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--- | --- | --- | --- | --- | | Authentic Assessment Complements Traditional Assessment  Defining Attributes of Traditional and Authentic Assessment  Another way that AA is commonly distinguished from TA is in terms of its defining attributes. Of course, TA's as well as AA's vary considerably in the forms they take. But, typically, along the continuums of attributes listed below, TA's fall more towards the left end of each continuum and AA's fall more towards the right end.  **Traditional --------------------------------------------- Authentic**  Selecting a Response ------------------------------------ Performing a Task  Contrived --------------------------------------------------------------- Real-life  Recall/Recognition ------------------------------- Construction/Application  Teacher-structured ------------------------------------- Student-structured  Indirect Evidence -------------------------------------------- Direct Evidence  **Recall/Recognition of Knowledge to Construction/Application of Knowledge:** Well-designed traditional assessments (i.e., tests and quizzes) can effectively determine whether or not students have acquired a body of knowledge. Thus, as mentioned above, tests can serve as a nice complement to authentic assessments in a teacher's assessment portfolio. Furthermore, we *are* often asked to recall or recognize facts and ideas and propositions in life, so tests are somewhat authentic in that sense. However, the demonstration of recall and recognition on tests is typically much less revealing about what we really know and can do than when we are asked to construct a product or performance out of facts, ideas and propositions. Authentic assessments often ask students to analyze, synthesize and apply what they have learned in a substantial manner, and students create new meaning in the process as well.  **Teacher-structured to Student-structured:** When completing a traditional assessment, what a student can and will demonstrate has been carefully structured by the person(s) who developed the test. A student's attention will understandably be focused on and limited to what is on the test. In contrast, authentic assessments allow more student choice and construction in determining what is presented as evidence of proficiency. Even when students cannot choose their own topics or formats, there are usually multiple acceptable routes towards constructing a product or performance. Obviously, assessments more carefully controlled by the teachers offer advantages and disadvantages. Similarly, more student-structured tasks have strengths and weaknesses that must be considered when choosing and designing an assessment.  **Indirect Evidence to Direct Evidence:** Even if a multiple-choice question asks a student to analyze or apply facts to a new situation rather than just recall the facts, and the student selects the correct answer, what do you now know about that student? Did that student get lucky and pick the right answer? What thinking led the student to pick that answer? We really do not know. At best, we can make some inferences about what that student might know and might be able to do with that knowledge. The evidence is very indirect, particularly for claims of meaningful application in complex, real-world situations. Authentic assessments, on the other hand, offer more direct evidence of application and construction of knowledge. As in the golf example above, putting a golf student on the golf course to play provides much more direct evidence of proficiency than giving the student a written test. Can a student effectively critique the arguments someone else has presented (an important skill often required in the real world)? Asking a student to write a critique should provide more direct evidence of that skill than asking the student a series of multiple-choice, analytical questions about a passage, although both assessments may be useful.  Teaching to the Test  These two different approaches to assessment also offer different advice about teaching to the test.  Under the TA model, teachers have been discouraged from teaching to the test.  That is because a test usually assesses a sample of students' knowledge and understanding and assumes that students' performance on the sample is representative of their knowledge of all the relevant material.  If teachers focus primarily on the sample to be tested during instruction, then good performance on that sample does not necessarily reflect knowledge of all the material.   So, teachers hide the test so that the sample is not known beforehand, and teachers are admonished not to teach to the test.  With AA, teachers are encouraged to teach to the test.  Students need to learn how to perform well on meaningful tasks.  To aid students in that process, it is helpful to show them models of good (and not so good) performance.  Furthermore, the student benefits from seeing the task rubric ahead of time as well.  Is this "cheating"?  Will students then just be able to mimic the work of others without truly understanding what they are doing?  Authentic assessments typically do not lend themselves to mimicry.  There is not one correct answer to copy.  So, by knowing what good performance looks like, and by knowing what specific characteristics make up good performance, students can better develop the skills and understanding necessary to perform well on these tasks.  Alternative Names for Authentic Assessment  You can also learn something about what AA is by looking at the other common names for this form of assessment. For example, AA is sometimes referred to as   * **Performance Assessment** (or Performance-based) -- so-called because students are asked to *perform* meaningful tasks. This is the other most common term for this type of assessment. Some educators distinguish performance assessment from AA by defining performance assessment as performance-based as Stiggins has above but with no reference to the *authentic* nature of the task (e.g., [**Meyer, 1992**](http://jfmueller.faculty.noctrl.edu/toolbox/references.htm#meyer)). For these educators, authentic assessments are performance assessments using real-world or authentic tasks or contexts. Since we should not typically ask students to perform work that is not authentic in nature, I choose to treat these two terms synonymously. * **Alternative Assessment** -- so-called because AA is an *alternative* to traditional assessments. * **Direct Assessment** -- so-called because AA provides more *direct* evidence of meaningful application of knowledge and skills. If a student does well on a multiple-choice test we might infer *indirectly* that the student could apply that knowledge in real-world contexts, but we would be more comfortable making that inference from a direct demonstration of that application such as in the golfing example above.   Authentic Assessments Capture Constructive Nature of Learning  A considerable body of research on learning has found that we cannot simply be fed knowledge. We need to construct our own meaning of the world, using information we have gathered and were taught and our own experiences with the world (e.g., [**Bransford&Vye, 1989**](http://jfmueller.faculty.noctrl.edu/toolbox/references.htm#bransford); [**Forman &Kuschner, 1977**](http://jfmueller.faculty.noctrl.edu/toolbox/references.htm#forman); [**Neisser, 1967**](http://jfmueller.faculty.noctrl.edu/toolbox/references.htm#neisser); [**Steffe& Gale, 1995**](http://jfmueller.faculty.noctrl.edu/toolbox/references.htm#steffe); [**Wittrock, 1991**](http://jfmueller.faculty.noctrl.edu/toolbox/references.htm#wittrock)). Thus, assessments cannot just ask students to repeat back information they have received. Students must also be asked to demonstrate that they have accurately constructed meaning about what they have been taught. Furthermore, students must be given the opportunity to engage in the construction of meaning. Authentic tasks not only serve as assessments but also as vehicles for such learning.  Authentic Assessments Integrate Teaching, Learning and Assessment  Authentic assessment, in contrast to more traditional assessment, encourages the integration of teaching, learning and assessing.  In the "traditional assessment" model, teaching and learning are often separated from assessment, i.e., a test is administered after knowledge or skills have (hopefully) been acquired.  In the authentic assessment model, the same authentic task used to measure the students' ability to apply the knowledge or skills is used as a vehicle for student learning.   For example, when presented with a real-world problem to solve, students are learning in the process of developing a solution, teachers are facilitating the process, and the students' solutions to the problem becomes an assessment of how well the students can meaningfully apply the concepts.  Authentic Assessments Provide Multiple Paths to Demonstration  We all have different strengths and weaknesses in how we learn. Similarly, we are different in how we can best *demonstrate* what we have learned. Regarding the traditional assessment model, answering multiple-choice questions does not allow for much variability in how students demonstrate the knowledge and skills they have acquired. On the one hand, that is a strength of tests because it makes sure everyone is being compared on the same domains in the same manner which increases the consistency and comparability of the measure. On the other hand, testing favors those who are better test-takers and does not give students any choice in how they believe they can best demonstrate what they have learned.  Thus, it is recommended (e.g., [**Wiggins, 1998**](http://jfmueller.faculty.noctrl.edu/toolbox/references.htm#wiggins1998)) that multiple and varied assessments be used so that 1) a sufficient number of samples are obtained (multiple), and 2) a sufficient variety of measures are used (varied). Variety of measurement can be accomplished by assessing the students through different measures that allows you to see them apply what they have learned in different ways and from different perspectives. Typically, you will be more confident in the students' grasp of the material if they can do so. But some variety of assessment can also be accomplished *within* a single measure. Authentic tasks tend to give the students more freedom in how they will demonstrate what they have learned. By carefully identifying the criteria of good performance on the authentic task ahead of time, the teacher can still make comparable judgments of student performance even though student performance might be expressed quite differently from student to student. For example, the products students create to demonstrate authentic learning on the same task might take different forms (e.g., posters, oral presentations, videos, websites). Or, even though students might be required to produce the same authentic product, there can be room within the product for different modes of expression. For example, writing a good persuasive essay requires a common set of skills from students, but there is still room for variation in how that essay is constructed.  **How Do You Create Authentic Assessments?**  **Authentic Assessment:***Students are asked to perform real-world tasks that demonstrate meaningful application of essential knowledge and skills*    Fortunately, you do not have to develop an authentic assessment from scratch.  You may already be using [*authentic tasks*](http://jfmueller.faculty.noctrl.edu/toolbox/glossary.htm#authentictask) in your classroom.  Or, you may already have the [*standards*](http://jfmueller.faculty.noctrl.edu/toolbox/glossary.htm#standards) written, the first and most important step in the process. Perhaps you have a task but need to more clearly articulate the [*criteria*](http://jfmueller.faculty.noctrl.edu/toolbox/glossary.htm#criteria) for evaluating student performance on the task. Or, you may just want to develop a [*rubric*](http://jfmueller.faculty.noctrl.edu/toolbox/glossary.htm#rubric) for the task. Wherever you are in the process, you can use the information on this page (and the ones that follow it) to help you through the steps of creating authentic assessments. If at any time the terminology is confusing, click a link to that concept or go to the [**glossary**](http://jfmueller.faculty.noctrl.edu/toolbox/glossary.htm).  I tend to think of authentic assessment development in terms of four questions to be asked. Those questions are captured in the following graphic:  **Questions to Ask:**  1) What should students know and be able to do? This list of knowledge and skills becomes your . . .  **STANDARDS**  http://jfmueller.faculty.noctrl.edu/toolbox/greendownarrow.gif  2) What indicates students have met these standards? To determine if students have met these standards, you will design or select relevant . . .  **AUTHENTIC TASKS**  http://jfmueller.faculty.noctrl.edu/toolbox/greendownarrow.gif  3) What does good performance on this task look like? To determine if students have performed well on the task, you will identify and look for characteristics of good performance called . . .  **CRITERIA**  http://jfmueller.faculty.noctrl.edu/toolbox/greendownarrow.gif  4) How well did the students perform? To discriminate among student performance across criteria, you will create a . . .  **RUBRIC**   |  | | --- | | http://jfmueller.faculty.noctrl.edu/toolbox/45leftgreenarrow2.gifhttp://jfmueller.faculty.noctrl.edu/toolbox/45rightgreenarrow1.gif |  |  |  | | --- | --- | | 5) How well should most students perform? The minimum level at which you would want most students to perform is your ...  http://jfmueller.faculty.noctrl.edu/toolbox/greendownarrow.gif | 6) What do students need to improve upon? Information from the rubric will give students feedback and allow you to ...  http://jfmueller.faculty.noctrl.edu/toolbox/greendownarrow.gif | | **CUT SCORE or BENCHMARK** | **ADJUST INSTRUCTION** |     Summary of Steps   1. Identify your **standards** for your students. 2. For a particular standard or set of standards, develop a **task** your students could perform that would indicate that they have met these standards. 3. Identify the characteristics of good performance on that task, the **criteria**, that, if present in your students’ work, will indicate that they have performed well on the task, i.e., they have met the standards. 4. For each criterion, identify two or more levels of performance along which students can perform which will sufficiently discriminate among student performance for that criterion. The combination of the criteria and the levels of performance for each criterion will be your **rubric** for that task (assessment).   Now, I will guide you through each these four steps for creating an authentic assessment in more detail.  [**[http://jfmueller.faculty.noctrl.edu/toolbox/brownarrow.gif](http://jfmueller.faculty.noctrl.edu/toolbox/howstep1.htm)Step 1: Identify the Standards**](http://jfmueller.faculty.noctrl.edu/toolbox/howstep1.htm)  [**[http://jfmueller.faculty.noctrl.edu/toolbox/brownarrow.gif](http://jfmueller.faculty.noctrl.edu/toolbox/howstep2.htm)Step 2: Select an Authentic Task**](http://jfmueller.faculty.noctrl.edu/toolbox/howstep2.htm)  [**[http://jfmueller.faculty.noctrl.edu/toolbox/brownarrow.gif](http://jfmueller.faculty.noctrl.edu/toolbox/howstep3.htm)Step 3: Identify the Criteria for the Task**](http://jfmueller.faculty.noctrl.edu/toolbox/howstep3.htm)  [**[http://jfmueller.faculty.noctrl.edu/toolbox/brownarrow.gif](http://jfmueller.faculty.noctrl.edu/toolbox/howstep4.htm)Step 4: Create the Rubric**](http://jfmueller.faculty.noctrl.edu/toolbox/howstep4.htm)  good authentic assessment development begins with identifying a set of standards for your students  But what about critical thinking skills, problem solving abilities, collaborative skills and personal development? These highly valued skills are not easily incorporated into *content* standards and, thus, are often omitted or given insufficient attention. Yet, the standards should capture what we most value and most want our students to learn. So, we should consider including these other skills in our standards  **Types of Standards**  I distinguish between three types of standards:   * *content standards* * *process standards* * *value standards*   **Content Standards**  I define content standards as statements that describe what students should know or be able to do within the content of a specific discipline or at the intersection of two or more disciplines.  Examples would include  Students will classify objects along two dimensions.  Describe effects of physical activity on the body.  Present employment-related information in the target language.    **Process Standards**  I define process standards as statements that describe skills students should develop to enhance the process of learning.  Process standards are not specific to a particular discipline, but are generic skills that are applicable to any discipline.  Examples would include  Students will set realistic goals for their performance.  Seriously consider the ideas of others.  Find and evaluate relevant information.    **Value Standards**  I define value standards as statements that describe attitudes teachers would like students to develop towards learning.  Examples would include  Students will value diversity of opinions or perspectives.  Take responsible risks. (Costa &Kallick)  Persist on challenging tasks.    **Is it a *Content* or a *Process* Standard?**  Given the definitions listed above, the same standard could be either a content or a process standard.  For example, the standard *students will write a coherent essay* would be a process standard in a history course because it is not describing content within the discipline of history.  Rather, it describes a useful skill that historians should have along with those working in other disciplines.  However, if the same standard were part of an English composition course, I would label it a content standard because students would be learning the content of that discipline.  Yes, writing skills are useful in any discipline, but in the composition course it is being taught as content for the course.  **Authentic Tasks**  [**[http://jfmueller.faculty.noctrl.edu/toolbox/brownarrow.gif](http://jfmueller.faculty.noctrl.edu/toolbox/tasks.htm#characteristics)Characteristics of Authentic Tasks**](http://jfmueller.faculty.noctrl.edu/toolbox/tasks.htm#characteristics)  [**[http://jfmueller.faculty.noctrl.edu/toolbox/brownarrow.gif](http://jfmueller.faculty.noctrl.edu/toolbox/tasks.htm#types)Types of Authentic Tasks**](http://jfmueller.faculty.noctrl.edu/toolbox/tasks.htm#types)    **Authentic Task:**  An assignment given to students designed to assess their ability to apply standard-driven knowledge and skills to real-world challenges  In other words, a task we ask students to perform is considered authentic when 1) students are asked to construct their own responses rather than select from ones presented and 2) the task replicates challenges faced in the real world.  (Of course, other definitions abound.)  If I were teaching you how to play golf, I would not determine whether you had met my standards by giving you a multiple-choice test.  I would put you out on the golf course to "construct your own responses" in the face of real-world challenges.  Similarly, in school we are ultimately less interested in how much information students can acquire than how well they can use it.   Thus, our most meaningful assessments ask students to perform authentic tasks.  However, these tasks are not just assessments.   Authentic assessment, in contrast to more traditional assessment, encourages the integration of teaching, learning and assessing.  In the "traditional assessment" model, teaching and learning are often separated from assessment, i.e., a test is administered after knowledge or skills have (hopefully) been acquired.  In the authentic assessment model, the same authentic task used to measure the students' ability to apply the knowledge or skills is used as a vehicle for student learning.   For example, when presented with a real-world problem to solve, students are learning in the process of developing a solution, teachers are facilitating the process, and the students' solutions to the problem becomes an assessment of how well the students can meaningfully apply the concepts.  Characteristics of Authentic Tasks  Another way that authentic assessment is commonly distinguished from traditional assessment is in terms of their defining attributes. Of course, traditional assessments as well as authentic assessments vary considerably in the forms they take. But, typically, along the continuums of attributes listed below, traditional assessments fall more towards the left end of each continuum and authentic assessments fall more towards the right end.    **Traditional ------------------------------------------- Authentic**  Selecting a Response ----------------------------------- Performing a Task  Contrived -------------------------------------------------------------- Real-life  Recall/Recognition ------------------------------ Construction/Application  Teacher-structured ------------------------------------ Student-structured  Indirect Evidence ------------------------------------------- Direct Evidence    Let me clarify the attributes by elaborating on each in the context of traditional and authentic assessments:  **Selecting a Response to Performing a Task:** On traditional assessments, students are typically given several choices (e.g., a,b,c or d; true or false; which of these match with those) and asked to select the right answer. In contrast, authentic assessments ask students to demonstrate understanding by performing a more complex task usually representative of more meaningful application.  **Contrived to Real-life:** It is not very often in life outside of school that we are asked to select from four alternatives to indicate our proficiency at something. Tests offer these contrived means of assessment to increase the number of times you can be asked to demonstrate proficiency in a short period of time. More commonly in life, as in authentic assessments, we are asked to demonstrate proficiency by doing something.  **Recall/Recognition of Knowledge to Construction/Application of Knowledge:** Well-designed traditional assessments (i.e., tests and quizzes) can effectively determine whether or not students have acquired a body of knowledge. Thus, as mentioned above, tests can serve as a nice complement to authentic assessments in a teacher's assessment portfolio. Furthermore, we *are* often asked to recall or recognize facts and ideas and propositions in life, so tests are somewhat authentic in that sense. However, the demonstration of recall and recognition on tests is typically much less revealing about what we really know and can do than when we are asked to construct a product or performance out of facts, ideas and propositions. Authentic assessments often ask students to analyze, synthesize and apply what they have learned in a substantial manner, and students create new meaning in the process as well.[[top](http://jfmueller.faculty.noctrl.edu/toolbox/tasks.htm#top)](http://jfmueller.faculty.noctrl.edu/toolbox/tasks.htm#top)  **Teacher-structured to Student-structured:** When completing a traditional assessment, what a student can and will demonstrate has been carefully structured by the person(s) who developed the test. A student's attention will understandably be focused on and limited to what is on the test. In contrast, authentic assessments allow more student choice and construction in determining what is presented as evidence of proficiency. Even when students cannot choose their own topics or formats, there are usually multiple acceptable routes towards constructing a product or performance. Obviously, assessments more carefully controlled by the teachers offer advantages and disadvantages. Similarly, more student-structured tasks have strengths and weaknesses that must be considered when choosing and designing an assessment.  **Indirect Evidence to Direct Evidence:** Even if a multiple-choice question asks a student to analyze or apply facts to a new situation rather than just recall the facts, and the student selects the correct answer, what do you now know about that student? Did that student get lucky and pick the right answer? What thinking led the student to pick that answer? We really do not know. At best, we can make some inferences about what that student might know and might be able to do with that knowledge. The evidence is very indirect, particularly for claims of meaningful application in complex, real-world situations. Authentic assessments, on the other hand, offer more direct evidence of application and construction of knowledge. As in the golf example above, putting a golf student on the golf course to play provides much more direct evidence of proficiency than giving the student a written test. Can a student effectively critique the arguments someone else has presented (an important skill often required in the real world)? Asking a student to write a critique should provide more direct evidence of that skill than asking the student a series of multiple-choice, analytical questions about a passage, although both assessments may be useful.  Types of Authentic Tasks  I have used the term *traditional assessment* on this site to refer to the many tests that are commonly administered to assess the acquisition of knowledge and skills. Tests usually consist of selected-response items (see below) and, occasionally, some constructed-response items. In contrast, *authentic assessments* include tasks such as performances, products and constructed-response items that typically require more direct application of knowledge and skills. These types of tasks are described below along with common examples of each.  Selected-response  In response to a prompt, students select an answer from among those given or from memory or from allowable study aids. Typically, no new knowledge is constructed; students simply recall or recognize information required to select the appropriate response. Examples include  Multiple-choice tests True-false Matching Fill-in-the-blank Label a diagram  Constructed Response  In response to a prompt, students construct an answer out of old and new knowledge. Since there is no one exact answer to these prompts, students are constructing new knowledge that likely differs slightly or significantly from that constructed by other students. Typically, constructed response prompts are narrowly conceived, delivered at or near the same time a response is expected and are limited in length. However, the fact that students must construct new knowledge means that at least some of their thinking must be revealed. As opposed to selected response items, the teachers gets to look inside the head a little with constructed response answers. Examples include  **(product-like):** [**Short-answer essay questions**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kammes08/medieval%20exam.pdf) "Show your work" [**Ordering decimals**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/bossenga08/decimals%20at%20the%20library.pdf) [**Limericks**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kravets08/task%206.pdf) and [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kravets08/rubric%20task%206.pdf) [**Concept maps**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/pacholek08/task%206.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/greenbiology99/task12.pdf) /[**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/greenbiology99/task12rubric.pdf) [**Writing a topic sentence**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/callahan03/task3.htm) [**Identifying a theme**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/landschoot08/magazine%20picture.pdf) [**Making predictions**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/jankiewicz08/task%204.pdf) [**Brief summaries**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/willis08/reading%20strategies.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/whalen/musicalsummarytask.htm) [**Peer editing**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/callahan03/task11.htm) Figural representation (e.g., [**Venn diagram**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kaese03/task1.pdf); [**web**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/greenbiology99/task8.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/greenbiology99/task8rubric.pdf))  [**Journal response**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kaese03/task6.pdf); [**literary journal reflections**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/thill03/biography.pdf) [**Homework reflections**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/bossenga08/homework%20reflection.pdf); [**article reflections**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/hayner03/journalentries.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/hayner03/journalrubric.pdf) [**Evaluating work of others**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/khan08/task%2001.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/coyle08/recorder%20evaluation.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/withers97/oralevaluationrubric.htm) [**Self-assessment**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/dobrodt03/reflectiontakingturns.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/pfeifferwalford03/task%205.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/pfeifferwalford03/criteria%20for%20quiz%20corrections.pdf) [**Self and group evaluation**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/szymanski08/individual%20group%20evaluation.pdf) [**Goal setting**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/rakes08/reflection.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/szymanski08/new%20unit%20resolution.pdf) / [**reflection**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/szymanski08/new%20unit%20resolution%20reflection.pdf) [**Question generation**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/landschoot08/entry%20slip.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/landschoot08/exit%20slip.pdf) [**Explain your solution**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kleckauskas08/explain%20your%20solution.pdf)  **(performance-like):** Typing test Complete a step of science lab [**Measure objects**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/ardolino08/measurement.pdf) [**Conducting bank transactions**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/alfus/conductingbanking.htm) [**Utilizing library services**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/alfus/utilizinglibrary.htm) [**Computer catalog search**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/dobrodt03/on-line%20library%20search%20sheet.pdf) On demand, construct a short musical, dance or    [**dramatic response**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/barrett08/threeline.pdf) On demand, exhibit an athletic skill [**Reading fluently**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/khan08/task%2002.pdf) [**Conferences**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/thill03/conferences.pdf) [**Participation**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/barrett08/participation.pdf) (and [**self-assessment**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/barrett08/selfassessment.pdf))  Product  In response to a prompt (assignment) or series of prompts, students construct a substantial, tangible product that reveals their understanding of certain concepts and skills and/or their ability to apply, analyze, synthesize or evaluate those concepts and skills. It is similar to a constructed-response item in that students are required to construct new knowledge and not just select a response. However, product assessments typically are more substantial in depth and length, more broadly conceived, and allow more time between the presentation of the prompt and the student response than constructed-response items. Examples include  [**Essays**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/stowers03/task%204.pdf), [**stories**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kammes08/modern%20moral.pdf), or [**poems**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/khan08/task%2010.pdf) [**Ballads**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/montford/resultsofrevwartask.htm) [**Obituaries**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/whalen/composerobittask.htm) [**Satirical pieces**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/maffey08/satire%20assignment.pdf) [**Metaphors**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/globalstonebraker00/metaphors.htm) [**School rules**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/globalstonebraker00/rules.htm) [**Research reports**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/stowers03/task%2013.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/englishanderson00/vocationalpaper.htm) [**Annotated bibliographies**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/maffey08/annotated.pdf) [**Works cited pages**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/maffey08/works%20cited.pdf) [**Reading strategies**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/bass03/active%20reading.pdf) and [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/bass03/active%20reading%20journal%20rubric.pdf) [**Projects**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/shuttersoverton98/hot%20air%20balloon.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/shuttersoverton98/hot%20air%20balloon%20rubric.htm); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/muzzyschramm99/task.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/muzzyschramm99/rubric.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kristensen03/trigtasksurvey.pdf) [**Literary analysis**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/crookstrtan03/compareandcontrast.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/jankiewicz08/task%201.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/jankiewicz08/task%207.pdf) [**Character analysis**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/barrett08/analyze.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/landschoot08/character%20study.pdf) [**Diction analysis**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/jankiewicz08/task%205.pdf) [**Advertisement analysis**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/henry08/advertisement.pdf) [**Biography/Autobiography analysis**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/thill03/biography.pdf) [**Argument analysis**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/krumpsuthers03/article%20web%20task.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/krumpsuthers03/article%20web%20rubric.pdf) [**Analyzing primary sources**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/gannon03/task3.pdf) [**Analysis of painting**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/englishanderson00/littlerock.htm) [**Film analysis**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/englishanderson00/12angrymen.htm) [**Geometric analysis**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/rakes08/pottery%20task.pdf) [**Article reviews**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/scott08/task%206.pdf) [**Book reviews**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/bass03/writing%20a%20book%20review.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/bass03/book%20review%20rubric.pdf) [**Case study**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kravets08/task%202.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kravets08/rubric%20task%202.pdf) [**Speech critiques**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/stowers03/task%205.pdf) Extended journal responses [**Identification of goals**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/englishanderson00/goalssoles.htm) [**Reading guides**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/maffey08/reading%20guide.pdf) [**Feudal contracts**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/krumpsuthers03/feudal%20contract%20task.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/krumpsuthers03/feudal%20contract%20rubric.pdf) Art exhibit or portfolio [**Models**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/hymers97/indianhomes.html); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/micheljohnson03/task9.pdf) [**Constructing objects**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kleckauskas08/holiday%20ornament.pdf) [**Floor plans**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/draftingkoeppen00/creatingfloorplan.htm) [**Musical compositions**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/coyle08/composition%20assignment.pdf) [**Photo compositions**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/photo1parrish00/composition.htm) [**Design an advertisement**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/photo1parrish00/types.htm) [**Design an experiment**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/dickson/coralreef.htm) [**Lab reports**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/scott08/task%207.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/szymanski08/unit%201%20lab.pdf) [**Surveys**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kaese03/task5.pdf)  [**Data recordings**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/willis08/temperature%20graphs.pdf) [**Graphing of data**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/bossenga08/tracking%20stocks.pdf) [**Data analysis**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/weigel03/archmystery.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/algebraresch00/freeagent.htm); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/algebraresch00/hearing.htm) [**Anaysis of statistical use in media**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/muzzyschramm99/newspapertask.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/muzzyschramm99/newspaperrubric.pdf) [**Real-world problem solutions**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/bossenga08/table%20perimeters.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/pfeifferwalford03/task%2016.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/pfeifferwalford03/criteria%20for%20oral%20presentations.pdf) [**Logical sequences**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/seaver/logicalexplanationtask.htm) [**Error analysis**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/rakes08/error%20analysis%20task.pdf) [**Planning for a task**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/stowers03/task%201.pdf) [**Preparing for a discussion**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/maffey08/racism%20discussion.pdf) [**Proposals**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/pfeifferwalford03/unit%20assessment.pdf) and [**criteria**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/pfeifferwalford03/criteria%20for%20unit%20project.pdf) [**Road trip directions**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/lachman08/road%20trip.pdf) [**Map construction**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/krumpsuthers03/scale%20map%20task.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/krumpsuthers03/scale%20map%20rubricss.pdf) [**Road trip budget**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/lachman08/road%20trip%20budget.pdf) [**Scavenger hunt**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/dobrodt03/library%20scavenger%20hunt.pdf) Newspapers [**Newscasts**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kaese03/task8.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/enas08/constructnewsshow.pdf) [**Editorials**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/henry08/editorial.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/montford/enlightenmenttask.htm) [**Peer editing**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/krumpsuthers03/editorial%20revision%20task.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/krumpsuthers03/editorial%20revision%20rubric.pdf) [**Posters**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/hymers97/posteradvertisement.html); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/henry08/techniques%20of%20persuasion.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/greenbiology99/task1.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/greenbiology99/task1rubric.pdf) [**Collages**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/pacholek08/task%205.pdf) [**Pamplets**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/khan08/task%2005.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/pacholek08/task%204.pdf) [**Brochures**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/lachman08/travel%20brochure.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/bass03/steinbeck%20brochure.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/bass03/john%20steinbeck%20informational%20brochure.pdf) [**Magazine covers**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kammes08/prologue%20tabloids.pdf) [**Bulletin boards**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kaese03/task10.pdf) [**Videos**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/greenbiology99/task7.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/greenbiology99/task7rubric.pdf) [**Podcasts**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/rakes08/podcast%20project.pdf) [**Games**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/lachman08/50%20states.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kaese03/task3.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/weigel03/carnivalgame.pdf) [**Comic strips**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kleckauskas08/triangle%20tale%20comic.pdf) [**Books**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kleckauskas08/abc%20book.pdf); [**Booklets**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/rakes08/points.pdf) [**Timelines**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/hymers97/timeline.html); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/bass03/migrant%20workers.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/bass03/migrant%20worker%20timeline.pdf) [**Issue awareness campaigns**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/miller03/recycling%20awareness%20campaign.pdf) [**Letter writing**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/crookstrtan03/letter.pdf); [**persuasive letter writing;**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/feyereisen08/persuasive%20letter.pdf)[**complaint letter**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/henry08/complaint%20letter.pdf) [**Advice letter**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/thill03/dearadvice.pdf); [**letter to Congress**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/pacholek08/task%209.pdf); [**letter to Emperor**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/globalstonebraker00/letter.htm)  Performance  In response to a prompt (assignment) or series of prompts, students construct a performance that reveals their understanding of certain concepts and skills and/or their ability to apply, analyze, synthesize or evaluate those concepts and skills. It is similar to a constructed-response item in that students are required to construct new knowledge and not just select a response. However, performances typically are more substantial in depth and length, more broadly conceived, and allow more time between the presentation of the prompt and the student response than constructed-response items. Examples include  Conducting an experiment [**Musical auditions**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/coyle08/musical%20audition.pdf); [**group auditions**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/whalen/groupauditiontask.htm) [**Conducting an ensemble**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/vaughn08/conducting.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/vaughn08/conducting%20rubric.pdf) [**Conduct band rehearsal**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/vaughn08/rehearse.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/vaughn08/rehearse%20lab%20band%20rubric.pdf) [**Create musical arrangement**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/vaughn08/final.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/vaughn08/final%20project%20rubric.pdf) Dance or [**dramatic performances**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/barrett08/performance.pdf) [**Dramatic readings**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/jankiewicz08/task%206.pdf) [**Skits**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kaese03/task4.pdf) [**Role-plays**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/stowers03/task%2016.pdf) / [**handout**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/stowers03/group%20roles%20handout.pdf) [**Talk show performances**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/hymers97/talkshow.html); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/thill03/talkshow.pdf) [**Book talks**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/thill03/booktalk.pdf) [**Debates**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/miller03/deforestation%20debate.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/krumpsuthers03/mock%20debate%20task.pdf) / [**rubric**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/krumpsuthers03/mock%20debates%20rubric.pdf) [**Panel discussions**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/stowers03/task%2018.pdf) [**Fishbowl discussions**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/keller00/task2.pdf) [**Coffee shop conversation**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/thill03/coffeeshop.pdf) Athletic competitions [**Oral presentations**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/lachman08/informative%20speech.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/maffey08/legacy.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kammes08/medieval%20fest.pdf) [**Teaching/explaining**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/szymanski08/presentation%20self%20evaluation.pdf) [**Speeches**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/stowers03/task%206.pdf) [**Interviews**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/stowers03/task%2012.pdf) [**Self-introduction**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/kammes08/self-intro.pdf) [**Cooperative group behavior**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/dobrodt03/observation%20checklist%20for%20poster.pdf); [**another example**](http://jonathan.mueller.faculty.noctrl.edu/toolbox/examples/barrett08/rehearsal.pdf)  **Research Rubric**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Criteria** |  | **1** | **2** | **3** | | Number of Sources | x1 | 1-4 | 5-9 | 10-12 | | Historical Accuracy | x3 | Lots of historical inaccuracies | Few inaccuracies | No apparent inaccuracies | | Organization | x1 | Can not tell from which source information came | Can tell with difficulty where information came from | Can easily tell which sources info was drawn from | | Bibliography | x1 | Bibiliography contains very little information | Bibliography contains most relevant information | All relevant information is included |   Descriptors  The above rubric includes another common, but not a necessary, component of rubrics -- [*descriptors*](http://jfmueller.faculty.noctrl.edu/toolbox/glossary.htm#descriptors). Descriptors spell out what is expected of students at each level of performance for each criterion. In the above example, "lots of historical inaccuracies," "can tell with difficulty where information came from" and "all relevant information is included" are descriptors. A descriptor tells students more precisely what performance looks like at each level and how their work may be distinguished from the work of others for each criterion. Similarly, the descriptors help the teacher more precisely and consistently distinguish between student work.  Many rubrics do not contain descriptors, just the criteria and labels for the different levels of performance. For example, imagine we strip the rubric above of its descriptors and put in labels for each level instead. Here is how it would look:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Criteria** |  | **Poor (1)** | **Good (2)** | **Excellent (3)** | | Number of Sources | x1 |  |  |  | | Historical Accuracy | x3 |  |  |  | | Organization | x1 |  |  |  | | Bibliography | x1 |  |  |  |   It is not easy to write good descriptors for each level and each criterion. So, when you first construct and use a rubric you might not include descriptors. That is okay. You might just include the criteria and some type of labels for the levels of performance as in the table above. Once you have used the rubric and identified student work that fits into each level it will become easier to articulate what you mean by "good" or "excellent." Thus, you might add or expand upon descriptors the next time you use the rubric.  Holistic rubric  In contrast, a holistic rubric does *not* list separate levels of performance for each criterion. Instead, a [*holistic rubric*](http://jfmueller.faculty.noctrl.edu/toolbox/glossary.htm#holistic) assigns a level of performance by assessing performance across multiple criteria as a whole. For example, the analytic research rubric above can be turned into a holistic rubric:   |  | | --- | | 3 - Excellent Researcher   * included 10-12 sources * no apparent historical inaccuracies * can easily tell which sources information was drawn from * all relevant information is included | | 2 - Good Researcher   * included 5-9 sources * few historical inaccuracies * can tell with difficulty where information came from * bibliography contains most relevant information | | 1 - Poor Researcher   * included 1-4 sources * lots of historical inaccuracies * cannot tell from which source information came * bibliography contains very little information |   Analytic rubrics  Generally, it is better to start with a smaller number of levels of performance for a criterion and then expand if necessary. Making distinctions in student performance across two or three broad categories is difficult enough. As the number of levels increases, and those judgments become finer and finer, the likelihood of error increases.  Thus, start small. For example, in an oral presentation rubric, amount of eye contact might be an important criterion. Performance on that criterion could be judged along three levels of performance: **never,sometimes,always.**   |  |  |  |  | | --- | --- | --- | --- | | **makes eye contact with audience** | never | sometimes | always |   Although these three levels may not capture all the variation in student performance on the criterion, it may be sufficient discrimination for your purposes. Or, at the least, it is a place to start. Upon applying the three levels of performance, you might discover that you can effectively group your students' performance in these three categories. Furthermore, you might discover that the labels of never, sometimes and always sufficiently communicates to your students the degree to which they can improve on making eye contact.  On the other hand, after applying the rubric you might discover that you cannot effectively discriminate among student performance with just three levels of performance. Perhaps, in your view, many students fall in between never and sometimes, or between sometimes and always, and neither label accurately captures their performance. So, at this point, you may decide to expand the number of levels of performance to include never, **rarely**, sometimes, **usually** and always.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **makes eye contact** | never | rarely | sometimes | usually | always |   There is no "right" answer as to how many levels of performance there should be for a criterion in an analytic rubric; that will depend on the nature of the task assigned, the criteria being evaluated, the students involved and your purposes and preferences. For example, another teacher might decide to leave off the "always" level in the above rubric because "usually" is as much as normally can be expected or even wanted in some instances. Thus, the "makes eye contact" portion of the rubric for that teacher might be   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **makes eye contact** | never | rarely | sometimes | usually |   So, I recommend that you begin with a small number of levels of performance for each criterion, apply the rubric one or more times, and then re-examine the number of levels that best serve your needs. I believe starting small and expanding if necessary is preferable to starting with a larger number of levels and shrinking the number because rubrics with fewer levels of performance are normally   * easier and quicker to administer * easier to explain to students (and others) * easier to expand than larger rubrics are to shrink   The fact that rubrics can be modified and can reasonably vary from teacher to teacher again illustrates that rubrics are flexible tools to be shaped to your purposes. To read more about the decisions involved in developing a rubric, see the chapter entitled, [**"Step 4: Create the Rubric."**](http://jfmueller.faculty.noctrl.edu/toolbox/howstep4.htm)  Holistic rubrics  Much of the advice offered above for analytic rubrics applies to holistic rubrics as well. Start with a small number of categories, particularly since holistic rubrics often are used for quick judgments on smaller tasks such as homework assignments. For example, you might limit your broad judgments to   * satisfactory * unsatisfactory * not attempted   or   * check-plus * check * no check   or even just   * satisfactory (check) * unsatisfactory (no check)   Of course, to aid students in understanding what you mean by "satisfactory" or "unsatisfactory" you would want to include [*descriptors*](http://jfmueller.faculty.noctrl.edu/toolbox/glossary.htm#descriptors) explaining what satisfactory performance on the task looks like.  **Step 4: Create the Rubric**  [**[http://jfmueller.faculty.noctrl.edu/toolbox/brownarrow.gif](http://jfmueller.faculty.noctrl.edu/toolbox/howstep4.htm#analytic)Creating an Analytic Rubric**](http://jfmueller.faculty.noctrl.edu/toolbox/howstep4.htm#analytic)  [**[http://jfmueller.faculty.noctrl.edu/toolbox/brownarrow.gif](http://jfmueller.faculty.noctrl.edu/toolbox/howstep4.htm#holistic)Creating a Holistic Rubric**](http://jfmueller.faculty.noctrl.edu/toolbox/howstep4.htm#holistic)  [**[http://jfmueller.faculty.noctrl.edu/toolbox/brownarrow.gif](http://jfmueller.faculty.noctrl.edu/toolbox/howstep4.htm#final)Final Step: Checking Your Rubric**](http://jfmueller.faculty.noctrl.edu/toolbox/howstep4.htm#final)  [**[http://jfmueller.faculty.noctrl.edu/toolbox/brownarrow.gif](http://jfmueller.faculty.noctrl.edu/toolbox/howstep4.htm#workshop)Workshop: Writing a Good Rubric**](http://jfmueller.faculty.noctrl.edu/toolbox/howstep4.htm#workshop)  In Step 1 of creating an authentic assessment, you identified what you wanted your students to know and be able to do -- your standards.  In Step 2, you asked how students could demonstrate that they had met your standards. As a result, you developed authentic tasks they could perform.  In Step 3, you identified the characteristics of good performance on the authentic task -- the criteria.  Now, in Step 4, you will finish creating the authentic assessment by constructing a rubric to measure student performance on the task. To build the rubric, you will begin with the set of criteria you identified in Step 3. As mentioned before, keep the number of criteria manageable. You do not have to look for everything on every assessment.  Once you have identified the criteria you want to look for as indicators of good performance, you next decide whether to consider the criteria analytically or holistically. (See [**Rubrics**](http://jfmueller.faculty.noctrl.edu/toolbox/rubrics.htm) for a description of these two types of rubrics.)  Creating an Analytic Rubric  In an [*analytic rubric*](http://jfmueller.faculty.noctrl.edu/toolbox/glossary.htm#analytic) performance is judged separately for each criterion. Teachers assess how well students meet a criterion on a task, distinguishing between work that effectively meets the criterion and work that does not meet it. The next step in creating a rubric, then, is deciding how fine such a distinction should be made for each criterion. For example, if you are judging the amount of eye contact a presenter made with his/her audience that judgment could be as simple as did or did not make eye contact (two levels of performance), never, sometimes or always made eye contact (three levels), or never, rarely, sometimes, usually, or always made eye contact (five levels).  Generally, it is better to start small with fewer levels because it is usually harder to make more fine distinctions. For eye contact, I might begin with three levels such as never, sometimes and usually. Then if, in applying the rubric, I found that some students seemed to fall in between never and sometimes, and never or sometimes did not adequately describe the students' performance, I could add a fourth (e.g., rarely) and, possibly, a fifth level to the rubric.  In other words, there is some trial and error that must go on to arrive at the most appropriate number of levels for a criterion. (See the Rubric Workshop below to see more detailed decision-making involved in selecting levels of performance for a sample rubric.)  Do I need to have the same number of levels of performance for each criterion within a rubric?  No. You could have five levels of performance for three criteria in a rubric, three levels for two other criteria, and four levels for another criterion, all within the same rubric. Rubrics are very flexible Alaskan Moose. There is no need to force an unnatural judgment of performance just to maintain standardization within the rubric. If one criterion is a simple either/or judgment and another criterion requires finer distinctions, then the rubric can reflect that variation.  Here are some examples of rubrics with varying levels of performance......  Do I need to add descriptors to each level of performance?  No. [*Descriptors*](http://jfmueller.faculty.noctrl.edu/toolbox/glossary.htm#descriptors) are recommended but not required in a rubric. As described in [**Rubrics**](http://jfmueller.faculty.noctrl.edu/toolbox/rubrics.htm), descriptors are the characteristics of behavior associated with specific levels of performance for specific criteria. For example, in the following portion of an elementary science rubric, the criteria are 1) observations are thorough, 2) predictions are reasonable, and 3) conclusions are based on observations. Labels (limited, acceptable, proficient) for the different levels of performance are also included. Under each label, for each criterion, a descriptor (in brown) is included to further explain what performance *at that level* looks like.   |  |  |  |  | | --- | --- | --- | --- | | **Criteria** | **Limited** | **Acceptable** | **Proficient** | | **made good observations** | observations are absent or vague | most observations are clear and detailed | all observations are clear and detailed | | **made good predictions** | predictions are absent or irrelevant | most predictions are reasonable | all predictions are reasonable | | **appropriate conclusion** | conclusion is absent or inconsistent with observations | conclusion is consistent with most observations | conclusion is consistent with observations |   Assigning point values to performance on each criterion  As mentioned above, rubrics are very flexible tools. Just as the number of levels of performance can vary from criterion to criterion in an analytic rubric, points or value can be assigned to the rubric in a myriad of ways. For example, a teacher who creates a rubric might decide that certain criteria are more important to the overall performance on the task than other criteria. So, one or more criteria can be weighted more heavily when scoring the performance. For example, in a rubric for solo auditions, a teacher might consider five criteria: (how well students demonstrate) vocal tone, vocal technique, rhythm, diction and musicality. For this teacher, musicality might be the most important quality that she has stressed and is looking for in the audition. She might consider vocal technique to be less important than musicality but more important than the other criteria.So, she might give musicality and vocal technique more weight in her rubric. She can assign weights in different ways. Here is one common format:  **Rubric 1: Solo Audition**   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  | 0 | 1 | 2 | 3 | 4 | 5 | weight | | vocal tone |  |  |  |  |  |  |  | | vocal technique |  |  |  |  |  |  | x2 | | rhythm |  |  |  |  |  |  |  | | Diction |  |  |  |  |  |  |  | | Musicality |  |  |  |  |  |  | x3 |   In this case, placement in the 4-point level for vocal tone would earn the student four points for that criterion. But placement in the 4-point box for vocal technique would earn the student 8 points, and placement in the 4-point box for musicality would earn the student 12 points. The same weighting could also be displayed as follows:  **Rubric 2: Solo Audition**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | NA | Poor | Fair | Good | Very Good | Excellent | | vocal tone | 0 | 1 | 2 | 3 | 4 | 5 | | vocal technique | 0 | 2 | 4 | 6 | 8 | 10 | | Rhythm | 0 | 1 | 2 | 3 | 4 | 5 | | Diction | 0 | 1 | 2 | 3 | 4 | 5 | | Musicality | 0 | 3 | 6 | 9 | 12 | 15 |   In both examples, musicality is worth three times as many points as vocal tone, rhythm and diction, and vocal technique is worth twice as much as each of those criteria. Pick a format that works for you and/or your students. There is no "correct" format in the layout of rubrics. So, choose one or design one that meets your needs.  Yes, but do I need equal intervals between the point values in a rubric?  No. Say it with me one more time -- rubrics are flexible tools. Shape them to fit your needs, not the other way around. In other words, points should be distributed across the levels of a rubric to best capture the value you assign to each level of performance. For example, points might be awarded on an oral presentation as follows:  **Rubric 3: Oral Presentation**   |  |  |  |  | | --- | --- | --- | --- | | **Criteria** | never | sometimes | always | | makes eye contact | 0 | 3 | 4 | | volume is appropriate | 0 | 2 | 4 | | enthusiasm is evident | 0 | 2 | 4 | | summary is accurate | 0 | 4 | 8 |   In other words, you might decide that at this point in the year you would be pleased if a presenter makes eye contact "sometimes," so you award that level of performance most of the points available. However, "sometimes" would not be as acceptable for level of volume or enthusiasm.  Here are some more examples of rubrics illustrating the flexibility of number of levels and value you assign each level.  **Rubric 4: Oral Presentation**   |  |  |  |  | | --- | --- | --- | --- | | **Criteria** | never | sometimes | usually | | makes eye contact | 0 | 2 | 4 | | volume is appropriate | 0 |  | 4 | | enthusiasm is evident | 0 |  | 4 | | summary is accurate | 0 | 4 | 8 |   In the above rubric, you have decided to measure volume and enthusiasm at two levels -- never or usually -- whereas, you are considering eye contact and accuracy of summary across three levels. That is acceptable if that fits the type of judgments you want to make. Even though there are only two levels for volume and three levels for eye contact, you are awarding the same number of points for a judgment of "usually" for both criteria. However, you could vary that as well:  **Rubric 5: Oral Presentation**   |  |  |  |  | | --- | --- | --- | --- | | **Criteria** | never | sometimes | usually | | makes eye contact | 0 | 2 | 4 | | volume is appropriate | 0 |  | 2 | | enthusiasm is evident | 0 |  | 2 | | summary is accurate | 0 | 4 | 8 |   In this case, you have decided to give less weight to volume and enthusiasm as well as to judge those criteria across fewer levels.  So, do not feel bound by any format constraints when constructing a rubric. The rubric should best capture what you value in performance on the authentic task. The more accurately your rubric captures what you want your students to know and be able to do the more valid the scores will be.  Creating a Holistic Rubric  In a [*holistic rubric*](http://jfmueller.faculty.noctrl.edu/toolbox/glossary.htm#holistic), a judgment of how well someone has performed on a task considers all the criteria together, or holistically, instead of separately as in an analytic rubric. Thus, each level of performance in a holistic rubric reflects behavior across all the criteria. For example, here is a holistic version of the oral presentation rubric above.  **Rubric 6: Oral Presentation (Holistic)**   |  | | --- | | **Oral Presentation Rubric** | | Mastery   * usually makes eye contact * volume is always appropriate * enthusiasm present throughout presentation * summary is completely accurate   Proficiency   * usually makes eye contact * volume is usually appropriate * enthusiasm is present in most of presentation * only one or two errors in summary   Developing   * sometimes makes eye contact * volume is sometimes appropriate * occasional enthusiasm in presentation * some errors in summary   Inadequate   * never or rarely makes eye contact * volume is inappropriate * rarely shows enthusiasm in presentation * many errors in summary |   An obvious, potential problem with applying the above rubric is that performance often does not fall neatly into categories such as mastery or proficiency. A student might always make eye contact, use appropriate volume regularly, occasionally show enthusiasm and include many errors in the summary. Where you put that student in the holistic rubric? Thus, it is recommended that the use of holistic rubrics be limited to situations when the teacher wants to:   * make a quick, holistic judgment that carries little weight in evaluation, or * evaluate performance in which the criteria cannot be easily separated.   Quick, holistic judgments are often made for homework problems or journal assignments. To allow the judgment to be quick and to reduce the problem illustrated in the above rubric of fitting the best category to the performance, the number of criteria should be limited. For example, here is a possible holistic rubric for grading homework problems.  **Rubric 7: Homework Problems**   |  | | --- | | **Homework Problem Rubric** | | **++** (3 pts.)   * most or all answers correct, AND * most or all work shown   **+** (1 pt.)   * at least some answers correct, AND * at least some but not most work shown   **-** (0 pts.)   * few answers correct, OR * little or no work shown |   Final Step: Checking Your Rubric  As a final check on your rubric, you can do any or all of the following before applying it.   * Let a colleague review it. * Let your students review it -- is it clear to them? * Check if it aligns or matches up with your standards. * Check if it is manageable. * Consider imaginary student performance on the rubric.   By the last suggestion I mean to imagine that a student had met specific levels of performance on each criterion (for an analytic rubric). Then ask yourself if that performance translates into the score that you think is appropriate. For example, on Rubric 3 above, imagine a student scores   * "sometimes" for eye contact (3 pts.) * "always" for volume (4 pts.) * "always" for enthusiasm (4 pts.) * "sometimes" for summary is accurate (4 pts.)   **Portfolios**  **Portfolio:***A collection of a student's work specifically selected to tell a particular story about the student*  What is a Portfolio?  **Note:** My focus will be on portfolios of *student* work rather than teacher portfolios or other types.  Student [*portfolios*](http://jfmueller.faculty.noctrl.edu/toolbox/glossary.htm#portfolio) take many forms, as discussed below, so it is not easy to describe them. A portfolio is *not* the pile of student work that accumulates over a semester or year. Rather, a portfolio contains a purposefully selected subset of student work. "Purposefully" selecting student work means deciding what type of story you want the portfolio to tell. For example, do you want it to highlight or celebrate the progress a student has made? Then, the portfolio might contain samples of earlier and later work, often with the student commenting upon or assessing the growth. Do you want the portfolio to capture the process of learning and growth? Then, the student and/or teacher might select items that illustrate the development of one or more skills with reflection upon the process that led to that development. Or, do you want the portfolio to showcase the final products or best work of a student? In that case, the portfolio would likely contain samples that best exemplify the student's current ability to apply relevant knowledge and skills. All decisions about a portfolio assignment begin with the type of story or purpose for the portfolio. The particular purpose(s) served, the number and type of items included, the process for selecting the items to be included, how and whether students respond to the items selected, and other decisions vary from portfolio to portfolio and serve to define what each portfolio looks like. I will describe many of the purposes and characteristics in the sections below.  Why use Portfolios?  Purposes  Why might you use a portfolio assignment? Portfolios typically are created for one of the following three purposes: to show growth, to showcase current abilities, and to evaluate cumulative achievement. Some examples of such purposes include  **1. Growth Portfolios**  a. to show growth or change over time  b. to help develop process skills such as self-evaluation and goal-setting  c. to identify strengths and weaknesses  d. to track the development of one more products/performances  **2. Showcase Portfolios**  a. to showcase end-of-year/semester accomplishments  b. to prepare a sample of best work for employment or college admission  c. to showcase student perceptions of favorite, best or most important work  d. to communicate a student's current aptitudes to future teachers  **3. Evaluation Portfolios**  a. to document achievement for grading purposes  b. to document progress towards standards  c. to place students appropriately  How do you Create a Portfolio Assignment?  I think of most tasks as problems to be solved, or questions to be answered. So, I find it useful to approach how to do something by thinking of it as a series of questions to be answered. Thus, I will attempt to offer a possible answer to the question above by answering a series of questions that need to be addressed when considering the design of a portfolio assignment. Those questions are:  1. Purpose: What is the purpose(s) of the portfolio?  2. Audience: For what audience(s) will the portfolio be created?  3. Content: What samples of student work will be included?  4. Process: What processes (e.g., selection of work to be included, reflection on work, conferencing) will be engaged in during the development of the portfolio?  5. Management: How will time and materials be managed in the development of the portfolio?  6. Communication: How and when will the portfolio be shared with pertinent audiences?  7. Evaluation: If the portfolio is to be used for evaluation, when and how should it be evaluated?  Purpose: What is the purpose(s) of the portfolio?  As mentioned above, before you can design the portfolio assignment and before your students can begin constructing their portfolios you and your students need to be clear about the story the portfolio will be telling. Certainly, you should not assign a portfolio unless you have a compelling reason to do so. Portfolios take work to create, manage and assess. They can easily feel like busywork and a burden to you and your students if they just become folders filled with student papers. You and your students need to believe that the selection of and reflection upon their work serves one or more meaningful purposes.  Audience: For what audience(s) will the portfolio be created?  Selecting relevant audiences for a portfolio goes hand-in-hand with identifying your purposes. Who should see the evidence of a student's growth? The student, teacher and parents are good audiences to follow the story of a student's progress on a certain project or in the development of certain skills. Who should see a student's best or final work? Again, the student, teacher and parents might be good audiences for such a collection, but other natural audiences come to mind such as class or schoolmates, external audiences such as employers or colleges, the local community or school board. As the teacher, you can dictate what audiences will be considered or you can let students have some choice in the decision.  Just as the purposes for the portfolio should guide the development of it, the selection of audiences should shape its construction. For example, for audiences outside the classroom it is helpful to include a cover page or table of contents that helps someone unfamiliar with the assignment to navigate through the portfolio and provide context for what is found inside. Students need to keep their audiences in mind as they proceed through each step of developing their portfolios. A good method for checking whether a portfolio serves the anticipated audiences is to imagine different members of those audiences viewing the portfolio. Can each of them tell why you created the portfolio? Are they able to make sense of the story you wanted to tell them? Can they navigate around and through the portfolio? Do they know why you included what you did? Have you used language suitable for those audiences?  Content: What samples of student work will be included?  As you can imagine, the answer to the question of content is dependent on the answers to the questions of purpose and audience. What should be included? Well, what story do you want to tell? Before I consider what types of items might be appropriate for different purposes, let me make a more general point. First, hypothetically, there is no limit as to what can be included in a portfolio. Paper products such as essays, homework, letters, projects, etc. are most common. But more and more other types of media are being included in portfolios. Audio and videotapes, cd-roms, two- and three-dimensional pieces of art, posters and anything else that can reflect the purposes identified can be included. Some schools are putting all the artifacts onto a cd-rom by videotaping performances, scanning paper products, and digitizing audio. All of those files are then copied onto a student's cd-rom for a semester or a year or to follow the student across grades as a cumulative record. Realistically, you have to decide what is manageable. But if the most meaningful evidence of the portfolio's goals cannot be captured on paper, then you may consider including other types of media.  Obviously, there are a considerable number and variety of types of student work that can be selected as samples for a portfolio. Using the purposes given above for each type of portfolio, I have listed just a few such possible samples of work in the following tables that could be included in each type of portfolio.   |  |  | | --- | --- | | **Growth Portfolios: What samples might be included?** | | | **Purpose** | **Some possible inclusions** | | a. to show growth or change over time | * early and later pieces of work * early and later tests/scores * rough drafts and final drafts * reflections on growth * goal-setting sheets * reflections on progress toward goal(s) | | b. to help develop process skills | * samples which reflect growth of process skills * self-reflection sheets accompanying samples of work * reflection sheets from teacher or peer * identification of strengths/weaknesses * goal-setting sheets * reflections on progress towards goal(s) * see more detail below under [**Process**](http://jfmueller.faculty.noctrl.edu/toolbox/portfolios.htm#process) below | | c. to identify strengths/weaknesses | * samples of work reflecting specifically identified strengths and weaknesses * reflections on strengths and weaknesses of samples * goal-setting sheets * reflection on progress towards goal(s) | | d. to track development of one or more products or performances | * obviously, drafts of the specific product or performance to be tracked * self-reflections on drafts * reflection sheets from teacher or peer | | **Showcase Portfolios: What samples might be included?** | | | **Purpose** | **Some possible inclusions** | | a. to showcase end-of-year/semester accomplishments | * samples of best work * samples of earlier and later work to document progress * final tests or scores * discussion of growth over semester/year * awards or other recognition * teacher or peer comments | | b. to prepare a sample of best work for employment or college admission | * cover letter * sample of work * reflection on process of creating sample of work * reflection on growth * teacher or peer comments * description of knowledge/skills work indicates | | c. to showcase student perceptions of favorite, best or most important | * samples of student's favorite, best or most important work * drafts of that work to illustrate path taken to its final form * commentary on strengths/weaknesses of work * reflection on why it is favorite, best or most important * reflection on what has been learned from work * teacher or peer comments | | d. to communicate a student's current aptitude | * representative sample of current work * match of work with standards accomplished * self-reflection on current aptitudes * teacher reflection on student's aptitudes * identification of future goals |        |  |  | | --- | --- | | **Evaluation Portfolios: What samples might be included?** | | | **Purpose** | **Some possible inclusions** | | a. to document achievement for grading | * samples of representative work in each subject/unit/topic to be graded * samples of work documenting level of achievement on course/grade-level goals/standards/objectives * tests/scores * rubrics/criteria used for evaluation of work (when applied) * self-reflection on how well samples indicate attainment ofcourse/grade-level goals/standards/objectives * teacher reflection of attainment of goals/standards * identification of strengths/weaknesses | | b. to document progress towards standards | * list of applicable goals and standards * representative samples of work aligned with respective goals/standards * rubrics/criteria used for evaluation of work * self-reflection on how well samples indicate attainment ofcourse/grade-level goals/standards/objectives * teacher reflection of attainment of goals/standards * analysis or evidence of progress made toward standards over course of semester/year | | c. to place students appropriately | * representative samples of current work * representative samples of earlier work to indicate rate of progress * classroom tests/scores * external tests/evaluations * match of work with standards accomplished * self-reflection on current aptitudes * teacher reflection on student's aptitudes * parent reflection on student's aptitudes * other professionals' reflections on student's aptitudes |     ***Other Content***  In addition to samples of student work and reflection upon that work, a portfolio might also include a table of contents or a cover letter (both typically composed by the student) to aid a reader in making sense of the purposes, processes and contents of the portfolio. This can be particularly useful if the portfolio is to be shared with external audiences unfamiliar with the coursework such as parents, other educators and community members.  Process: What processes will be engaged in during the development of the portfolio?  One of the greatest attributes of the portfolio is its potential for focusing on the *processes* of learning. Too often in education we emphasize the products students create or the outcomes they achieve. But we do not give sufficient attention to the processes required to create those products or outcomes, the processes involved in self-diagnosis and self-improvement, or the metacognitive processes of thinking. As a result, the products or outcomes are not as good as we or the students would like because they are often unsure how to get started, how to self-diagnose or self-correct or how to determine when a piece of work is "finished."  Although a variety of processes can be developed or explored through portfolios, I will focus on three of the most common:   * selection of contents of the portfolio; * reflection on the samples of work and processes; * conferencing about the contents and processes.   ***Selection of Contents***  Once again, identifying the purpose(s) for the portfolio should drive the selection process. As listed in the tables above, different samples of student work will likely be selected for different purposes. Additionally, *how* samples are selected might also differ depending on the purpose. For example, for an evaluation portfolio, the teacher might decide which samples need to be included to evaluate student progress. On the other hand, including the student in the decision-making process of determining appropriate types of samples for inclusion might be more critical for a growth portfolio to promote meaningful reflection. Finally, a showcase portfolio might be designed to include significant input from the student on which samples best highlight achievement and progress, or the teacher might primarily make those decisions.  Furthermore, audiences beyond the teacher and student might have input into the content of the porfolio, from team or department members, principals and district committees to external agencies to parents and community members. External audiences are most likely to play a role for evaluation portfolios. **However, it is important to remember there are no hard rules about portfolios. Anything can be included in a portfolio. Anyone can be involved in the processes of selection, reflection and evaluation of a portfolio.** Flexibility applies to portfolios as it does to any authentic assessment. That is, you should be true to your purpose(s), but you should feel no constraints on how you meet them with a portfolio assignment.  **How might the selection take place?**  What I will describe below are just a few of the many possible avenues for selecting which samples will be included in a portfolio. But these examples should give you a good sense of some of the choices and some of the decisions involved.  ***When?***   * **when a sample of work is completed** -- at the point a piece of work is ready to be turned in (or once the work has been returned by the teacher) the student or teacher identifies that work for inclusion in the portfolio; * **at periodic intervals** -- instead of selecting samples when they are completed, the samples can be stored so that selection might occur every two (three, six or nine) weeks or once (twice or three times) every quarter (trimester or semester); * **at the end of the** ... unit, quarter, semester, year, etc.   ***By whom?***   * **by the student** -- students are the most common selectors, particularly for portfolios that ask them to reflect on the work selected. Which work students select depends on the criteria used to choose each piece (see below). * **by the teacher** -- teachers may be the selector, particularly when identifying best pieces of work to showcase a student's strengths or accomplishments. * **by the student and teacher** -- sometimes portfolio selection is a joint process involving conversation and collaboration. * **by peers** -- a student might be assigned a "portfolio partner" or "portfolio buddy" who assists the student in selecting appropriate pieces of work often as part of a joint process involving conversation and collaboration. A peer might also provide some reflection on a piece of work to be included in the portfolio. * **by parents** -- parents might also be asked to select a piece or two for inclusion that they particularly found impressive, surprising, reflective of improvement, etc.   ***Based on what criteria?***   * **best work** -- selection for showcase portfolios will typically focus on samples of work that illustrate students' best performance in designated areas or the culmination of progress made * **evidence of growth** -- selection for growth portfolios will focus on identifying samples of work and work processes (e.g., drafts, notes) that best capture progress shown on designated tasks, processes or acquisition of knowledge and skills. For example, students might be asked to choose   + samples of earlier and later work highlighting some skill or content area   + samples of rough drafts and final drafts   + work that traces the development of a particular product or performance   + samples of work reflecting specifically identified strengths and weaknesses * **evidence of achievement** -- particularly for showcase and evaluation portfolios, selection might focus on samples of work that illustrate current levels of competence in designated areas or particular exemplars of quality work * **evidence of standards met** -- similarly, selection could focus on samples of work that illustrate how successfully students have met certain standards * **favorite/most important piece** -- to help develop recognition of the value of the work completed and to foster pride in that work, selection might focus on samples to which students or parents or others find a connection or with which they are particularly enamored * **one or more of the above** -- a portfolio can include samples of work for multiple reasons and, thus, more than one of the above criteria (or others) could be used for selecting samples to be included   ***Reflection on Samples of Work***  Many educators who work with portfolios consider the reflection component the most critical element of a good portfolio. Simply selecting samples of work as described above can produce meaningful stories about students, and others can benefit from "reading" these stories. But the students themselves are missing significant benefits of the portfolio process if they are not asked to reflect upon the quality and growth of their work. As Paulson, Paulson and Meyer (1991) stated, "The portfolio is something that is done *by* the student, not *to* the student." Most importantly, it is something done *for* the student. The student needs to be directly involved in each phase of the portfolio development to learn the most from it, and the reflection phase holds the most promise for promoting student growth.  In the reflection phase students are typically asked to   * comment on why specific samples were selected *or* * comment on what they liked and did not like in the samples *or* * comment on or identify the processes involved in developing specific products or performances *or* * describe and point to examples of how specific skills or knowledge improved (or did not) *or* * identify strengths and weaknesses in samples of work *or* * set goals for themselves corresponding to the strengths and weaknesses *or* * identify strategies for reaching those goals *or* * assess their past and current self-efficacy for a task or skill *or* * complete a checklist or survey about their work *or* * some combination of the above   ***Reflection sheets***  Probably the most common portfolio reflection task is the completion of a sheet to be attached to the sample (or samples) of work which the reflection is addressing. The possibilities for reflection questions or prompts are endless, but some examples I have seen include  **Selection questions/prompts**   * Why did you select this piece? * Why should this sample be included in your portfolio? * How does this sample meet the criteria for selection for your portfolio? * I chose this piece because ....   **Growth questions/prompts**   * What are the strengths of this work? Weaknesses? * What would you work on more if you had additional time? * How has your \_\_\_\_\_\_ (e.g., writing) changed since last year? * What do you know about \_\_\_\_\_\_ (e.g., the scientific method) that you did not know at the beginning of the year (or semester, etc.)? * Looking at (or thinking about) an earlier piece of similar work, how does this new piece of work compare? How is it better or worse? Where can you see progress or improvement? * How did you get "stuck" working on this task? How did you get "unstuck"? * One skill I could not perform very well but now I can is .... * From reviewing this piece I learned ....   **Goal-setting questions/prompts**   * What is one thing you can improve upon in this piece? * What is a realistic goal for the end of the quarter (semester, year)? * What is one way you will try to improve your \_\_\_\_ (e.g., writing)? * One thing I still need to work on is .... * I will work toward my goal by ....   **Evaluation questions/prompts**   * If you were a teacher and grading your work, what grade would you give it and why? * Using the appropriate rubric, give yourself a score and justify it with specific traits from the rubric. * What do you like or not like about this piece of work? * I like this piece of work because ....   **Effort questions/prompts**   * How much time did you spend on this product/performance? * The work would have been better if I had spent more time on .... * I am pleased that I put significant effort into ....   **Overall portfolio questions/prompts**   * What would you like your \_\_\_\_\_ (e.g., parents) to know about or see in your portfolio? * What does the portfolio as a whole reveal about you as a learner (writer, thinker, etc.)? * A feature of this portfolio I particularly like is .... * In this portfolio I see evidence of ....   As mentioned above, students (or others) can respond to such questions or prompts when a piece of work is completed, while a work is in progress or at periodic intervals after the work has been collected. Furthermore, these questions or prompts can be answered by the student, the teacher, parents, peers or anyone else in any combination that best serves the purposes of the portfolio.  ***Other reflection methods***  In addition to reflection sheets, teachers have devised a myriad of means of inducing reflection from students and others about the collection of work included in the portfolio. For example, those engaging in reflection can   * write a letter to a specific audience about the story the portfolio communicates * write a "biography" of a piece of work tracing its development and the learning that resulted * write periodic journal entries about the progress of the portfolio * compose an imaginary new "chapter" that picks up where the story of the portfolio leaves off * orally share reflections on any of the above questions/prompts   ***Reflection as a process skill***  Good skill development requires four steps:   * Instruction and modeling of the skill; * Practice of the skill; * Feedback on one's practice; * Reflection on the practice and feedback.   Reflection itself is a skill that enhances the process of skill development and virtually all learning in innumerable settings. Those of us who are educators, for example, need to continually reflect upon what is working or not working in our teaching, how we can improve what we are doing, how we can help our students make connections to what they are learning, and much, much more. Thus, it is critical for students to learn to effectively reflect upon their learning and growth.  As a skill, reflection is not something that can be mastered in one or two attempts. Developing good reflective skills requires instruction and modeling, lots of practice, feedback and reflection. As many of you have probably encountered, when students are first asked to respond to prompts such as "I selected this piece because..." they may respond with "I think it is nice." Okay, that's a start. But we would like them to elaborate on that response. The fact that they did not initially elaborate is probably not just a result of resistance or reluctance. Students need to learn *how* to respond to such prompts. They need to learn how to effectively identify strengths and weaknesses, to set realistic goals for themselves and their work, and to develop meaningful strategies to address those goals. Students often have become dependent upon adults, particularly teachers, to evaluate their work. They need to learn self-assessment.  So, the reflection phase of the portfolio process should be ongoing throughout the portfolio development. Students need to engage in multiple reflective activities. Those instances of reflection become particularly focused if goal-setting is part of their reflection. Just as instruction and assessment are more appropriately targeted if they are tied to specific standards or goals, student identification of and reflection upon strengths and weaknesses, examples of progress, and strategies for improvement will be more meaningful and purposeful if they are directed toward specific goals, particularly self-chosen goals.  Once opportunities for reflection (practice) take place, feedback to and further reflection upon student observations can be provided by conversations with others. Conferencing is one tool to promote such feedback and reflection.    ***Conferencing on Student Work and Processes***  Conferencing typically takes several forms:   * **teacher/student** -- sometimes teachers are able to informally meet with a few students, one at a time, as the other students work on some task in class. Other times, teachers use class time to schedule one-on-one conferences during "conference days." Some teachers are able to schedule conferences outside of class time. Typically such conferences take only a few minutes, but they give the teacher and the student time to recap progress, ask questions, and consider suggestions or strategies for improvement. * **teacher/small group** -- other teachers, often in composition classes, meet with a few students at a time to discuss issues and questions that are raised, sharing common problems and reflections across students. * **student/student** -- to conserve time as well as to give students the opportunity to learn how to provide feedback along with receiving it, teachers sometimes structure peer-to-peer conferencing. The focus might be teacher-directed (e.g., "share with each other a sample of work you recently selected for your portfolio") or student-directed (e.g., students use the time to get feedback on some work for a purpose they determine).   **Evaluation: If the portfolio is to be used for evaluation, how and when should it be evaluated?**  As with all of the elements of portfolios described above, how and when evaluation is addressed varies widely across teachers, schools and districts. Take, for example, …  ***Evaluation vs. Grading***  Evaluation refers to the act of making a judgment about something. Grading takes that process one step further by assigning a grade to that judgment. Evaluation may be sufficient for a portfolio assignment. What is (are) the purpose(s) of the portfolio? If the purpose is to demonstrate growth, the teacher could make judgments about the evidence of progress and provide those judgments as feedback to the student or make note of them for her own records. Similarly, the student could self-assess progress shown or not shown, goals met or not met. No grade needs to be assigned. On a larger scale, an evaluation of the contents within the portfolio or of the entire package may be conducted by external bodies (e.g., community members, other educators, state boards) for the purpose of judging completion of certain standards or requirements. Although the evaluation is serious, and graduation might even hinge on it, no classroom grade may be assigned.  On the other hand, the work within the portfolio and the process of assembling and reflecting upon the portfolio may comprise such a significant portion of a student's work in a grade or class that the teacher deems it appropriate to assign a value to it and incorporate it into the student's final grade. Alternatively, some teachers assign grades because they believe without grades there would not be sufficient incentive for some students to complete the portfolio. Ahh, but …  ***What to Grade***  **Nothing.** Some teachers choose not to grade the portfolio because they have already assigned grades to the contents selected for inclusion.  **The metacognitive and organizational elements.** But the portfolio is more than just a collection of student work. Depending on its purpose, students might have also included reflections on growth, on strengths and weaknesses, on goals that were or are to be set, on why certain samples tell a certain story about them, or on why the contents reflect sufficient progress to indicate completion of designated standards. Some of the process skills may also be part of the teacher's or school's or district's standards. So, the portfolio provides some evidence of attainment of those standards. Any or all of these elements can be evaluated and/or graded.  **Completion.** Some portfolios are graded simply on whether or not the portfolio was completed.  **Everything.** Other teachers evaluate the entire package: the selected samples of student work as well as the reflection, organization and presentation of the portfolio.  ***Who evaluates***  The more we can involve students in the assessment process, the more likely they will take ownership of it, be engaged in it, and find it worthwhile. So, it makes sense to involve students in the evaluation process of their portfolios as well. They have likely engaged in some self-assessment in the reflection or goal-setting components of the portfolio. Additionally, students are capable of evaluating how well their portfolio elements meet standards, requirements, or competencies, for their own portfolios or those of their peers. Furthermore, older peers could make excellent judges of the work of younger students. Cross-grade peer tutoring has demonstrated how well the older and younger students respond to such interactions.  Obviously, the classroom teacher, other educators, review board members, community members, etc. can all serve as judges of student work. If multiple judges are used, particularly if they are not directly familiar with the student work or assignments, training on a rubric should be provided before evaluation proceeds. The evaluators should be familiar with and clear on the criteria and the levels of performance within the rubric. A calibration session, in which the judges evaluate some sample portfolios and then share ratings to reach some consensus on what each criteria and level of performance within the rubric means, can provide a good opportunity for judges to achieve some competence and consistency in applying a rubric.  Can I do Portfolios Without all the Fuss?  Oh, what fun would that be! Actually, the answer is a qualified "yes." Portfolios do typically require considerable work, particularly if conferencing is involved. But with most anything, including assessment, I recommend that you start small.  Here's a quick, easy way to get started if any of the above thoughts has either encouraged you or not discouraged you from considering assigning portfolios in your little world. The following describes just one possible way to get started.  **Step 1.** Depending on the age of your students and other considerations, have students select two pieces of their work over the course of a quarter (or three or four over a semester). Decide (with your students or without) upon one or more criteria by which the selection will be guided (e.g., their best work). To limit management time, don't wait for the end of the quarter for students to make those selections. Otherwise, all their work will have to be collected along the way. Instead, if you want to keep it simple, tell your students ahead of time that they will be selecting two or more pieces matching certain criteria, and that you will ask them to do it at the point each sample is completed.  **Step 2.** At the time a student selects a sample to be included in his portfolio, require the student to complete a brief reflection sheet and attach it to the sample.  **Step 3.** Depending on the age of your students, ask your student to save that sample and the attached reflection sheet until the end of the quarter or semester, or collect it and store it yourself at that point.  **Step 4.** At the end of the quarter or semester, ask your students to reflect upon the samples one additional time by describing what they liked best about their work, or by identifying strengths and weaknesses, or by setting one or two goals for the future. | | |

**Rich Tasks**

Rich Tasks, many designed by New Basics Education QLD, often have the following characteristics:

·        require students to solve real, substantive problems

·        real-world context

·        link, extend, and display high-level knowledge from varied disciplines

·        include analytical and critical thinking and use of knowledge and skills acquired in varied ways and varied contexts

·        require students to link new knowledge with prior knowledge to encourage knowledge transfer to new situations

·        include collaborative effort

·        Make use of new technologies

·        allow teachers and students freedom for expression

·        require students to analyse, theorise and intellectually engage with that world

·        Make use of multiple representations

**e.g.**

Designing a Multimedia presentation of an endangered plant or animal

Designing, making and displaying a product

Investigating and debating about real world problems such as global warming, pollution, scarcity of resources