

The final learning

The Value of critique The phrase “doing beautiful work” was coined by Ron Berger, author of *An Ethic of Excellence* (Heinemann, 2003). His protocols for peer critique of student work— which results in far higher quality— has been adapted by other teachers. Consider the following adaptation.

PURPOSE The purpose of the critique is to teach students particular skills. Do not use this time as an opportunity for the whole class to give a student feedback on his or her work. **CRITIQUE RULES**

1. Be kind.
2. Be specific.
3. Be helpful.

THE PROTOCOL

1. The lesson. Think about what lesson you are trying to teach your students. After looking at a draft of student work, what big idea are students missing? What is troubling about the work? What next step are many of the students ready to take? List three to six skills that you want students to improve.

2. Selecting the work. Find student work that serves as great examples of what you are looking for, or else great examples of what you are not looking for. Examining merely mediocre work will not lead to helpful discussion. (If you show an example of poor work quality, use work done by students your students don't know— and be sure no names appear on it.)

3. The critique

- Give students one or two pieces of student work for in-depth critique. Examples could include excerpts from student writing, architectural blueprints, and solutions to math problems, or lab write-ups.
- Give students time to look silently at the work and think about what makes the work beautiful or where it falls short.

- Depending on age level, have students discuss in small groups.
- Lead a group conversation about the work. The goal is to identify the attributes of great work for this particular assignment. Once those attributes are identified, they need to be named in simple language so that they can be used by students. Keep in mind that your students may name other useful skills.

4. Next draft. Students now create a new draft of the assignment, incorporating the skills identified during the critique session. Let students know in advance how many drafts the assignment will require to be completed. Each draft should be somewhat different from the preceding one, to avoid student burnout. For example, students' first draft could be a rough sketch of a storyboard. The next draft could be a detailed sketch of the storyboard. The final draft could be a high-quality storyboard utilizing materials that professionals in the field use.

End with Mastery Make Learning Memorable

- Plan for Exhibitions and Presentations
- Reflect on Performance and Learning
- Reteach If Necessary Teaching Innovation: Parents as Learning Partners

Projects can start right but end poorly. Poor endings include rushed work for un-meet able deadlines, mediocre presentations, low-quality products, and lack of mastery of critical content as reflected in tests.

Projects normally encounter problems in the final week; some can be solved by quick adjustments to the schedule, but others can be avoided by keeping the end in mind as you coach students through the project. To a great extent, success at the end will reflect careful planning during the project. As with any sustained effort, key steps you take anchor the learning, celebrate the accomplishments, and prepare for the next project.

1 Plan for Exhibitions and Presentations Big projects should have big endings, and big endings require significant preparations. If you are planning an exhibition or public presentation, know that much of the time

during the last half of the project will be spent on preparing for the final event. Consider the following as you plan for the end of the project.

- **Know why students will exhibit.** Be sure to scale exhibitions. Sometimes a poster presentation in the hallways is sufficient to make work public. At other times, a community event is the best venue for student work. Vary exhibitions during the year according to your time and needs. One large, high-stakes presentation per school year may be sufficient.
- **Plan according to the school calendar.** Identify an important date on the school calendar, such as Open House, when exhibition of work is particularly appropriate. Plan projects around that date.
- **Allow for practice and mastery.** Schedule sufficient practice time in the last week of the project. Have students do their last practice presentations in the same room as the final students.
 - **Use an exhibition checklist.** Develop a comprehensive list of the tasks necessary for a successful exhibition. Assign responsibilities and due dates.
 - Have students do the planning. Planning exhibitions teaches teamwork, logistics, and other useful skills. As the project winds down, assign a team of students to be your planning committee.
 - Showcase PBL. If you would like your students' parents and community to better understand PBL, create a showcase event. Have students present work, answer questions, and engage in conversation with parents and other adults about what they've learned—and how they like it. Invite your fellow teachers and the local press as well.

2 Reflect on Performance and Learning the project does not end on the day of the presentations or the final test. On your project schedule, allot time after the final presentations for reflection. Use a formal process of your choosing— such as a survey, whole-group discussion, or reflection form— to debrief all aspects of the project. This appraisal includes your performance as well as that of students. **A two-day reflection process is preferable.** On Day One, focus on the “how” of the project:

- How well did we perform?

- What did we learn?
- How engaged were we?
- How meaningful was the project?
- How clear were our goals and instructions?
- How well planned was the process?
- Were the evaluations fair and accurate?
- Did we answer the Driving Question?

On Day Two, help students find personal meaning in the project:

- What do I/ we do with this knowledge?
- What new questions do I/ we have?
- How have I/ we improved as learners?
- What new skills do I/ we have?
- What else can I/ we explore?
- How am I/ we different after this project?

At the end of the reflection, gather potential ideas for other projects. Even if you can't yet plan for them, the ideas may be handy in the future. To build team spirit and enthusiasm for another project, remember to celebrate after the end of the reflection. Use the Reflection Matrix in the Online Folders (see the index of them at the back of this book) for additional guidance. 3 **Reteach if necessary** As you review the project and participate in the reflection, note any gaps in knowledge or obvious concerns about the learning. If necessary, fill the gaps by reteaching a lesson or incorporating the gaps into subsequent lessons.

TEACHING INNOVATION Parents as Learning Partners Involving parents in projects is productive for several reasons. Projects show parents what quality learning in the twenty-first century can be. Parents enjoy seeing their children as motivated, enthusiastic students. And parents recognize that the skills taught through projects will be critical to their children's success. PBL teachers have effectively involved parents in various ways:

Ask parents to serve as judges. Parents can sit on panels for presentations and use rubrics you provide to assess student performance.

Use parents to raise the stakes. During an exhibition, have students circulate among students and ask questions. Give parents prompts before the exhibition.

- **Debrief with parents.** Have a student-teacher-parent discussion after the project. What did parents see that they liked? What do they question? What suggestions do they have?
- **Plan with parents.** Thinking about projects for the year ahead? Sit down with a small team of parents and plan together.

Resources:.

Most notable are the Project Based Learning Handbook: A Guide to Standards-Focused Project Based Learning for Middle and High School Teachers, written by myself and colleagues at the Buck Institute for Education; and the PBL Starter Kit and PBL in the Elementary Grades, also published by the Buck Institute for Education. See www.bie.org for more resources.

Online links and assistance can be found as well through the George Lucas Educational Foundation (www.edutopia.org). A number of projects have been filmed and documented, and are available at www.edutopia.org and www.bie.org, or on YouTube channels.

More information can be found at www.thommarkham.com

Markham, Thom. Project Based Learning Design and Coaching Guide . HeartIQ Press. Kindle Edition.

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