

Answers to Exercise 6.3

Standards-Based Reporting

1. *In table 6.6 (page 119), explain what “3 of 36” for level 4 in language arts means.*

The notation “3 of 36” means that the student has reached proficiency (score 3.0 or higher) in three of the thirty-six learning goals for language arts.

2. *In table 6.6, explain why art and technology have fewer levels than the other subject areas.*

Table 6.6 depicts a standards-based system that uses levels instead of grades. Because content is not split up into age-based grades, the nature of the content divides the levels. Some subject areas will have more levels than others.

3. *Explain why an overall grade cannot be assigned in a standards-based approach.*

A standards-based approach either uses performance levels instead of grade levels or treats grade levels as performance levels. As such, students do not move up until they have demonstrated mastery on all of the learning goals at a specific level. The reporting practices in a standards-based system are different. Instead of overall letter grades that represent the average performance in the content addressed at a given grade level, teachers and students keep track of how many learning goals students have demonstrated mastery of in a particular subject area at a particular level. Given that students might be working at one level in mathematics, another level in science, and still another in language arts, there is no useful way to report grades for subject areas. The more relevant information is how many learning goals have been mastered for a specific subject at a specific level.

4. *Explain how the “grade-level” standards-based approach differs from the standards-based approach that does not use grade levels.*

In grades K–8, the grade-level standards-based approach looks nearly identical to the pure performance-level standards-based approach. Students move from one level (grade level or pure performance level) only when they have demonstrated mastery for all of the learning goals in their current level. At the high school level, however, a grade-level standards-based approach uses specific courses instead of levels. For the grade-level approach, students must demonstrate mastery of the learning goals in the courses with simpler or more basic content before they move on to courses with more complex or difficult content. For example, in mathematics, Algebra I addresses simpler content than Algebra II, and so on. Once a student has demonstrated mastery (score 3.0 content) for all of the learning goals within a course, he or she receives credit for that course and moves on to another course.

APPENDIX B

WHAT IS AN EFFECT SIZE?

Reports on educational research use terms such as *meta-analysis* and *effect size* (ES). While these terms are without doubt useful to researchers, they can be confusing and even frustrating for the practitioner. So what does meta-analysis mean exactly? What is an ES? A meta-analysis is a summary, or synthesis, of relevant research findings. It looks at all of the individual studies done on a particular topic and summarizes them. This is helpful to educators in that a meta-analysis provides more and stronger support than does a single analysis (meta-analysis is literally an analysis of analyses).

An average ES tells us about the results across all of the individual studies examined. For example, let us say the purpose of the meta-analysis is to examine multiple studies regarding the effect of formative assessment on student achievement (that is, the effect of X on Y). An average ES reports the results of all of the included studies to tell us whether or not formative assessment improves student achievement and, if so, by how much.

Exactly how does a meta-analysis work, and how is an ES calculated? Empirical research is highly detailed and often uses idiomatic language; however, in the following steps, we have made efforts to demystify the processes of meta-analysis and ES calculation.

1. *Researchers survey the wide field of educational studies available with an eye for what is relevant to their meta-analysis.* They create keyword lists to help determine the breadth and depth of the search. Published articles, unpublished articles, dissertations, book chapters, and online and other electronic databases are considered for inclusion. Quite simply, they construct a database of all relevant studies.
2. *After an initial examination of the relevant studies, researchers have an idea of the rigor of each study. They craft their own inclusion criteria by asking which studies are good enough to include and which studies should be excluded.* They also pay close attention to the similarities and differences between the studies. Strong results will be based on studies with common purposes and variables. In other words, researchers want to include the