Deconstructing the Standards

Much of the academic curriculum in today’s schools is dictated by the respective state standards, which are frequently based on national standards, such as those from the Principles and Standards for School Mathematics (NCTM, 2000); the Next Generation Science Standards (NGSS Lead States, 2013); the College, Career, and Civic Life (C3); Framework for Social Studies State Standards: Guidance for Enhancing the Rigor of K-12 Civics, Economics, Geography, and History (NCSS, 2017); and the Standards for the English Language Arts (NCTE and IRA, 1996). However, it is often difficult to translate these standards into IEPs because of confusion generated by their broad generality and the absence of sufficient direction for their implementation. Hence, some teachers often have a negative view of standards per se.

Our goal in this chapter is to help you modify the wording of any standard into performance terminology and then transmit it into long-term and short-term instructional objectives, all within a progressive sequence of specificity. This
sequence can serve as a set of blueprints for classroom instruction. As you know, most reputable contractors would not consider building a house without blueprints, because they provide a basis for ongoing (formative) and conclusive (summative) assessment, and they also enable the contractor to determine whether corrections are in order. Instructional objectives serve the same purpose for classroom instruction.

The litmus test for any instructional objective is whether it provides for objective assessment. Hence, clear language and specific intent should be inherent in every objective at every level. Of course, the level of specificity should increase from national and CEC Standards to long-term objectives- to short-term instructional objectives, and clarity of intent should be vividly present throughout.

Some measurement specialists caution against over adhering to specificity in instructional objectives, fearing that teachers may spend a disproportionate amount of time writing objectives at the expense of preparing for instruction (Harden, 2002). We believe that this is an unwarranted fear.

As we mentioned in the Introduction, virtually all statewide assessment tests are based on state standards, which stem from the national standards. Since these high-stakes tests are criterion- referenced, aligning your lesson plans with them by using our process can enhance your students’ performance on these critical examinations. Consequently, your comfort in implementing the standards into your instruction and assessment will result in higher student scores.

**WRITING INSTRUCTIONAL OBJECTIVES FOR NATIONAL STANDARDS**

We begin with sample items drawn from the national standards of the major content and CEC areas, break them down to behavioral terms, and transfer them into long-term and, finally, short-term instructional objectives. This conversation process can be easily applied to the standards of any particular state. We now demonstrate this process for each of the major content areas, as well as the CEC areas of daily living skills and employability training.

**Mathematics**

Many of the examples used here are paraphrased or taken directly from the Principles and Standards for School Mathematics (National Council of Teachers of Mathematics, 2000). This important document, originally released in 1989 by the National Council of Teachers of Mathematics (NCTM), has been adopted in most states.

The following example is taken from the Measurement Standard for Grades 3-5, a verbatim portion of the actual standard.

**National Standard**

Each and every student should: use models, benchmarks, and equivalent forms to judge the size of fractions. (p. 148)

First, we modify this standard to include an evidenced understanding of appropriate models, benchmarks, and equivalent forms for determining equivalence.

**Modified National Standard**
The student will evidence an understanding of appropriate models, benchmarks, and equivalent forms to determine the size of fractions.

We use the term evidence to indicate that the student must show that he/she has met predetermined criteria for fulfilling the standard through observable behaviors. This term is used again in the long-term objective for continuity and to ensure student performance in determining measurements through the discovery of means and tools for measuring complex objects.

Long-term Objective

The student will evidence an understanding of determining the relative size of fractions through the discovery of means and tools for representing fractions.

As you see, this long-term objective includes the original standard while providing for a diversity of means for its fulfillment through short-term instructional objectives. The following objective illustrates how a high level of specificity can still include the components of the original standard.

Short-term Instructional Objective

Given a set of Cuisenaire rods, the student will compare two proper fractions and then state which is greater by orally citing at least one reason for his choice. This objective contains conditions (“Given a set of Cuisenaire rods”) behavior (“state,” “citing”) and minimal standards (“at least one reason”).

Remember, this short-term instructional objective is but one component within the long-term objective that is directed toward the achievement of the national standard.

Science

As with any other discipline taught in Grades K-12, adherence to the respective state standards or Next Generation Science Standards is imperative for any teacher of science. Let us demonstrate how broad national and state science standards can be stated in specific terms appropriate for long-term and short-term objectives.

Here is a progression using an actual standard as prescribed in the 5-8 From Molecules to Organisms: Structures and Processes from the Next Generation Science Standards (NGSS Lead States, 2013).

National Standard

Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

The complexity and wording of this standard may be confusing and even intimidating to some teachers. However, these translations are easily possible when you follow our steps of conversion. Here is an example of how to deconstruct such standards into logical and understandable guidelines for instruction.

Modified National Standard
The student will demonstrate an understanding of the interrelationships among environmental and genetic factors that influence the growth of organisms.

The verb demonstrates is a precursor of observable pupil performance in the forthcoming objectives. Then, the term interrelationships serves as a connector that brings the disjointed components of the original standard into an understandable whole while still providing for a plethora of long-term objectives, such as the following.

Long-term Objective

The student will demonstrate an understanding of the interrelationships between the growth of fish that inhabit small ponds with those that live in large ponds.

In adherence to the modified standard, this objective uses the verb demonstrate and then specifies and refines some of the previously mentioned relationships. As shown in the following short-term instructional objective, you can use a variety of specific activities for meeting the goal dictated by the national standard and refined by this long-term objective.

Short-term Instructional Objective

Following a class discussion, the student will orally cite three similarities and three differences between the genetic and environmental factors of fish from large ponds compared to those from small ponds.

Continuing the pattern of increasing specificity, this short-term instructional objective is detailed in its partial fulfillment of the original standard. It contains the conditions (“Following a class discussion”), behavior (“cite”), and minimal standards (“three similarities and three differences”).

Social Studies

In 1994, the National Council for the Social Studies (NCSS) released ten broad strands that became the basis for the subsequently published national standards. Building upon this seminal document, the NCSS released a comprehensive update entitled College, Career, and Civic Life (C3) Framework for Social Studies State Standards: Guidance for Enhancing the Rigor of K-12 Civics, Economics, Geography, and History (NCSS, 2017), further explaining that social studies is not a single discipline, but rather a multidimensional collection that encompasses virtually all of the social science disciplines. Understandably, such a broad sweep can be intimidating to teachers who may be puzzled as how to transfer these overarching standards to long-term and short-term instructional objectives in a comprehensible and measurable progression.

The following example is taken verbatim from the Geography Standard of the National Council for the Social Studies (2017) College, Career, and Civic Life (C3) Framework for Social Studies State Standards: Guidance for Enhancing the Rigor of K-12 Civics, Economics, Geography, and History for grades 9-12. First, we will modify this example and then translate it into long-term and short-term instructional objectives.

National Standard

D2.Geo.1.9-12.

Use geospatial and related technologies to create maps to display and explain the spatial patterns of cultural and
environmental characteristics.

The inclusion of the term spatial makes this national standard somewhat manageable, and it still provides for a multiplicity of long-term and ensuing short-term instructional objectives. However, modification is needed to sharpen its focus.

Modified National Standard

The student will demonstrate the ability to analyze spatial information regarding the Earth’s peoples, places, and environments.

Less confusing than the original standard, this modification focuses on student action. Moreover, it allows for a great latitude of long-term and sequential short-term instructional objectives.

Long-term Objective

The student will demonstrate an understanding of how the population density and relative climate of various regions of the continental United States influence agricultural crop production.

As a partial extension of the original standard, this long-term objective calls for student understanding of how two different phenomena, population density and climate, in various regions throughout the United States impact crop production. Much more specific than either the original or the modified standards, this objective still gives the teacher a great deal of freedom in the construction of short-term instructional objectives for its fulfillment. The following is one such example.

Short-term Instructional Objective

After viewing a film describing crop production in Africa, the student will select a single crop and cite at least two oral reasons why that particular crop would not thrive in her home state.

Detailed and specific, this objective describes the conditions (“After viewing a film”), the behavior (“cite”), and the minimal standards (“at least two oral reasons”).

English-Language Arts

The following example is taken word-for-word from Standard One of The Standards for the English Language Arts (National Council of Teachers of English and International Reading Association, 1996).

National Standard

Students read a wide range of print and non-print texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world. (p. 27)

This standard provides the teacher with unlimited options but virtually no margins of content coverage. The following modified standard adds focus and direction by including possible media sources, mentioned in the discussion following the standard (pp. 27-28), without altering or diluting the original.
Modified National Standard

The student will read novels, newspapers, magazines, and Web-based resources and engage in the study and creation of visual texts to develop her understanding of text per se, herself, and cultures of the United States and the world.

By suggesting general printed sources and recommending the study and creation of visual texts, the modified standard serves as a conduit for the sharpened focus on the long-term objective.

Long-term Objective

The student will read novels about children from a variety of religions in the United States.

Through his involvement in assigned readings, the student is directed toward the examination of a variety of printed sources, as mentioned in the original standard and specified in the modified standard. Understandably, the latitude of the original standard would not be covered in a single long-term objective. The following short-term instructional objective puts it into lesson plan terms.

Short-term Instructional Objective

After reading two trade books about children from different religious backgrounds, the student, in a conversation with her teacher, will cite at least two similarities and two differences between the two religions, within two attempts.

This objective contains the conditions (“After reading two trade books…, in a conversation with her teacher”), the behavior (“cite”), and the minimal standards (“at least two similarities and two differences, within two attempts.”)

Quite specific, the language transfers the original standard into a direct but open and measurable outcome. This objective fulfills the intent of the original standard’s dictate of the student’s building “an understanding of texts” and “religions of the United States,” through its focus and the use of various sources.

Daily Living Skills and Employability Training

In 2014, the Council for Exceptional Children (CEC) released the Life Centered Education (LCE) Matrix to embody the myriad of daily living skills and employability training areas contained within special education programs of study. The inherent vastness of this framework can be intimidating to teachers who may be challenged to transfer these broad standards to long-term and short-term instructional objectives in a comprehensible and measurable progression.

The following example is taken verbatim from the Life Centered Education (LCE) Matrix (CEC, 2014). First, we will modify this example and then translate it into long-term and short-term instructional objectives.

National Competency

Buying, Preparing, and Consuming Foods

This national objective provides for a plethora of long-term and sequential short-term objectives. However, modification is need to target the focus into pupil behavior.
Modified National Competency

The student will demonstrate the ability to purchase, prepare, and consume various foods.

Less confusing than the original standard, this modification focuses on student action. Nevertheless, it does allow for a great latitude of long-term and following short-term instructional objectives.

Long-term Objective

The student will demonstrate an understanding of how the unit price of a food item influences the value of the purchase.

As a partial extension of the original standard, this long-term objective calls for student understanding of how unit price is the driving force behind the overall value of the purchase. Much more specific than either the original or the modified standard, this objective still gives the teacher a great deal of freedom in the construction of short-term instructional objectives for its fulfillment. The following is an example.

Short-term Instructional Objective

After observing two comparable food products of different quantities in a store or retail-like setting, the student will calculate the unit price of each packaging to determine the better value, with at least 70% accuracy.

Detailed and specific, this short-term instructional objective pinpoints when the activity is to take place (“After comparing two comparable food products of different quantities”), the particular student behavior (“calculate”), and the minimal standards (“with at least 70% accuracy”). Such specificity provides clear understanding for both teacher and student.

The following example is taken from the LCE Curriculum Matrix, a verbatim portion of the actual standard.

National Competency

Seeking, Securing, and Maintaining Employment

This standard is relatively clear and accessible. However, we can make it more meaningful by including observable evidence of the student’s abilities.

Modified National Competency

The student will demonstrate the skillset to seek, secure, and maintain employment.

We use the term demonstrate to indicate that the student must show that she has met predetermined criteria for fulfilling the standard through observable behaviors across the continuum of employment benchmarks. This term is used again in the long-term objective for continuity and to ensure the observable proof that the student is able to demonstrate these critical employability qualities.

Long-term Objective

The student will evidence the ability to use newspapers and Web-based searches to ascertain possible employment opportunities that are commensurate with his skill set.
This long-term objective includes the original competency while providing for a diversity of means for its fulfillment through short-term instructional objectives. The following objective illustrates how a high level of specificity can still include the components of the original standard.

**Short-term Instructional Objective**

Presented with two different classified advertisements from a regional newspaper, the student will list one possible job for which she is qualified to apply, citing at least two applicable and pertinent qualifications.

Adhering to the long-term objective, this short-term instructional objective is specific in terms of conditions (“Presented with two different classified advertisements from a regional newspaper”), observable behavior (“list one possible job”), and minimal standards of performance (“citing at least two applicable and pertinent qualifications”). Such specificity provides a means for addressing the task dictated by the original competency, the modified competency, and long-term objective. Remember, this short-term instructional objective is but one component within the long-term objective that is directed toward the achievement of the Life Centered Education Curriculum.

**SUMMARY**

In this chapter we have taken you through the processes that connect and align the national content and CEC Standards with long-term and short-term instructional objectives. Like an engineer or an architect you, the teacher, are allowed virtual freedom within predetermined guidelines. Again, these guidelines are the national, state, or CEC Standards and the ensuing long-term objectives; and your freedom is in your creative construction and implementation of your short-term instructional objectives. Like the engineer and the architect, however, your short-term instructional objectives should be specific and measurable.

**PROFESSIONAL DEVELOPMENT ACTIVITIES**

Make certain that you have a copy of the state or CEC standards for the course or courses that you teach. Then break into groups of four or five according to subjects taught.

Together, select a standard and copy it verbatim. Next, modify it by making it more understandable and student-focused. Be sure to include an action verb (e.g., demonstrate) as a precursor of the description of student performance in your long-term and short-term instructional objectives. Remember not to change the content of the original standard by deleting from or adding to it.

Keeping in mind that a number of long-term objectives can stem from a modified standard, cooperatively construct a long-term objective from any part of your modified standard. Be sure to use at least one action verb and present a general description of what you will expect of the student. You can use the content area or CEC samples in the chapter as templates.

Next, construct a short-term instructional objective, selecting a portion of your long-term objective (remembering that many short-term instructional objectives constitute one long-term objective).

Be sure to include an action verb depicting observable pupil performance and mention configuration (e.g., in groups of three or four) and context or preparation (e.g., presented with an unlabeled diagram). Also, it is very important to specify
exactly what you expect of each student (e.g., with an error margin of plus or minus five miles).

After you have completed this process, each group can put its four components (national standard, modified standard, long-term objective, and short-term instructional objective) on the board or on the overhead for discussion.

Chapter 1 References


Chapter 1 Resources


