lesson-sized chunk of knowledge and skills to students**

Learning targets and success criteria

The formative assessment process must be rooted in the subject matter disciplines. The description of what students will learn, or the learning target, is developed based on state- or district-level content standards and the instructional objective(s) for a lesson.

A learning target is specific to a lesson and describes a unique learning intention. To clarify—a lesson can last 45 minutes or it can occur over several class periods. The teacher shares the learning targets with students

consistently and intentionally and delivers instruction so that students are clear on what they will be able to do at the end of the lesson.

The discussion of the knowledge and skills needed to achieve the learning target is shared in the form of success criteria. Success criteria provide a specific and concrete understanding of what it looks like to reach the learning target, which guides both instruction and assessment. A variety of formats from lists to rubrics can be used to share the success criteria.

The learning target defines the intended learning, and the success criteria are the arrows that help the learner achieve the target and demonstrate mastery.

* Formative assessment professional learning opportunities such as the Michigan Department of Education's FAME Project, provides further description of the teachers' instructional practice in the program materials.

Success criteria communicate the performances of learning that help the teacher and student know when students have achieved the learning target, when they have made some progress, and when they have more learning to do. Success criteria are clear, closely linked to the learning target, and focus on the learning. They are communicated from the students' perspective and illustrate the expected learning. Together, learning targets and success criteria support rich, productive learning experiences.

A teacher will develop proficiency with learning target use over time. The indicators listed in Figure 1 can help teachers identify their current level of practice and next steps as they develop proficiency.

Figure 1: Indicators of Successful Practice for Learning Target Use in the Formative Assessment Process

INDICATORS OF SUCCESSFUL PRACTICE

The indicators of successful practice outline the key aspects of Learning Target Use in the formative assessment process. They can be used for self-assessment and to set goals as a teacher develops proficiency with instructional planning in the formative assessment process.

- The teacher prepares content for the learning target in advance of the lesson.
- The learning target for the lesson focuses on concepts/skills from content/grade level standards.
- The learning target uses student-friendly language.
- The learning target is connected to the instructional activities/performance of understanding.
- Use of learning targets reflects formative assessment process knowledge, content knowledge, pedagogical knowledge, and knowledge of students.
- The teacher clearly communicates the learning target to the students at the beginning of the lesson and makes connections to past and future learning.
- The teacher explains the knowledge and skills needed to accomplish the learning target.
- The teacher references the learning target throughout the lesson and gathers evidence of student understanding of the target.

The information presented here supports learning about the 5 Components and 13 Elements of the formative assessment practice, as defined by Michigan's Formative Assessment for Michigan Educators (FAME) program.



LEARNING POINT

What are learning progressions?

How can they support student learning in the classroom?

What are learning progressions?

Learning progressions describe a path of increasing sophistication in student understanding in a subject matter domain. Learning progressions have been defined as the typical developmental sequence of skills and knowledge in a subject area over a span of time, based on research-conjectured hypotheses and validation studies. There are variations in the learning progressions that have been developed, however. Different types of learning progressions can be useful for different purposes.

While some types of learning progressions can inform standards and large-scale assessments, other types may be more helpful for teachers to support day-to-day student learning in the classroom (Alonzo & Steedle, 2009; Gotwals, 2012, 2017; Lehrer & Schauble, 2015). Specifically, it is important to consider the scope of the learning progression, which includes the amount of content and instructional time. In addition, the grain size of the learning progression, or the level of detail about the incremental changes in student thinking, is key to support student learning in the classroom (Alonzo, 2012; Mohan & Plummer, 2012).

Learning progressions and formative assessment

For the purposes of formative assessment, one way teachers can use learning progressions is to describe a series of incremental changes that occur in a student's thinking and skills that leads from achievement of one standard to the next in a subject matter domain. Along this pathway, there is a sequence of learning where the concepts or skills develop and deepen over time. This type of learning progression includes a series of building blocks that can be used to determine lesson-sized "chunks" of learning so that students' thinking and/or skills develop over time on the way to meeting a standard. Figure 1 shows an example of one set of building blocks for a standard for all students. Teachers may develop slightly different building blocks as needed by students at different levels of understanding.

Learning progressions include multiple building blocks

Content standards are usually substantive and too big for daily lesson planning. To plan for instruction and the formative assessment process, teachers need to describe the intermediate steps that occur in each student's thinking and ability as he or she advances in his or her learning from one standard to the next. These steps or series of changes can be thought of as "Building Blocks" (Tobiason, Chang, Heritage, & Jones, 2014). To identify a Building Block, a teacher can think about the learning steps that a student needs to take along a pathway to achieve a standard. Then, the teacher can use each Building Block to develop the related learning target(s) and success criteria. Together the Building Blocks, or learning steps, can be a form of learning progression.

How do building blocks make up a learning progression?

Building Blocks should connect to each other. They are a connected progression, not discrete or isolated instances of learning.

When teachers clarify the learning progression by outlining the Building Blocks necessary to achieve a standard, teachers are better equipped to determine the associated learning targets and success criteria for instruction. In addition, students will better understand how their learning may progress. Teachers also are better prepared to address misconceptions in student understanding—an important part of the formative assessment process.

Not all students follow the same path

Learning progressions describe "typical" learning paths. There can be outliers, and different ways in which students progress.

To learn more

- **Building Blocks, Learning Goals, and Success Criteria: Planning Instruction and Formative Assessment for K-8 Math Standards.** From the College and Career Ready Standards to Teaching and Learning in the Classroom: A Series of Resources for Teachers. Center on Standards and Assessments Implementation. Tobiason, G., Chang, S., Heritage, M., Jones, B., & Herman, J. (2014). <https://csaa.wested.org/resources>
- **Building Blocks, Learning Goals, and Success Criteria: Planning Instruction and Formative Assessment for K-12 English Language Arts and Literacy Standards.** From the College and Career Ready Standards to Teaching and Learning in the Classroom: A Series of Resources for Teachers. Center on Standards and Assessments Implementation. Lozano, M., Mancevice, N., Jones, B., Heritage, M., Chang, S., & Tobiason, G. (2013). <https://csaa.wested.org/resources>
- **Enhanced Learning Maps: Insights for Instruction.** The path to achievement is not linear. Center for Assessment and Accountability Research and Design, The University of Kansas. <https://enhancedlearningmaps.org>
- **Formative Assessment: What Do Teachers Need to Know and Do?** Margaret Heritage, Kappan, 2007, <https://bit.ly/3yvG0PJ>

There is not one path that all students will always follow in their learning. Due to differences in students' prior knowledge, experience, and skill, there will be differences as they work through these changes in understanding from the end of one standard to the next. Thus, students may follow different learning paths and take different amounts of time as they progress in their learning.

How do learning progressions support quality teaching and learning?

When the teacher thinks of learning targets for a lesson as part of a broader trajectory of learning and presents this sequence to students, it helps to communicate the purpose of learning this particular knowledge and skill, at this particular time, in this particular way. Teachers can clarify to students how this learning will build on past learning toward a broader learning goal.

Awareness of different learning paths helps the teacher to:

- understand how to connect the learning target for a given lesson to previous and future learning
- identify specific concepts and skills for student learning
- determine learning targets and success criteria
- connect instruction to learning goals
- collect relevant evidence of student understanding
- provide feedback to students about the next step in their learning
- identify and address individual student learning needs

Summary

Learning progressions are an important tool in the formative assessment process to help teachers and students connect prior knowledge to new learning as they move from less sophisticated to more sophisticated understandings.

- The teacher asks, "What steps do students need to make along the pathway of learning this standard?"
- A guiding question for the student is, "Now that I know X, what do I need to learn next to achieve the standard?"

Learning progressions can help teachers and students to make connections to the broader purpose of learning. In turn, students are able to take on greater ownership and become more active partners in their learning.

Figure 1: Example of a series of building blocks that compose a learning progression

Standard: Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 (CCSS Math Content 3. OA).

Building Blocks of a Standard	Learning Goal (Learning Target)	Success Criteria
Block 1 Practice repeated addition of objects arranged in rectangular arrays with progressively more rows and columns (beyond 5 rows and 5 columns). EX $7+7+7+7$ and $2+2+2+2+2+2+2$	Understand that a row in an array tells how many in the group and the column tells how many groups	Count the number in a group and the number of groups. Explain what happens when one more row and one more column are added to the array.
Block 2 Move between symbolic ($2+2+2+2$) and concrete (four groups of 2 objects) representations of the same repeated addition number sentence.	Understand that repeated addition can be represented with a number sentence or with a concrete representation (e.g., manipulatives arranged in an array).	Write a number sentence from a given concrete representation of repeated addition. Explain the correspondence between their number sentence and the given representation. Correctly model a given number sentence about repeated addition with a concrete representation. Explain the correspondence between their concrete representation and the given number sentence.
Block 3 Describe repeated addition like $2+2+2+2$ as "the number 2, added four times," and then, "four times 2."	Recognize the structure of repeated addition and understand that repeated addition can be expressed as the number of times a number repeats.	Create accurate number sentences using repeated addition, from a given set of objects. Make a pictorial representation of their number sentence. Describe the number of repeats in a concrete representation (e.g., "I have 6 repeats of this set of 3 things"). Correctly and precisely use the vocabulary "times" to express the number of repeats.

*See the cited reference for the complete list of Building Blocks for this standard.

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FAME

FORMATIVE ASSESSMENT FOR MICHIGAN EDUCATORS

LEARNING POINT

Models of proficient achievement: Why are they important?

A key element of the formative assessment process, models of proficient achievement provide concrete examples of the desired product or performance for a learning target. These models show students the qualities of student work that constitute successful performance related to a specific assignment. They are aligned to the learning target in order for the student to address the guiding question: Where am I going?

Such models provide clarity to students about what meeting the learning target entails. Models of proficient achievement provide a way to communicate success criteria to students. Success criteria also can be communicated to students through worked examples, rubrics, and checklists. Models provide both the teacher and students with a clear example to guide work toward the learning target. Student involvement in using models of proficient achievement can support reflection, self-assessment, and self-regulated learning.

Models of proficient achievement defined

Models of proficient achievement (also known as exemplars) are examples of successful demonstration of learning through a product or performance. They are tools teachers and students use to identify what consti-

tutes successful achievement of a learning target. Models of proficient achievement can be used to give students a clear understanding of what excellent work (as well as work “on the way to excellent work”) can look like and provide opportunities for students to improve.

It is important to note that models of proficient achievement may not always be possible or appropriate for certain lessons. They also differ depending upon the grade level and content area. In a variety of different ways, models of proficient achievement provide an important guidepost for students to understand what constitutes successful work.

Applications to practice

Initially, the teacher may develop the models of proficient achievement, but over time, the teacher may be able to select examples of actual student work. Teachers and students can review a model of proficient achievement to identify the success criteria for the the learning target. Engaging students in this criteria-setting process helps them more deeply understand the success criteria, and in the end, take ownership of their work. It also provides important information on what students do and do not know about a particular target. Overall, students can use the models of

“We may need to teach less in order for the students to learn more. Teach less more carefully, and discuss it with our students. We need to clarify the purpose and expected outcomes of the tasks we design for students, and give them specific, clear and constructive feedback, and the chance to use that feedback to improve their own work.”

(Sutton, 2000)

proficient achievement to guide their independent work.

During instruction, teachers can use models of proficient achievement to engage students in thinking about the learning target and what success might look like in a variety of ways. The teacher can present different models of proficient achievement, and have the student generate a list of the qualities and characteristics of the work that make it a model.

Teachers can also have students use a rubric to assess a model of proficient achievement to deepen their understanding of the criteria for success. Following the completion of an assignment, teachers can provide examples or models at various levels of achievement for students to use to review their own work and assess their current level of understanding or skill and what may be needed to move to the next level.



Teachers can gain greater insights into students' understanding of the learning target as students list criteria or elements of successful work from a model. Teachers can also identify and address student misunderstandings. Ultimately, formative assessment must be embedded in the discipline

in which it is carried out, and models of proficient achievement provide clear examples of proficiency in specific content areas.

As teachers involve students in the use of models of proficient achievement in various subject areas, they can:

- Analyze models of proficient achievement on a writing activity and develop a list of criteria of effective aspects of the work.
- Examine worked mathematical problems and compare the work to a rubric or checklist.
- View a social studies presentation and list specific indicators of quality and success.
- Review a range of models at different levels of achievement on a science assignment to determine the student's current level of performance and next steps in learning.

Summary

Teachers often begin by focusing on one element of the formative assess-

ment process and then build competence over time. The teacher intentionally plans instruction based on clear understanding of what he or she wants the students to learn within a progression of learning. The teacher decides when models of proficient achievement are appropriate for a given lesson and content area. When a model is presented, the teacher explicitly teaches students how to use the model, and students consistently use the model to guide their independent work. The teacher and students engage in discourse about the model to improve their understanding of the learning target and success criteria. Students have opportunities to reflect on the model of proficient achievement and to articulate what they notice about the model as well as their own work.

Through explicit instruction, dialogue, and reflection, models of proficient achievement can be an effective tool to support student agency and clarity

Reference

Year 8 and year 9: Overcoming the muddle in the middle. Ruth Sutton. (Ruth Sutton Publications, 2000)

To learn more

Formative assessment: What do teachers need to know and do?

Margaret Heritage. *Phi Delta Kappan*, 89(2), 140-146.

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Learning targets: How students aim for understanding in today's lesson.

Connie M. Moss and Susan M. Brookhart. (ASCD, 2012)

<https://www.ascd.org/>

Using formative assessment to enhance learning, achievement, and academic self-regulation

Heidi Andrade and Margaret Heritage (Routledge, 2018)

<https://www.routledge.com/>

NOTES

[illegible]

Component 3 – Eliciting Evidence of Student Understanding

When teachers elicit evidence of student understanding in the formative assessment process, they are monitoring student understanding. Various sources can be used, such as responses to questions, comments during class discussion, and written work. The purpose of gathering student evidence within the formative assessment process is that it allows (1) teachers to know where students are in relation to the learning targets, (2) students to see what they know and need to work on, and (3) teachers and their students to use the information to make decisions about where to go next with the learning.

The Eliciting Evidence of Student Understanding Component includes four Elements:

- 3.1 *Activating Prior Knowledge*** helps students to connect current learning to what they learned in the past.
- 3.2 *Gathering Evidence of Student Understanding*** indicates when and how teachers will determine the extent of student learning and understanding.
- 3.3 *Teacher Questioning Strategies*** suggests teachers may choose to use questions skillfully throughout a lesson.
- 3.4 *Skillful Use of Questions*** indicates that teachers may employ different types of questions (ranging from yes-no to those that deeply probe student understanding), consistent with instructional plans.

“When teachers *elicit evidence* of student understanding in the formative assessment process, they are *monitoring* student understanding.”



Prior knowledge: Why is activating it important in the formative assessment process?

In the formative assessment process, a teacher needs to understand what students currently know and can do in order to make informed instructional decisions and provide feedback that advances student learning and understanding. Therefore, it is crucial for teachers to elicit evidence of student understanding in a variety of ways so that students have opportunities to demonstrate their understanding.

Activating prior knowledge is important so that teachers gather accurate and complete information about students' current understanding and skill. It is also important so that students remember what they already know about a topic or a situation and use this as the basis for new learning. Teachers and students will benefit from reflecting on what students understand and any misconceptions they may have about a topic before they move forward with the new learning.

Activating prior knowledge defined

Activating prior knowledge can be defined as a process that encourages students to think about and perhaps share their existing understanding about a topic so as to make connections between what they already know and new information they are learning. To develop students' knowledge

and skill in a given subject, the teacher needs to provide an opportunity for students to consider and share what they already know and can do. This includes all aspects of what a student understands, including misconceptions the students may have about a topic.

student understanding in the formative assessment process. A teacher needs to support students to connect new learning to past knowledge, to self-assess, and to set goals for their learning. A teacher may activate prior knowledge by using a variety of different strategies including:

“Opportunities for pupils to express their understanding should be designed into any piece of teaching, for this will initiate the interaction whereby formative assessment aids learning.”

(Black & William, 1998, p. 11)

Activating student prior knowledge helps students to remember what they already know and understand about the area of learning, thus helping them to build on this previous learning. There are many different approaches to activating prior knowledge, and this process can look different depending upon the content area. These efforts also allow the teacher to gather a complete picture of students' previous learning to guide the student forward and address any misconceptions.

Applications to practice

Prior knowledge is an important element of eliciting evidence of

- concept maps,
- charts that capture what students **Know**, what they **Want** to know more about, and what they **Learned (KWL)**,
- anticipation guides, or
- reflection journals.

At other times, a teacher may structure reflective opportunities for students to connect to prior knowledge by leading students through a guided visualization or having them recall their previous learning by drawing or creating a visual diagram.

For example, in reading, a teacher may invite students to think about

their prior knowledge or experience on the topic of a reading passage in order to make connections to the text they are reading. Students may be able to increase their comprehension and reading skills by using what they already know about a topic to reflect on how the new information fits with what they already know.

In mathematics, a teacher may have students recall a particular experience in which they had to solve a problem. For example, for two-digit addition with regrouping, the teacher may have the students recall when they had to add a large number of items and how they were able to keep track of the sum. The teacher could also have students recall prior learning about place value and addition, and strategies they may have used to create groups of ten to help students make connections to the new learning. In this way, activating prior knowledge could involve telling a story, having students draw a picture, recalling prior learning, or visualizing a related experience.

A science lesson may begin with students completing an anticipation/reaction guide about photosynthesis. The students will fill out whether they agree or disagree with statements about photosynthesis before they engage in new learning. The teacher and students can reflect on the student responses to inform instructional and learning decisions. Then after the lesson, students can record their answers again and compare their predictions with their final conclusions. In another example, a teacher may activate prior knowledge before an investigation of a phenomenon by asking students what they already know about the phenomenon.

The tables to the right include some different ways teachers may activate prior knowledge. While the tables provide examples, the primary focus of activating prior knowledge is to gather information about students' current level of understanding for

To learn more

Formative assessment: What do teachers need to know and do?

Margaret Heritage. *Phi Delta Kappan*, 89(2), 140-146.

<https://bit.ly/3yvG0PJ>

What do we mean by formative assessment?

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Using formative assessment to enhance learning, achievement, and academic self-regulation

Heidi Andrade and Margaret Heritage (Routledge, 2018)

<https://www.routledge.com/>

a particular learning target, so that the information can be used to guide instructional decisions and support student learning. When students have opportunities to recall what they already know, their prior knowledge

can help to support current and future learning.

References

Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: principles, policy & practice*, 5(1), 7-74.

KWL Chart

Fill in the first two rows before new learning or research.

Fill in the last row after new learning or research.

Topic: _____

K: What do you already know about this topic?

W: What do you wonder or want to know?

L: What did you learn about this topic?

Anticipation Guide

Directions:

1. Read the statements below and decide if you agree or disagree. Record your prediction in the left-hand column.
2. At the end of the lesson, answer the same statements again. Record your answers in the right-hand column.
3. Compare your early predictions with your final conclusions.

Before (Agree/Disagree)

Statement

After (Agree/Disagree)

Reflection on Learning:

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FORMATIVE ASSESSMENT FOR MICHIGAN EDUCATORS

LEARNING POINT

What is gathering evidence of student understanding?

The formative assessment process involves continually collecting and using evidence to inform teaching and learning. A teacher needs to gather accurate and complete information about students' current understanding in order to make informed instructional decisions and provide feedback to advance student learning.

A variety of strategies can be used to gather evidence of student understanding. What is important is that the teacher gathers evidence that is aligned with a clear learning target and uses it to move student learning forward. It is also essential that students are active agents in collecting and using evidence of their own understanding as they reflect on their learning, revise or modify their strategies, and inform their future learning decisions.

Gathering evidence of student understanding defined

Gathering evidence of student understanding in the formative assessment process occurs when the teacher provides multiple and varied opportunities to gather information about where students are in the learning process. The information is gathered with the intention to inform the potential modifications to teaching and learning strategies.

Applications to practice

There are various ways for a teacher to gather evidence of student under-

PRACTICE IN A CLASSROOM IS FORMATIVE TO THE EXTENT THAT EVIDENCE ABOUT STUDENT ACHIEVEMENT IS ELICITED, INTERPRETED, AND USED BY TEACHERS, LEARNERS, OR THEIR PEERS, TO MAKE DECISIONS ABOUT THE NEXT STEPS IN INSTRUCTION THAT ARE LIKELY TO BE BETTER, OR BETTER FOUNDED, THAN THE DECISIONS THEY WOULD HAVE TAKEN IN THE ABSENCE OF THE EVIDENCE THAT WAS ELICITED.

Black & William, 2009, p.43

standing during a lesson, and several different ways should be used (to most accurately assess students). The best way for a teacher to start to elicit evidence during instruction is to use what they already do, rather than trying to add several new evidence collection strategies to current practice. Over time, a teacher can gradually increase his or her repertoire.

Three instructional routines support teachers in gathering evidence of student understanding during instruction:

1. Gathering evidence through academic dialogue
2. Gathering evidence through observation and examination of student work
3. Gathering evidence through conferences and one-on-one conversation

These instructional routines are further discussed below.

1. Gathering evidence through academic dialogue

Eliciting evidence of student under-

standing focuses on gathering information about student thinking and understanding. This involves more than simply "checking for understanding." The most important aspect for the teacher is to gather information about what the students are actually thinking and why.

Academic dialogue allows the teacher to gather information about the what students understand about the subject matter and different strategies they may use. When students engage in academic dialogue, they publicly communicate their ideas, they work to help one another, they explore ideas, make connections, and reveal their thinking. This provides valuable evidence about student understanding. The teacher will need to provide significant support to create a classroom culture in which all students engage in equitable academic dialogue. It will also be beneficial to provide time for classroom discussion with clear routines as well as to explain the purpose and expectations to students.

2. Gathering evidence through observation and examination of student work

A teacher will want to gather multiple examples of student learning to develop a full account of student understanding. There are many ways for the teacher to observe student thinking and gather evidence:

- concept maps
- student writing
- presentations
- videos
- portfolios
- collaborative work
- drawing
- graphic organizers
- investigations, and
- problem solving.

The teacher can gain important information from observation as students engage in learning opportunities. Then, analysis of student work products can provide additional evidence to inform instructional decisions to guide student learning. For analysis of the work, a teacher may use a checklist, rubric, or other metric that includes criteria for successful attainment of the learning target. The success criteria and learning target guide the instructional and learning decisions about when, how, and how much evidence of student understanding will be gathered – of value to both students and the teacher.

The teacher should plan opportunities to observe and gather student work in order to obtain information about

When a teacher regularly gathers information about student understanding, the teacher is then able to provide timely feedback to support students' attainment of the learning targets and adjust instruction accordingly.

the students' level of understanding in relation to the learning target. Students should also reflect on the learning target and success criteria as they engage in the learning process.

3. Gathering evidence through conferences and one-on-one conversations

Teachers can create regular opportunities to conference and speak one-on-one with students about their current understanding and progress toward learning targets. This allows the teacher to gather specific evidence of student understanding regarding a learning target and, when appropriate, to provide immediate feedback to move learning forward.

The teacher may ask probing questions about observations and student work samples to gather further information from the student. Students can describe their learning tactics and ask questions of the teacher during this time. The questions students ask also provide evidence of their understanding.

For example, in one elementary classroom, the teacher meets individually with students during reading

workshop. The students bring their reading folders containing student goals, work samples, and post-it notes with different reading strategies they have received from their teacher during conferences. The teacher may have the student share about previous strategies used, ask questions about current work, and describe next steps in his or her learning.

Similarly, in a high school math class, a teacher may conference with students to review their progress in a particular unit, identify areas for growth and areas of strength, and set goals for the upcoming weeks. During these conferences, the teacher is able to gather specific information about a student's level of understanding as well as the student's motivation, attitudes, and self-assessment regarding the content.

While gathering evidence, the teacher may use "triangulation" of all three ways to gather student data (such as products, observations, and conferences) to provide a more consistent, reliable, and clearer picture of student understanding.

Teachers also elicit evidence of student understanding through activating prior knowledge, questioning, and self- and peer assessment. These topics are covered in depth in other ALN Learning Points.

When a teacher regularly gathers information about student understanding, the teacher is then able to provide timely feedback to support students' attainment of the learning targets and adjust instruction accordingly.

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To learn more

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What do we mean by formative assessment?

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FORMATIVE ASSESSMENT FOR MICHIGAN EDUCATORS

LEARNING POINT

What are teacher questioning strategies?

Formative assessment involves a continuous process in which teachers and students collect and use evidence of student understanding to move learning forward. Teachers intentionally craft evidence-gathering strategies that are designed to gather information about what the students

Teacher questioning strategies defined

Teacher questioning strategies can be defined as the intentional use of a range of low to high cognitive demand questions. The teacher needs a repertoire of questioning strategies. These strategies include low-level cogni-

ing, provide their reasoning, and/or make connections to other students' ideas. This intentional use of questions helps the teacher to understand where the students are in relation to the learning target to support next steps in their learning.

“The shorter the time interval between eliciting the evidence and using it to improve instruction, the bigger the likely impact on learning.”

DYLAN WILIAM

know and can do in relation to the learning targets and success criteria. Questioning is a powerful tool for teachers to elicit and engage student thinking. In addition to other ways to elicit evidence such as observation, classroom talk, and student work, the teacher can employ different questioning strategies to elicit evidence of students' understanding while they are learning.

tive demand questions (to clarify, gather information, or activate prior knowledge) and high-level cognitive demand questions that require students to use information or ideas that they have learned to solve a problem, provide an explanation, or reveal their thinking while working through a problem or idea. The use of a repertoire of such questions also encourages students to reflect on their own think-

Applications to practice

Effective questioning strategies facilitate connections to prior knowledge, support a classroom culture that values learning and risk-taking, and promote cognitive development. The next section describes elements of effective questioning strategies that educators can use to elicit evidence of student understanding.

Essential elements of teacher questioning strategies

- **Intentionally plan questions in advance.** Intentionally plan questions prior to the lesson that will elicit and explore student thinking. This may include a list of questions to prompt student thinking at specific points in the lesson or scaffolding questions of increasing cognitive demand to engage students' thinking as they deepen their understanding. Questioning can be used to help students access their prior knowledge as well as to deepen their understandings later in the lesson.

- **Engage in dialogue or “assessment conversations.”** Reflect on ways to ask questions and ways to follow up on questions that prompt student thinking, acknowledge individual contributions to learning, and promote classroom dialogue. Questioning strategies often involve a format in which the teacher asks a question, the student responds, and then the teacher evaluates the answer. In higher cognitive demand questioning strategies and assessment conversations, the teacher asks a question, the student responds, and then the teacher may ask for more information in a number of different ways from that student or other students to explore student thinking and promote further learning. For example, the teacher may ask follow-up questions that invite students to:
 - clarify their meaning or ideas;
 - consider the situation from another perspective;
 - reflect on their own metacognitive processes;
 - explain their reasoning, thinking, and problem-solving process;
 - make connections to previous learning and others’ responses; or
 - provide evidence to support their thinking.
- **Use research-based practices for effective questioning.**
 - Apply pre-thinking strategies, such as think/pair/share, pre-

“What we are really trying to do as educators is learn – learn what students know so we can celebrate that while also learning where they need extra support.”

LearnED

To learn more

Embedding Formative Assessment: Practical Techniques for K-12 Classrooms

Dylan William, (Solution Tree, 2011).

Formative assessment: What do teachers need to know and do?

Margaret Heritage, Phi Delta Kappan, 89(2), 140-146.

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Quality questioning: research-based practice to engage every learner

by Jackie Walsh and Beth Sattes. (Corwin, 2nd Edition, 2017).

Questioning for classroom discussion: Purposeful thinking, engaged listening, deep thinking

by Jackie Walsh and Beth Sattes. (ASCD, 2015).

What do we mean by formative assessment?

ALN Learning Point (Michigan Assessment Consortium, 2016).

<http://bit.ly/LP-FormativeAssessment>

writing, and brainstorming for cognitively complex questions.

- Allow 3-5 seconds of wait-time after asking a question for students to process and engage with the question.
- Use question stems that involve increasing depth of knowledge (Marzano & Simms, 2012).
- Engage students in the cognitive activity of questioning. Teach students about different types of questions as well as different approaches to write and respond to higher-order thinking questions.
- Focus on students’ ideas rather than having a “right” answer (e.g., Otero, 2006).

Summary

Having a range of different types of questions, including high and low cognitive demand questions, is useful to support teaching and learning at different times. Teacher questioning strategies emphasize the intentional use of these different types of questions to elicit student thinking and promote learning. Questioning and dialogue in the classroom are critical opportunities to explore student thinking and promote an inclusive classroom culture.

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What is skillful use of questions?

Skillful use of questions is one of many ways to elicit evidence of student understanding. In the formative assessment process, the teacher and students use evidence of student understanding to make adjustments that move learning forward. The teacher purposefully uses different sorts of questions to deliver content and to monitor the understanding of the class as well as keep track of individual student

deliver content and gather information about student thinking and understanding with a specific focus on who is being asked the questions, when questions are being asked, and the purpose they will serve to gather evidence of student understanding. A key aspect of skillful use of different types of questions is the planned use of questions to check for student understanding from the entire class as well

and audience for questions to deliver content and to check students' understanding.

Purpose of questions

The teacher intentionally uses a repertoire of questions in the lesson for specific purposes, such as to activate prior knowledge; review past learning; deliver content; gauge student understanding; provide students with specific, actionable, and immediate feedback; or adjust instructional strategies in relation to the learning target.

By planning in advance, the teacher is able to determine when questioning will occur, the nature of the questions to be used, and how the questions will be used for particular purposes. The teacher will often write down the questions that will be asked; when he or she will ask the questions; and whether the questions will be asked to the entire class, to a small group of students, or to select individual students.

Skillful use of questions includes the careful selection of the type of question to fit the teacher's purpose. The type of questions may vary from low cognitive-demand questions for a quick review or activating prior knowledge to high cognitive-demand questions that deepen and extend student understanding. The skillful teacher uses the full repertoire of questioning strategies carefully and thoughtfully to gather evidence of student understanding for a particular purpose.

Ultimately, the purpose of questioning in the formative assessment process is to move student learning forward. Skillful

“To question well is to teach well. In the skillful use of the question more than anything else lies the fine art of teaching; for in it we have the guide to clear and vivid ideas, the quick spur to imagination, the stimulus to thought, the incentive to action.”

CHARLES DEGARMO (1911)

understanding. Skillful use of questions is how the teacher provides opportunities for students to engage in classroom questioning routines and discussion through sharing their ideas and building on each other's ideas.

Skillful use of questions defined

Skillful use of questions is the intentional use of different questioning strategies to

as from individual students. In addition, the students understand that questioning is about the opportunity to share current understanding and explore thinking to move learning forward rather than trying to “get it right.”

Applications to practice

A teacher's skillful use of questions includes a focus on the purpose, timing,

use of questions allows the teacher to determine:

- what the learner knows,
- what the learner doesn't know,
- the extent to which a learner is linking background knowledge with newer concepts,
- any fundamental misconceptions that are getting in the way of understanding, and
- what next steps are needed to move the learning forward.

– Adapted from Fisher and Frey, (2010)

ways. The students have opportunities to practice questioning routines and understand that the teacher asks questions to provide opportunities for the students to share their ideas and build on one another's ideas.

Audience for questions

The teacher is also intentional about the audience for the questions during a lesson. This includes who will respond to the questions as well as the needs of the learners who are answering the questions. Planning for questioning allows the

acknowledge the contributions of every student to the learning process and provide time for all students to explain their thinking and also ask their own questions.

Supportive classroom culture

Classroom culture is also an important aspect of questioning. The teacher will need to cultivate a climate of trust and support students as they become familiar with the important role of questions to explore student thinking and deepen understanding. Students must be involved in understanding the new expectations and their role in the learning process as teachers increase the cognitive demand of questions and ask students to explain the reasoning for their thinking. The teacher will need to provide modeling, practice, and scaffolding as students learn new ways to work through challenging questions and explain their thinking.

Skillful use of questions nurtures a culture for thinking in the classroom, facilitates the use of feedback, and promotes a sense of student ownership in the learning process.

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Frey, N., & Fisher, D. (2010). Identifying instructional moves during guided learning. *The Reading Teacher*, 64(2).

Popham, W. J. (2008). *Transformative assessment*. ASCD.

“Formative assessment is a planned process in which teachers or students use assessment-based evidence to adjust what they’re currently doing.”

JAMES POPHAM (2008)

The assessment-based evidence is then used to inform instruction, help students become more engaged in their learning, and move learning forward.

Timing of questions

The timing of questions must be carefully considered within the instructional lesson. As a teacher develops greater competence with skillful use of different types of questions to gather information on student understanding, the teacher may include a list of questions that will be asked at various points throughout the lesson. The teacher can then pose specific questions at certain moments in the lesson to monitor the understanding of the class as well as individual student understanding. In addition, the teacher will be better able to anticipate what questions may arise during the course of the lesson, and will develop skill in the spontaneous use of questions that become necessary during instruction.

The teacher plans ahead to determine the structure and questioning routines in the classroom to gather evidence of understanding from students. For example, a teacher may decide which students will be asked specific questions during conferences on a given day of the week. Structures and routines are established in the classroom, so that over time students become familiar with engaging in a variety of different types of questions in different

teacher to anticipate students' responses to questions that probe for deeper understanding, elicit discussion, and prompt exploration of ideas.

The teacher will also be aware of the discourse that may arise from questions and ensure that the thoughts, ideas, and suggestions of every student are valued equally by the teacher. Teachers should avoid calling on only certain students (e.g., only the ones who raise their hands), since this leaves other students “off the hook” and helps those students avoid active participation in the lesson. It is essential that the teacher intentionally

To learn more

Formative assessment: What do teachers need to know and do?

Margaret Heritage, Phi Delta Kappan, 89(2), 140-146.
<https://bit.ly/3yvG0PJ>

Framework for Thinking through Quality Questioning: Deepening Student Engagement.

J. Walsh & B. Sattes. (Corwin Press, 2011).
<https://bit.ly/3xrftw0>

Five Research Based Tips for Providing Students with Meaningful Feedback.

Marianne Stenger. (*Edutopia*, August 4, 2014).
<http://bit.ly/5Tips-Stenger>

What do we mean by formative assessment?

ALN Learning Point. (Michigan Assessment Consortium, 2016).
<http://bit.ly/LP-FormativeAssessment>

The information presented here supports learning about the 5 Components and 13 Elements of the formative assessment practice, as defined by Michigan's Formative Assessment for Michigan Educators (FAME) program.

NOTES

[illegible]

Component 4 – Formative Feedback

The goal of gathering evidence of student understanding is to use it to guide subsequent teacher and student actions to close the gap between students' current understanding and the learning target.

When teachers engage in formative feedback in the formative assessment process, they provide verbal or written feedback to students to help them adjust their learning. The process also supports students as they monitor their own learning and make adjustments as needed to close the gaps in their learning. This can foster a sense of control over their learning and promote student motivation and agency. Feedback is always adaptive and requires teacher knowledge of other factors; it depends upon the learning targets, the assignment, content knowledge, pedagogical knowledge, the student, and the overall formative assessment process.

The Formative Feedback Component includes three Elements:

- 4.1 Feedback from the Teacher** is formative feedback relative to the learning targets that teachers provide to students.
- 4.2 Feedback from Peers** is feedback students are able to provide to other students relative to the learning targets.
- 4.3 Student Self-Assessment** is feedback students are able to provide to themselves relative to the learning targets as they are learning.

“The goal of gathering evidence of student understanding is to use it to guide subsequent teacher and student actions to close the gap between students' current understanding and the learning target.”



FAME

FORMATIVE ASSESSMENT FOR MICHIGAN EDUCATORS

LEARNING POINT

What is formative feedback? Why is feedback from the teacher important?

Formative feedback is an essential component in the formative assessment process. Research indicates it can be one of the practices with the highest impact on student learning and achievement outcomes when done effectively (Hattie & Timperley, 2007). However, not all feedback is the same, and scholars have worked to identify what types of feedback are most effective (Brookhart, 2008; Hattie & Timperley, 2007; McManus, 2008; Nicol & Macfarlane-Dick, 2005; Wiggins, 2012). Feedback is most beneficial when it is related to the learning target and identifies strengths as well as areas for growth. In this way, formative feedback supports the student to understand the learning target and develop the necessary strategies and competence to reach the target.

Formative feedback defined

Feedback can be defined as the verbal or written responses a teacher provides to students on their performance or understanding with the intention to close the gap between the student's current status and the learning target. Feedback provides useful information for the students to reflect on their learning and self-regulate their thinking processes and the strategies they use. Feedback can take many forms and serve different purposes as it is tailored to the individual student and specific learning goals. Formative feedback can provide new knowledge, clarify understanding, introduce new strategies, shift beliefs about self and tasks, and develop metacognitive skills.

Sadler (1989) delineated three necessary components of feedback: (1) the standard that is to be achieved, (2) the actual level of performance, and (3) how to go about closing the gap. These components are at the heart of the formative assessment process, and thus feedback is critical for students to understand what is needed to move their learning forward.

Formative feedback involves an ongoing cycle between teachers and students. It can take many forms in the classroom, including:

- Feedback from the teacher: verbal or written feedback to a student to improve his or her achievement of the learning target
- Feedback from peers: feedback from one student to another student

about his or her learning in relation to a learning target

- Student self-assessment: the process in which students gather information and reflect on their own learning in relation to the learning goal.

What makes feedback most effective?

Feedback from the teacher is most effective when it is descriptive, that is, it focuses on a specific task and provides information for the student to improve his or her work or understanding on the task. According to the research, there are specific feedback strategies and content characteristics that affect student learning and motivation.

To learn more

Seven keys to effective feedback. Grant Wiggins (*Educational Leadership*, Vol. 70, Number 1, 2012).

<http://bit.ly/7Keys-Wiggins>

Six Tips for Managing the Feedback Workload. Andrew Miller. (*Edutopia*, July 3, 2019).

<http://bit.ly/6Tips-Miller>

Five Research Based Tips for Providing Students with Meaningful Feedback. Marianne Stenger. (*Edutopia*, August 4, 2014).

<http://bit.ly/5Tips-Stenger>

Feedback: Part of a System.

Dylan William. (*Feedback for Learning*, 2012. Vol. 70, No.1).

<http://bit.ly/Feedback-William>

Table 1: What does formative feedback look like?

Formative Feedback IS	Formative Feedback IS NOT
Specific to the learning target	Vague (e.g., “good”)
Process- or product-focused; identifies strengths and areas for growth	Learner-focused (You’re so smart!)
Targeted to the demands of the learning target	Diffuse and overwhelming (e.g. edits of even minute mistakes)
Focused on the quality of the students’ process/product/ideas as they are developing	Criterion-referenced (“Compared to the criteria, your response is good,”) or norm-referenced (e.g., “This is much better than the rest of the class”)
Timely—can be used to improve progress	Delayed until after the learning opportunity is over
Descriptive—specific, often in the form of questions	Evaluative—grades, scores, checkmarks, judgments
Actionable—concrete information that helps learners progress	Summative—no further learning on this learning target is expected

Also, feedback should be provided in a timely way so that students can take immediate action to improve their learning. Students also filter the feedback they receive and make meaning of the message through self-regulation, or the use and control of their thought processes. Therefore, it is important for the teacher to cultivate a classroom culture in which students view feedback as an integral part of the learning process.

Formative feedback is most effective when it:

- relates specifically to the learning target and success criteria.
 - focuses on strengths (what the student is doing well)
 - helps the student to be an investigator of learning and to identify errors
 - describes how to improve the work
 - changes feedback as student learning progresses and responds to where students currently are in relation to the learning target
- is provided at just the right time, in just the right amount.
- is positive, clear, and specific.
- is ongoing and consistent.
- makes actionable and manageable suggestions for improvement.
- helps students to become reflective learners.
- leads to opportunities for students to use the feedback to enhance their work.
- is supported by a classroom culture that values feedback.

Table 2: Examples of formative and evaluative of feedback

Descriptive or Formative Feedback	Evaluative Feedback
Descriptive—specific, often in the form of questions <i>“You provide a clear thesis statement for your essay. Do each of your three supporting paragraphs include evidence?”</i>	Letter Grade: A through F
Timely—can be used to improve progress <i>In a conference with the student the teacher says, “I notice you are using the slide through the whole word strategy. Keep using this, and as you read also try looking for chunks.”</i>	Comments such as: <i>“Good job,” “nice work,” or “incorrect.”</i> <i>“Nice reading!”</i>
Actionable—concrete information <i>“The computation error (you wrote $100 \times 15 = 150$) caused you to miss the correct answer to the word problem. Remember the strategy we practiced in class when multiplying numbers by 100. All other steps are correct.”</i>	Number such as: 24/25

What is descriptive and evaluative feedback?

Evaluative feedback is relative either to a performance standard or to the performance of all students. Evaluative feedback is summative, providing general information or comments about how well or how poorly students performed on a task. It often takes the form of a letter grade; check mark; number; or comment such as “good,” “nice work,” or “incorrect.”

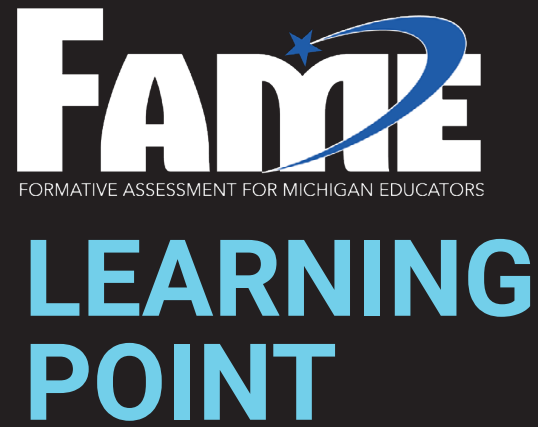
Descriptive or formative feedback, in contrast, provides specific information in written comments or conversations. Formative feedback helps students understand what they need to do to improve, helping learners understand where they are relative to the learning target and what they need to do next to close the gap.

In classroom instruction and assessment, there are different times and situations in which different types of feedback are most useful.

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- Wiggins, G. (2012). Seven keys to effective feedback. *Feedback*, 70(1), 10-16.

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What is feedback from peers?

Peers can be a valuable resource to support learning in the formative assessment process. In addition to receiving feedback from the teacher, classroom peers can receive descriptive formative feedback from each other that is clear, specific, actionable, and timely to promote learning. Feedback from a peer could focus on what the student may need to do to achieve the success criteria, suggest how the student can make the needed changes or describe what the student providing feedback has accomplished regarding his or her success criteria for a learning target. Students can then reflect on and use peer feedback to move their learning forward.

Feedback from peers defined

Feedback from peers can be defined as the process through which a student gathers information and feedback from another student's learning in relation to a learning target. This process involves three steps:

- 1) Recognize the desired learning goal
- 2) Provide feedback on the quality of another student's thinking and performance relative to the success criteria so that the other student is able to gather evidence about his or her current position in relation to the learning goal
- 3) Provide information including understanding, strategies, and skills to close the gap between the student's current position and the desired performance

Feedback from peers is often referred to as "peer assessment." The term "peer assessment" in this context does not describe the practice when students grade

each other's papers and/or provide a summative assessment of the work (i.e., evaluative feedback such as "good job"). Peer assessment is an ongoing process in which students learn skills over time to provide descriptive and actionable feedback to peers as well as to reflect on the feedback from one another and use it to revise their skills or work.

Applications to practice

The teacher will need to foster a supportive learning culture in the classroom so that students are comfortable providing feedback to others that is useful to them

bric, checklist, or feedback protocol. The teacher should provide explicit instruction and model the peer feedback process for students. Then, students should be given opportunities to practice peer assessment. Students can use checklists, rubrics, or other criteria to support them as they provide descriptive feedback to another student.

Initially, students can focus on one topic for their feedback; but over time with practice, they can manage providing feedback on multiple aspects of the work of other students. It is important to note

“Feedback is most effective when it is related to the learning target and identifies strengths and areas for growth. Then, students need time to reflect on the feedback from one another and to use it to improve their skills or work.”

KINTZ ET AL., 2016

(and overcome possible inter-personal barriers). Teachers also should prepare students to engage in peer assessment and provide direct, useful feedback to one another. In addition, the teacher might develop a repertoire of instructional tools, practices, and strategies to support students as they learn to provide meaningful feedback to one another.

Once students are clear on the learning target and success criteria, the teacher may select a strategy or tool for students to use for peer assessment such as a rubric,

checklist, or feedback protocol. The teacher should provide explicit instruction and model the peer feedback process for students. Then, students should be given opportunities to practice peer assessment. Students can use checklists, rubrics, or other criteria to support them as they provide descriptive feedback to another student.

An overview of steps involved in implementing peer assessment are outlined in Table 1. For more detailed information, see *Going Deeper with Self- and Peer Assessment*, Kintz et. al., forthcoming).

Table 1: Implementing Peer Assessment

1. PREPARE: Prepare students for peer assessment	• Cultivate a supportive learning culture and an environment of trust in the classroom, and provide opportunities for collaboration in learning. • Explain the expectations for students and the change from their role as a learner to being a resource for one another. • Ensure the learning target and success criteria for any peer assessment are clear and discussed with students.
2. GUIDANCE: Provide rubrics, guidelines, or other criteria with clearly defined tasks	• Provide rubrics, checklists, or visual anchor charts and clearly defined tasks to guide their feedback to peers. • Develop a repertoire of protocols and strategies that students can use to provide feedback to one another.
3. MODEL and TEACH the PROCESS: Model and explicitly teach the process of peer assessment with students	• Provide descriptive and actionable feedback to students through comments on their work and performance in relation to the learning target and success criteria. • Model and teach the process and skills of giving and receiving feedback.
4. PRACTICE: Facilitate opportunities for students to practice, engage in peer assessment, and receive feedback on the process	• Scaffold student learning by allowing them to practice one step at a time, and provide feedback so students are aware of what went well and what may need to be improved.
5. REFLECT and SUPPORT: Ensure students have time to reflect on the feedback from one another and use it to improve their skills and/or work.	• Integrate peer assessment into students; work toward a learning target. • Provide opportunities for students to review feedback from a peer and improve their skills and/or work accordingly.

Source: FAME Learning Guide (Kintz et al., 2016)

Teachers who have been successful in promoting peer assessment in the classroom report it is important to provide opportunities for peers to give and receive feedback as often as possible. These experiences help students to build trust in one another and become actively involved in the assessment process. Other teacher recommendations include the following:

- Allow the same students to partner together for the first part of the year to develop relationships. Then they can switch partners more often as they get to know each other;
- Gather data during peer assessment time on strengths and weaknesses of the process. If it is beneficial for the whole class, share feedback in general terms, or in one-on-one conferences as needed.
- Choose a manageable strategy to begin with: lukewarm and cool feedback, two stars and a wish, or sentence frames (see Kintz et. al., forthcoming).
- Focus on the learning goal rather than completing an assignment or getting it right.
- Support students who are frustrated, not giving quality feedback, or taking feedback personally. Let them know it is ok if it does not work the first or second time and to keep working on manageable tasks.
- After students engage in peer assessment, ask for their opinions on what worked and what could be improved, why, and where to go from here. When teachers provide consistent and ongoing opportunities for feedback from peers, students become familiar with the process, take ownership of their learning, and regard each other as instructional resources.

To learn more

Learning targets: Helping students aim for understanding in today's lesson

Connie M. Moss and Susan M. Brookhart. (ASCD, 2012).

<http://www.ascd.org/Publications/Books/Overview/Learning-Targets.aspx>

Student centered assessment: Peer assessment.

Georgia Brooke and Heidi Andrade. (Students at the Center, 2013).

<https://bit.ly/3hkoJi2>

What do we mean by formative assessment?

ALN Learning Point (Michigan Assessment Consortium, 2016).

<http://bit.ly/LP-FormativeAssessment>

References

Kintz et. al., (forthcoming). Going deeper with peer-assessment. Michigan Department of Education.

Kintz et. al., (2016). FAME learning guide: Developing and implementing the formative assessment process in Michigan. Michigan Department of Education.

Wiliam, D. (2011). Embedded Formative Assessment. Strategies for classroom formative assessment that drives student engagement and learning. Solution Tree Press.

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FORMATIVE ASSESSMENT FOR MICHIGAN EDUCATORS

LEARNING POINT

What is self-assessment?

Student self-assessment has been shown to raise student achievement and promote a sense of ownership in the learning process (Black & William, 1998; Chappuis & Stiggins, 2002; Rolheiser & Ross, 2001). According to a review of the self-assessment literature, students who engaged in the process of self-assessment strategies demonstrated improved academic performance across different grade levels and subject areas (Brown & Harris, 2014). When students self-assess, they gather information about and reflect on their own learning.

Teachers can work with students to help them consider their progress in developing certain skills, knowledge, processes, and attitudes. Then, students can use that information to determine where they are in relation to the learning goal and the actions they need to take to close the gap between their current understanding and the learning goal.

Student self-assessment defined

Student self-assessment can be defined as the process in which students gather information about and reflect on their own learning in relation to a learning goal. This process involves three parts in which students:

- (1) recognize and understand the desired learning goal,
- (2) monitor and evaluate the quality of their thinking and performance to gather evidence about their current position in relation to the learning goal, and
- (3) acquire the understanding, strategies, and skills to close the gap between their current position and the desired performance.

This three-part definition helps to provide clarity for the different areas of skill and understanding that the teacher needs to address to effectively support students to engage in self-assessment.

Applications to practice

Self-assessment is an essential element of the formative assessment process. When a teacher explicitly teaches students to effectively self-assess, students become empowered to set their own goals for learning, take ownership of their learning, and take action to close the gap between the two to achieve their goals. Students need ongoing feedback, support, and practice throughout this learning process.

There are several steps a teacher can take to establish processes and routines that support students to engage in self-assessment. It is important for the teacher to foster a supportive learning culture in the classroom so that students are comfortable engaging in self-assessment. The teacher can provide clear expectations on how students can objectively look at their work in comparison to specific criteria. Students are often overly critical or overly optimistic about their performance, so the teacher can help students develop an accurate self-assessment of their work by looking for specific indicators of the success criteria to meet the learning goal. This criteria is helpful for students to use as they review their own work.

The more students have learned to give and receive formative feedback that is aligned to success criteria, the better prepared they are to self-assess. Through both self- and peer assessment, students learn how to monitor their progress toward goals and take action to move their learning forward.

Teaching self-assessment to students requires attention to five aspects:

- Ensure students understand the success criteria to clarify what they will use when assessing their learning.
- Model how to use the success criteria to assess student work.
- Provide opportunities for students to use the criteria to assess their own work.
- Talk with students about what went well and what could be improved in assessing their learning.
- Help students to use the information from self-assessment to clarify next steps in their learning and to develop individual learning goals.

Steps for implementing self-assessment are highlighted in Table 1.

Teachers can also help students develop as self-assessors by modeling self-assessment in the classroom. The teacher or students may show examples of work and share their self-assessment about the work in comparison to a learning target or specific criteria. The teacher will need to further prepare students to engage in self-assessment by:

- defining self-assessment in student-friendly language;
- discussing why it is important for their learning; and
- clarifying the learning targets and success criteria they will use to assess their knowledge, skills, or performance.

The teacher will need to support students to use the information they gather from self-assessment to inform their work as they close the gap between their current

understanding or performance and the desired learning goal. Students benefit from opportunities to reflect on their self-assessment as they internalize what constitutes quality work and their own individual strengths and areas for growth. They can do this by revising their work, writing in a journal, or sharing with a peer. Often the teacher will have students keep a notebook to record their goals, progress, and new strategies they are using.

This is an iterative process that develops over the course of the school year. Students will need ample practice, with opportunities to debrief, ask questions, and share about challenges and successes. Self-assessment will also look different in different content areas and for different assignments, so teachers will need to think about when and how it will be most valuable for students to engage in self-assessment.

It is helpful for students and teachers to begin small with self-assessment, and to develop skills over time with practice. When teachers provide consistent and ongoing opportunities for self-assessment, students become familiar with the process, take ownership of their learning, and gain confidence in themselves as learners.

"Peer and self-assessment help students gain confidence in themselves as learners and promote student engagement and learning"
(Black & William, 1998).

Table 1: Implementing Self-Assessment

1. PREPARE: Prepare students to engage in self-assessment	■ Create a class culture where reflection and growth are valued. ■ Define self-assessment in student-friendly language, and explain why it may be helpful for their learning. ■ Ensure the learning target and success criteria are presented/co-created and discussed so that students have a clear understanding of the expectations for performance that they will use to assess their work.
2. GUIDANCE: Provide rubrics, guidelines, or other criteria to guide students as they assess their own work	■ Provide rubrics, checklists, or visual anchor charts, along with clearly defined tasks to guide self-assessment.
3. MODEL and TEACH the PROCESS: Model and explicitly teach the process of self-assessment with students	■ Model self-assessment and metacognition by doing a "think-aloud" in which the teacher demonstrates the internal thinking involved in self-assessment using a particular learning target and performance or work sample.
4. PRACTICE Facilitate opportunities for students to practice, engage in self-assessment, and receive feedback on the process	■ Scaffold student learning by allowing them to practice one step at a time, and provide feedback so students are aware of what went well and what may need to be improved.
5. REFLECT and SUPPORT: Ensure students have time to reflect on their self-assessment and use it to improve their skills and/or work	■ Provide opportunities for students to revise their work and set goals for future learning based on their self-assessment.

To learn more

Learning Point: **What do we mean by formative assessment?**

Michigan Assessment Consortium, 2016.
<http://bit.ly/LP-FormativeAssessment>

Promoting learning and achievement through self-assessment

by Heidi Andrade & Anna Valtcheva. *Theory into Practice*. 48, 12-19.
<https://doi.org/10.1080/00405840802577544>

Student Self-Assessment. Literacy and Numeracy Secretariat: Capacity Building Series (Ontario Ministry of Education, 2007)

<http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/studentselfassessment.pdf>

Student Self-Assessment: The Key to Stronger Student Motivation and Higher Achievement. James McMillan & Jessica Hearn. *Educational Horizons*, Fall 2008, p 40-49.

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Component 5 – Instructional and Learning Decisions

As part of instructional decisions in the formative assessment process, teachers make decisions several times a day about changes to instruction, given the progress (or lack thereof) of students. Students also make ongoing learning decisions in the formative assessment process based on the evidence they gather and feedback they receive. Students should set goals for themselves and make short- and longer-term changes in learning tactics based on their progress in learning.

The formative assessment process can provide teachers and students with immediate data for making informed decisions about what to do next. The essential purpose is to give teachers and students real-time information about student understanding to help students move closer to the learning target. By implementing practices that assess student learning in relation to the learning target, teachers can analyze the evidence to provide feedback to students, and also modify teaching and learning activities.

The Instructional and Learning Decisions Component includes two Elements:

- 5.1 *Adjustments to Teaching*** are the changes in instruction that teachers make as the result of feedback from students as they learn.
- 5.2 *Adjustments to Learning*** are the changes to learning that students make as a result of formative feedback they receive from the teacher or peers, as well as the feedback they provide to themselves.

“The essential purpose is to give teachers and students real-time information about student understanding to help students move closer to the learning target.”



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FORMATIVE ASSESSMENT FOR MICHIGAN EDUCATORS

LEARNING POINT

What are adjustments to teaching?

In the formative assessment process, teachers gather evidence of student understanding to move student learning forward. As teachers plan for instruction, they consider when they will elicit evidence of student understanding and what mechanisms they will use to do so. They anticipate the types of misunderstanding students might evidence and even how they may need to adjust their instruction to move student learning forward.

Teachers elicit evidence in a variety of ways such as observation, student work products, or classroom talk.



After they intentionally collect evidence to figure out students' current levels of understanding relative to learning goals (see the Learning Point, *What is gathering evidence of student understanding?*), teachers use the evidence to decide the next immediate step to advance student learning.

Formative assessment is a systematic process to continuously gather evidence about learning. The data are used to identify a student's current level of learning and to adapt lessons to help the student reach the desired learning goal.

Margaret Heritage, 2007, p. 141

Dylan William (2009) describes the two steps involved in making instructional decisions:

- 1) **diagnostic**, in which the teacher interprets the students' responses to understand the students' current thinking and motivation; and
- 2) **prognostic**, to choose the best course of action.

Eliciting and using evidence of student understanding should happen during daily teaching and learning in the classroom. The ways that teachers respond to evidence to move student learning forward can look different depending upon the context. Teachers benefit from seeing different examples and then reflecting how it will look in their own setting.

Adjustments to teaching defined

Adjustments to teaching can be defined as the ongoing changes that teachers make to adjust teaching and learning based on evidence in order

to improve students' achievement of intended instructional aims.

Applications to practice

In adjustments to teaching, the teacher uses evidence of student understanding in relation to learning targets to verify or modify teaching and learning activities. After teachers interpret the evidence and identify the current status of student learning, they need to make decisions and take action to respond to students' learning needs.

To support students in reaching learning targets, the teacher may make adjustments in 1) plans for the lesson, 2) instructional strategies, or 3) types of assessment to gather further information on what students know or do not understand. These adjustments may occur during planned work time or moment-to-moment in the classroom, when the teacher continually interprets evidence to guide instructional decisions.

The following are instructional adjustments teachers can make in response to evidence:

Feedback

Feedback to students that is specific to the learning target and success criteria (that is, feedback that is formative, not evaluative). The teacher helps students to reflect on their use of strategies and provides feedback that invites students to be investigators in their learning as they develop new learning strategies.

Modeling

Explicit and intentional modeling of a skill, problem solving, or learning strategy that can help students to understand the desired student learning outcome.

Questioning

Asking questions that can promote meaningful discussions and deepen student understanding. Teachers can listen to the students' answers and ask follow-up questions to gather further information about student understanding. An appropriate instructional response to move learning forward may be to ask further questions.

Direct instruction

Explanation, direction, or instruction that is aimed at supporting students to remove barriers or misconceptions and to provide what students need to deepen their understanding. The teacher may provide an explanation to clarify concepts, clear up misconceptions, or explain a strategy or process. Direct instruction provides students with information intended to help students further develop their understanding.

Contingent plan

A plan that is made before instruction to address the range of possible evidence the teacher may see in a lesson. The teacher considers different ways the students may respond and plans alternate instructional strategies for individuals, small groups, or the whole class that will move learning forward. This allows the teacher to plan for a range of next steps to respond to evidence that might arise in the moment during the lesson.

Work configuration

Evidence-based decisions to have students work in different configurations—alone, in pairs, with an assistant teacher, with the teacher, in small groups, with different resources, or on a subset of expanded content. The intention is to provide opportunities to deepen, extend, or clarify their understanding relevant to the learning target.

Adjustments to teaching are based on the ongoing analysis of teaching and learning throughout the formative assessment process. At times, a single data source will lead to a shift in instructional decisions. At other times, multiple sources of data might be used to make well-informed decisions about next steps in learning.

The teacher may reflect on notes from observations, student work samples, and a student-led conference form to record where students currently are in their learning and to identify learning needs and next steps for instruction. During the lesson, the teacher may also reflect on responses from students to various questions to make adjustments in how to proceed.

Teachers may choose different approaches and systems to analyze

data such as to graph, chart, or color-code student data to identify patterns and have a visual representation of information. A clear purpose and progress toward the learning goal guides the collection, analysis, and reflection on the data.

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William, D. (2009). *Assessment for learning: Why, what and how?* London: The Institute of Education, University of London.

To learn more

Formative assessment: What do teachers need to know and do?

Margaret Heritage. Phi Delta Kappan, 89(2), 140–146.
www.pdkmembers.org/members_online/publications/Archive/pdf/k0710her.pdf

What do we mean by formative assessment?

Learning Point (Michigan Assessment Consortium, 2016).
bit.ly/LP-FormativeAssessment

The information presented here supports learning about the 5 Components and 13 Elements of the formative assessment practice, as defined by Michigan's Formative Assessment for Michigan Educators (FAME) program.



FAME

FORMATIVE ASSESSMENT FOR MICHIGAN EDUCATORS

LEARNING POINT

What are adjustments to learning?

In the formative assessment process, teachers intentionally plan instruction, periodically check for student understanding in order to monitor student learning, and make any necessary instructional adjustments to promote student learning. As active partners in the process, students need structured support to use evidence from their learning and to make adjustments to their future learning processes.

Teachers can help students develop greater competence in this area by ensuring students have opportunities to receive and reflect on feedback they receive. By providing time for revisions, modeling, practicing with tools and resources, and facilitating the process, teachers can support

“In formative assessment, students are active participants with their teachers, sharing learning goals and understanding how their learning is progressing, what next steps they need to take, and how to take them.”

Margaret Heritage, 2007, p. 141

students to use the feedback they receive to move their learning forward.

Adjustments to learning defined

Adjustments to learning is the process in which students receive feedback that they can use to make

adjustments in their learning tactics and set goals in order to improve their current and future work.

Applications to practice

The teacher can support students in their use of feedback to make adjustments in their learning by:

1. ensuring students receive feedback—from self, from peers, or from the teacher;
2. modeling how to use feedback to adjust learning tactics;
3. providing opportunities for students to use the feedback; and
4. supporting students to set goals and make adjustments in learning tactics based on the feedback.

Teachers and students can engage in regular classroom structures and routines in which they gather evidence and analyze student work to provide meaningful feedback on a regular basis (see related Learning Points: *What is gathering evidence of student understanding? What is feedback?*)



Students who have well developed assessment capabilities are able and motivated to access, interpret, and use information from quality assessment in ways that affirm or further their learning.

Directions for Assessment in New Zealand, 2009

What is self-assessment? and What is peer assessment?). It is important for teachers to model the metacognitive and self-regulation processes that students will need to learn in order to use feedback to make adjustments to their learning. Students develop skills and knowledge through self- and peer assessment to develop student agency and self-regulation. Teachers must explicitly teach self- and peer assessment skills to students and provide regular time in the classroom for students to use feedback, monitor their learning, and identify next steps.

Student self- and peer assessment involves students reflecting on the learning goal, success criteria, and student work. Teachers help students understand what constitutes quality work for a given learning target through modeling and explicit instruction. The teacher can provide anchor papers or models of proficient achievement, examples of work at various stages, and the use of feedback to advance student work toward desired learning goals. In this way, the teacher can support students to internalize an understanding about the quality of work. Through this process, students consider their progress and reflect on their current understanding relative to the learning goal and what steps they need to take to close the gap.

In self-assessment, students generate internal feedback to guide their adjustments to learning. Peer assessment activates students to be resources for one another. Teachers use quality, formative feedback themselves as well as model and

teach students to provide quality feedback to one another. Students continually ask, “Where am I going in my learning?” Then, they review their work and skills to determine, “Where am I now?” Then students consider, “Where to next?” Over time, students can begin to develop their capacity to reflect on their own work and make adjustments in their skills and performance in relation to the learning target.

Teachers can also support students to set goals in their learning as they reflect on their current level of understanding and learn to make adjustments in their learning tactics. Modeling the process with one goal for the entire class can be helpful for students to learn the process. Then, students can create individual goals for themselves based on their current skill level to attain the learning target or broader learning goals.” The students may record their goals in individual notebooks and monitor their progress using different sources of data.

Students can further develop their ability to make adjustments to learn-

ing based on feedback by engaging in class discussions, modeling their process in front of the class, and working in small groups and one-on-one conferences to reflect on how feedback might inform their future work. When students have consistent opportunities to reflect on their own strategies and learn new approaches, they are able to build on their current understanding and incorporate new strategies that meet their needs. The teacher can revisit previous learning strategies with students to reinforce the changes and ensure the ongoing development of their learning.

“The research shows that the person providing the feedback benefits just as much as the recipient, because they are forced to internalize the learning intentions and success criteria in the context of someone else’s work, which is less emotionally charged than one’s own work.”
(Wiliam, 2006, p. 5)

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To learn more

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Closing

There are many aspects to the formative assessment process, and learning to implement them well takes time (two or more years), as well as effort, personal experience, and collaboration with others. With continued practice, teachers can learn to use these components and elements effectively in their daily instructional activities, thus improving both their teaching and their students' learning. The FAME program provides a convenient way for educators to learn more about the formative assessment process and begin to implement it effectively in their classrooms.

Engaging in this work enables the teacher to develop his or her ability to understand and use the formative assessment process to engage students in their own growth, monitor their progress, and guide future teaching and learning decisions. Throughout this process, the teacher will learn to model processes that support students to examine their own learning as well as the work of other students in relation to specific criteria. The teacher will also engage students in multiple ways of demonstrating their knowledge and skill. Competence in these various areas and the ability to integrate the entire formative assessment process develops over time. We encourage readers of this introductory resource to choose to engage in the longer-term learning process necessary to go beyond *knowing about* the formative assessment process to *capably using* the formative assessment process oneself and having students who can do so as well. This is a journey well-worth taking!

“The FAME program provides a convenient way for educators to learn more about the formative assessment process and begin to implement it effectively in their classrooms.”

Frequently Asked Questions and Answers about the Formative Assessment Process

- 1. I often see the term “formative assessments.” How is that different from the formative assessment process?**

Answer: The term “formative assessments” (with an -s on the end) actually refers to interim/benchmark tests that are periodically administered to students. The formative assessment process refers to activities that teachers and students engage in daily during instruction. For more detail, read the following Learning Point: “Formative assessmentS vs. formative assessment: The ‘s’ makes a difference.”

<https://tinyurl.com/3cw47mrd>

- 2. We have a grading policy that requires grades for assignments that are designed to gather evidence of student understanding. How do I navigate grading and formative assessment?**

Answer: The goal of the formative assessment process is to encourage students to take ownership of their own learning, striving to achieve the targets for their learning. Grades tend to be summative in that students who receive high grades may feel that no additional learning is needed, while students who receive low grades may feel that improvement is impossible, especially if initial low performances are to be “averaged” with later higher grades (which is a very harmful grading practice). One strategy to mitigate this is to award grades that reflect current learning status, not an over-time combination of low initial grades and later higher grades.

- 3. I want to begin right away implementing formative assessment. What is the best way to get started?**

Answer: After reading about the components and elements, teachers should invite colleagues to engage in collaborative learning to use selected elements, reflecting on their current use and selecting one or more elements to seek to improve. Working with colleagues will provide the support and accountability needed for educators to work long-term to improve their instructional and the learning of their students. Join the FAME program!

- 4. What are some ways administrators can best support teachers to learn about the formative assessment process?**

Answer: Supportive schools have administrators who make time available for teachers to work together to learn about and learn to use the formative assessment process. They also reinforce the challenging work of educators to reflect on their instructional practices and improve their use of the formative assessment process. For more detail, read, “What do Administrators Need to Know about the Formative Assessment Process?”

<https://tinyurl.com/y4zjspbf>

5. What are some additional resources to learn more about the formative assessment process?

Answer: The FAME program offers an extensive library of resources to Coaches and Learning Teams, including a helpful Introduction to FAME for Coaches. In addition, the FAME Website at www.FAMEMichigan.org offers a wide variety of resources that are useful for readers who wish to know more about the formative assessment process. These include:

- **Learning Point:** What do we mean by the formative assessment process?
<https://tinyurl.com/yad5w4an>
- **Learning Point:** What conditions are necessary for successful implementation of formative assessment?
<https://tinyurl.com/y8amukep>
- **FAME Components & Elements at a Glance**
(includes links to 2-page “Learning Point” handouts describing each Element)
<http://famemichigan.org/wp-content/uploads/2017/08/FAME-Comps-and-Elements-Table-and-FA-Graphic.pdf>
- **Why the Formative Assessment Process Matters:** for FAME participants who wish to share the nature and advantages of using the formative assessment process with others. Audience: Students and their families, teachers, school administrators, local policymakers — anyone who is not familiar with FAME or the formative assessment process.
<https://famemichigan.org/why-the-formative-assessment-process-matters/>
- **Case Studies:** describe innovative approaches to FAME participation that might inspire replication elsewhere. Explore these success stories! Audience: FAME Coaches and Learning Team Members
<https://famemichigan.org/research-and-development/#case-studies>
- **FOCUS on FAME:** documents that describe useful ideas for FAME participants based on research by the FAME R&D Team. Audience: FAME Coaches and Learning Team Members
<https://famemichigan.org/research-and-development/#focus-on-fame>
- **Going Deeper Guides:** provide extensive information and ideas for FAME participants who wish to deepen their understanding and increase their use of selected formative assessment practices. Audience: Returning FAME Coaches and Learning Team Members
Contact Kim Young at youngk1@michigan.gov to request a list of available Going Deeper Guides.
- **Content-Area Formative Assessment Guides:** These guides illustrate and describe how the use of the formative assessment process in content areas can both improve teachers’ disciplinary understanding and use of the formative assessment process. Audience: FAME Coaches and Learning Team Members.
Contact Kim Young at youngk1@michigan.gov to request a list of available Going Deeper Guides.

A compiled list of all current FAME resources is available for download at <http://famemichigan.org/wp-content/uploads/2021/08/FAME-Resource-Compendium.pdf>

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