

Clarifying learning intentions and sharing criteria for success

1. **Sharing exemplar student work**: The teacher shares student work from another class or uses a teacher-made mock-up. The selected exemplars are chosen to represent the qualities that differentiate stronger from weaker work. There is often a discussion of the strengths and weaknesses that can be seen in each sample, to help students internalize the characteristics of high quality work.
2. **Thirty-second share**: At the end of a class period, several students take a turn to report something they learned in the just-completed lesson. When this is a well-established and valued routine for the class, what students share is usually on target, connected to the learning intentions stated at the start of the lesson. If the sharing is off-target that is a signal to the teacher that the main point of the lesson hasn't been learned or it has been obscured by the lesson activities, and needs further work. In classrooms where this technique has become part of the classroom culture, if a student misstates something during the thirty-second share, other students will often correct him or her in a non-threatening way.
3. **Misconception check**: Present students with common or predictable misconceptions about designated learning target, concept, process, or principal. Ask them whether they agree or disagree and explain why.
4. **Hand Signals**: Ask students to display a designated hand signal to indicate their understanding of a specific concept, process or skill. This could be thumbs up, side ways, or down or a show of fingers on a scale of 1-5.
5. **Creating a Cooperative, Tolerant Classroom**: Series of activities designed to encourage students to work together on classroom tasks. Some of the activities are as simple as moving to pairs or groups, while others set the tone for classroom discussions and group presentations.
6. **Targets in Student-Friendly Language**: This critical step is often done by a single teacher or collaboratively by teachers. Students could become an active participant in the process by helping to identify problematic words or reaching agreement on their meaning. This could be expanded where students share their understanding of the targets with other students.

Engineering effective classroom discussions, questions, and learning tasks that elicit evidence of learning

1. **ABCDE cards:** The teacher asks or presents a multiple-choice question, and then asks students to simultaneously (“on the count of three”) hold up one or more cards, labeled A, B, C, D, or E as their individual response. ABCDE cards can be cheaply made on 4 inch x 6 inch white cardstock printed with one black, bold-print letter per card. A full set might include the letters A-H plus T. This format allows all students to select not only one correct answer, but multiple correct answers, or to answer true/false questions. This is an example of an “all-class response system” that helps the teacher to quickly get a sense of what students know or understand while engaging all students in the class. The teacher may choose to ask the question orally or to present it to the class on an overhead. The teacher then uses the information in the student responses to adapt and organize the ensuing discussion or lesson.
2. **Colleague-generated questions:** Fellow teachers share and/or write better questions—questions that stimulate higher order thinking and/or reveal misconception—to be used in ordinary classroom discussions or activities. Formulating good questions takes time and thought. It makes sense, then, to share good questions and the responsibility for developing them among a group of colleagues. Once developed, good questions can be reused year after year. Questions may have been previously tried out in one teacher’s classroom, or they may be brand new to all, with teachers reporting back on how well they worked. Time to develop questions is sometimes built into a regular schedule (such as team or grade-level meetings), or it may have to be specially scheduled from time to time.
3. **Socratic Seminar:** Ask students to write down questions that they have about concepts at the end of a lesson or unit. Organize the students into small groups and designate one person to be the facilitator to guide the group discussion. Students can put forth one of their questions to the group for discussion and then the next student can ask their question. The teacher can assist any group that needs support, and/or use this as an opportunity for observation of student learning.
4. **Designing Exam Questions:** Have students design two exam questions where they provide both the questions and answer AND their explanation of both the correct and incorrect responses.
5. **3-2-1 Assessment:** Ask students to prepare sticky notes that record 3 things that they learned, 2 things that they don’t understand and 1 question that they still have. Have them post the sticky notes on poster paper as they leave the room. The teacher will then be able to respond to the questions and revise their plan for instruction. This is an extended version of an “Exit Slip”.

6. Inquiry Questioning:

Why do you think that?

How do you know?

Could you give me an example?

What do you mean when you say . . . ?

What data/examples do you have to support your position?

Tell me more about . . . ?

How might you validate or confirm . . . ?

7. Index Cards: Instruct students to do the following:

On side 1-Based on classroom learning experiences, summarize the understanding you have about the target/concepts. What was your “take away” message?

On side 2-Identify something about the unit (or learning that day) that you do not yet fully understand and write is a statement or question.

8. Group Acknowledgement: As students are engaged in class discussion, create a format for the asking of questions. When a student wants to respond to the statements of another student/group, they must first begin with a paraphrase of what that student/group stated. This insures that they are paying attention and can minimize misunderstanding in discussion. If they want to offer a different opinion, their paraphrasing of the student/group’s statements takes the personal edge off their comments.

9. Spiral Questioning: Lessons and questions need to be carefully structured to lead students through a step-by-step process of discovery. Student should first explore using basic cognitive skills—observation, description, identification, recall, and then spiral to even-higher levels of cognition such as synthesis , application, and interpretation.

Providing feedback that moves learners forward

1. **Comment only marking:** The teacher provides only comments—no grades—on student work, in order to get students to focus on how to improve, instead of their grade or rank in the class. This will more likely pay off if the comments are specific to the qualities of the work, designed to promote thinking, and to provide clear guidance on what to do to improve. Consistently writing good comments that make students think is not easy to do, so it is a good idea to practice this technique with other teachers for ideas and feedback. Furthermore, the chance of student follow-through is greatly enhanced if there are established routines and time provided in class for students to revise and improve the work.
2. **Plus, minus, equals:** The teacher marks student work with a plus, minus, or equals sign to indicate how this performance compares with previous assignments. If the latest assignment is of the same quality as the last, the teacher gives it an "="; if the assignment is better than the last one, she gives it a "+"; and if the assignment is not as good as the last one, she gives it a "-". This technique can be modified for younger students by using up and down arrows. There should be well-established routines around this kind of marking, so that students can use it formatively to think about and improve their progress.
3. **"Clickers":** These are hand-held computers that allow teachers to ask questions and record the student responses on a computer. This gives real-time feedback to the teacher and students. Group discussion after the question is more effective.
4. Oral feedback
5. Written feedback
6. Most of the additional ideas that I have found focus more on teacher strategies for descriptive feedback. Examples include the following:
 - Keep records carefully by being meticulous, being systematic, using technology, and using other people
 - Reducing the number of assignments
 - Using shorter assignments
 - Using assignment reform sheets or feedback forms
 - Considering using statement banks for frequently repeated comments
 - Involving students in self or peer-assessment
 - Not counting all assessment

Activating students as the owners of their own learning

1. **Traffic lighting:** Students mark their own work, notes, or teacher-provided concept lists to identify their level of understanding (green = I understand; yellow = I'm not sure; red = I do not understand). Younger students can simply draw a smiling or frowning face to indicate their level of understanding. The teacher makes colored markers or pencils available, provides instruction on their purpose, and provides practice time, so students know how to use them to code their levels of understanding. It is important that time and structure be allotted for students to get help with the things they do not understand, or this technique will simply result in frustration.
2. **Learning logs:** Near the end of a lesson, students write summaries or reflections explaining what they just learned during the lesson (what they liked best, what they did not understand, what they want to know more about, etc.). Students can periodically hand these in for review, or hand them in at the end of selected lessons. These summaries or reflections may be kept in a notebook, journal, online, or on individual sheets. The teacher, in turn, periodically takes time to analyze them, respond, and, based on the information in them, perhaps modify or adapt future instruction. Students may also review their own learning logs to take stock of what they have learned over time and also to note areas of continuing interest or difficulty.
3. **Question Box or Board:** Establish a location where students may leave or post questions about concepts, skills, or processes that they do not understand. This can help students who have difficulty expressing they don't understand. This is different than the Homework Help Board because it is private and between student and teacher.
4. Examining work against exemplar
5. Journals or logs
6. Reflective questioning
7. Rubrics or criteria
8. Graphic organizers
9. Student-led conferences
10. Pair share self-evaluation

11. Student self-evaluation against learning intentions

12. **K-W-L:** The K-W-L chart is often used but often under used for information gathering.

It is most often used by students for students. Here are two ways to modify its use:

1. Ask students to fill in the "K" a day or two prior to a new lesson, unit or concept and collect without conducting a full class share out of what they put in that column. This will help guide the teacher as to which students know what and adjust instruction prior to the learning.

Use this strategy to record class discussions at a beginning of unit, record what is learned in the third column during wrap-up sessions, and cross out incorrect "know" statements as students' progress.

13. Most of the additional ideas that I have used and found are variations of the same things that have been listed. The one variation that incorporates a number of ideas is the Interactive Notebook. This would contain notes, reflections, and assignments (classroom and homework). The assignments would include a variety of different formats that have a heavy emphasis on the multiple intelligences. Periodically, these would be collected for teacher review and providing of descriptive feedback. They could also be used for self and peer-assessment. Students could also use them to communicate with their parents.

Activating students as instructional resources for each other

1. **Peer assessment with a “pre-flight checklist” or rubric:** Students trade papers and check each other’s work against a “pre-flight checklist” or rubric to improve the quality of the work they submit to the teacher. To close the feedback loop, there should be clear structures for when and how students are to take this feedback on board to improve their work. A pre-flight checklist is a list of the required, basic components for an assignment, such as “title page, introduction, 5-paragraph explanation, and conclusion.” The pre-flight checklist differs from a full-fledged rubric in that it is used primarily to check that all the required components are present, whereas a rubric is more likely to get into the quality of those components. Some checklists and rubrics will be generic—applicable to many assignments. Others may be specific to a particular assignment. Whether a checklist or rubric is used, peers should be taught to provide accurate feedback. We note that students should *not* provide grades of any kind, just feedback.
2. **Homework help board:** Students identify homework questions they struggled with, put them on the board, and solve them for one another. As students enter the classroom, they write the problem number or other identifier for homework questions that they could not figure out in a pre-designated section of the blackboard. At the same time, they and classmates who succeeded at any of the identified problems show their solutions on the board, with minimal involvement from the teacher. This technique results in an efficient review of homework that is targeted to the areas of difficulty. The teacher need only assist on those problems that no one else can solve, and even then, this may only require the teacher to ask an appropriate question, offer a suggestion, or begin a solution—then the students can take over.
3. Group processing