Aligning Curriculum, Instruction, and Assessment Based on Content Standards

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Aligning Curriculum, Instruction, and Assessment Based on Content Standards

1. *What is "Alignment?"*

Alignment is the process that assures that there is a direct and supportive relationship among standards, objectives, curriculum, instruction, and assessment.

2. *What do the terms "curriculum," "instruction," "content standards" and "assessment," mean?*

Following are working definitions of the above terms as they are used in this document.

Curriculum in a school district or classroom refers to that set of written documents that identifies what content students are to learn and the plans governing how that content is to be taught.

The content students are to learn in social studies may be in such forms as content standards, goals, objectives, and assessment items. The content for the curriculum most often includes knowledge, skills, and subject area perspectives from civics, economics, geography, and history.

Instruction refers to how teachers deliver the curriculum for the purpose of helping students learn certain knowledge and skills, and develop habits of mind.

Instruction may take many forms, such as lectures, guided discussions, simulations, research projects, debates, applications of computer-assisted learning, and so on.

Content Standards are descriptions of what students should know and be able to do.

Standards should focus on big ideas and skills from the academic disciplines. Following are examples of a few national standards:

- Students should be able to explain and evaluate the argument that civil society is a prerequisite of limited government. (Civics & Government Standard 3: "Civil Society and Government," Grades 9-12)
- Students know how to apply the geographic point of view to solve social and environmental problems by making geographically informed decisions (Geography Standard 18: "The Uses of Geography: How to Apply Geography to Interpret the Present and Plan for the Future," Grades 5-8).
- Students will be able to identify incentives that affect people's behavior and explain how incentives affect their own behavior. (Economics Standard 4: "People respond predictably to positive and negative incentives," Grades K-12). Rewards are positive incentives that make people better off," Economics Standard 4: Grades K-4)
- The student understands how the French Revolution contributed to transformations in Europe and the world. (World History, Era 7 Standard 1A: "The Causes and Consequences of Political Revolutions in the Late 18th and Early 19th Centuries," Grades 5-12)

Assessment measures what students know and are able to do. Assessments involve observing and analyzing students' work in order to evaluate how well they are learning or have learned what is being taught or what has been taught.

Assessments may take many forms, such as quizzes, tests, research projects, performances, discussions, debates, and presentations. They may be used to make decisions, such as assigning grades, determining whether students need additional instruction, and reflecting on whether methods of instruction and resource materials should be changed.

3. Why align curriculum, instruction, and assessment based on standards?

Alignment is based on the following assumptions:

- The primary purpose for instruction is to improve student learning of significant content and important skills.
- States and school districts have created standards to identify what it is that students should know and be able to do.
- Time to teach is limited and valuable. Hence, it is important to be effective both in selecting important content and instructing students.

Alignment is necessary for the following reasons: a) to assure that all students understand what they should know and be able to do, b) to assure that assessments and the learning experiences are fair to all students, and c) to help teachers be more effective when working with students to achieve a high level of competency relative to the standards.

4. What is alignment of curriculum, instruction, and assessment based on standards?

Take a look at Figures 1a and 1b on the following page and note how curriculum, instruction, and assessment are either related or not related by the positioning of the circles and in Figures 2a and 2b by the alignment of narrative in the matrices.

Figure 3-1a. Standards, Curriculum, Instruction, and Assessment NOT Aligned

Figure 3-1b. Standards, Curriculum, Instruction, and Assessment: Aligned with Each Other

Figure 3-2a. Examples of Instructional Programs Where Alignment Is Not Evident

	NATIONAL STANDARDS	LOCAL CURRICULUM	INSTRUCTION	ASSESSMENT
Example 1. Study of World War II in a High School U.S. History or World History Class	The student analyzes cause-effect relationships. The student understands the global scope, outcome, and human costs of World War II.	A unit in a district's written curriculum focuses on causes, consequences, and major developments of World War II.	The teacher teaches about the weapons of World War II.[1]	The unit test assesses student knowledge of the effect of World War II on the home fronts of all nations involved.[2]
Example 2. Study of geography in an elementary school social studies class	The student knows and understands the consequences of human modifications of the physical environment.	The curriculum includes a unit pertaining to environmental problems in the local community.	The teacher focuses on the way Native Americans used the land in the region where the school is found.[1]	The unit test focuses on foods and clothing of Native Americans in the region where the school is found.[2]
Example 3. Study of the federal government in a high school civics course.	The student should be able to explain how the United States Constitution grants and distributes power to national and state governments and how it seeks to prevent the abuse of power.	The civics unit in the district's curriculum emphasizes the federal system and checks and balances.	The teacher teaches about differences between Republican and Democratic political parties.	The test includes an essay question focused on the concept of judicial review.
Example 4. Study of economics concepts in a course entitled "U.S. History Since the Civil War" at the middle school level.	Students will be able to use knowledge of relationships among supply, demand, and price to predict how prices change, and to explain how the incentives facing individual buyers and sellers are affected.	None of the units in the middle school social studies curriculum address economics concepts because the district has an economics elective at the high school level.	In a unit dealing with events following World War I, the teacher informs students that in the Soviet economy prices were set by the state, much as is the case with prices of postage stamps in the United States.	In the state's social studies test, students are asked to explain how the laws of supply and demand may be applied to explain what happened to the price of horse-drawn buggies as a result of mass production of automobiles.

1. The instruction fails to address the focus for the unit found in the school district's written curriculum.
2. The assessment addresses content different from what students were taught.

Question: What problems exist in Examples 2 and 3?

Figure 3-2b. Examples of Instructional Programs Where Alignment Is Evident

	NATIONAL STANDARDS	LOCAL CURRICULUM	INSTRUCTION	ASSESSMENT
Example 1. Study of World War II in a high school U.S. History or World History class	The student analyzes cause-effect relationships. The student understands the global scope, outcome, and human costs of World War II.	A unit in a district's written curriculum focuses on causes, consequences, and major developments of World War II and on how to determine cause-effect relationships.	The teacher has the students read primary and secondary sources focused on World War II and has students create flow charts showing cause-effect relationships pertaining to the war.	Students present their flow charts to classmates using overhead projectors. The flow charts and their presentations are evaluated using a scoring guide developed in class under the teacher's leadership.
Example 2. Study of geography in an elementary school social studies class	The student knows and understands the consequences of human modifications of the physical environment.	A unit in a district's written curriculum focuses on specific examples where human activities have had a profound effect on the physical environment.	The teacher has students read about examples of how the actions of people have caused modifications in the physical environment. Students, using photographs or sketches,are then asked to show how people have affected the environment locally	Students present their findings in booklet form. The teacher and classmates read the booklets and evaluate them using a scoring guide developed in class under the teacher's leadership.
Example 3. Study of the federal government in a high school civics course	The student should be able to explain how the United States Constitution regards the distribution of power and responsibilities within the federal system.	A civics unit in the district's curriculum includes lessons on checks and balances. The curriculum unit asks students to use current media to monitor specific issues related to checks and balances in the federal system and to evaluate the checks and balances system by developing explicit criteria on the purpose, use, and effectiveness of the system.	Students are asked to develop a simulation to show how the checks and balances system operates among the three branches of the national government as well as between the national government and the states.	In an essay exam, the teacher presents students with a description of a government that does not have separation of powers and checks and balances. Students are then asks to explain how that government would need to be changed in order to bring separation of powers and checks and balances into the system, and to describe pros and cons of the changes.
Example 4. Study of economics concepts in a course entitled "U.S. History Since the Civil War" at the middle school level.	Students will be able to use knowledge of relationships among supply, demand, and price to predict how prices change, and to explain how the incentives facing individual buyers and sellers are affected.	The district curriculum has a unit focused on concepts from economics and other social sciences that are important for interpreting events in U.S. history.	In the unit on concepts from economics and other social sciences the teacher has students draw demand curves by carrying out surveys pertaining to quantities of various goods and services people are willing to buy at different prices.	In the state's social studies test, students are asked to explain how the law of demand may be applied to explain what happened to the price of horse-drawn buggies as a result of mass production of automobiles.

An aligned instructional program is a system in which all parts (standards, curriculum, instruction, and assessment) relate directly to each other, support each other, and are directed to a constructive purpose (student learning).

5. *How is alignment obtained?*

Following is an approach a teacher might use to develop a standards-based instructional unit in which curriculum, instruction, and assessment are aligned.

Figure 3-3. Steps in the Process of Attaining Alignment

STEPS IN THE PROCESS	COMMENTS
1. Identify standards (national, state, and/or local) and /or instructional goals that are important for students to learn in the specific unit. (For example, Mr. Schmitt examines national civics, economics, history, and geography standards and state social studies standards as he plans a unit on the New Deal for a United States History course. Mr. Schmitt also identifies reasons why the standards are important for his students as individuals and members of society.)	The standards should focus on important content from academic disciplines (concepts, principles, patterns, generalizations, and interrelated facts) and on habits of mind (skills of effective research and inquiry and of effective communication, problem solving, and decision-making).
2. Determine the content and skills objectives for the unit. (Mr. Schmitt lists knowledge and skills objectives pertinent to the New Deal unit and supportive of the standards.)	The objectives should be important for the topic of the unit and should be directly related to the standards selected.
3. Construct assessment items that may be used to collect data to evaluate how well students will have mastered the unit's objectives and standards. (Mr. Schmitt designs test items and student performance tasks to assess his students' achievement of the New Deal unit objectives.)	Teachers should develop specific assessment materials *prior to* designing lessons so that the lessons will be directed to the objectives of the unit in ways that are likely to result in successful student performance.
4. Use the written curriculum and other resources to create the unit. (Mr. Schmitt examines his district's curriculum, textbooks, the Internet, and other resources and then selects content and designs strategies that will give students the opportunity to learn the objectives of the New Deal unit and perform effectively in the unit's assessment.)	The unit should include unit objectives, a sequence of lessons, which includes instructional strategies, and a listing of resource materials.
5. Teach the unit as planned. (When teaching the unit, Mr. Schmitt is attentive to the lesson objectives and to the standards to which the lessons are related.)	While teaching the unit, the teacher should use observations, quizzes, and formative tests to check student progress on lesson objectives and standards.
6. Administer the assessment. (Mr. Schmitt has students participate in the assessment he designed in Step 3 above.)	The assessment should be aligned to the standards, unit objectives, and instruction if Steps 3, 4, and 5 were executed properly.
7. Analyze data from the assessment. (Mr. Schmitt examines his students' responses in the assessment to discover areas of strength and weakness with regard to the standards and objectives. He makes use of that information in planning for future instruction, perhaps returning to Step 1 above, in order to improve student learning where needed.)	In order to help students be more reflective about their own learning and to take more responsibility for their learning, a teacher should involve them in the analysis of the assessment data.

Figure 3-4. Steps in the Process of Attaining Alignment in a Unit as an Iterative Process

6. *How may results of aligned assessments be used to promote student learning?*

Data from assessments may be used to carry out the following tasks if the assessments were aligned to standards, the curriculum, and instruction:

1. Judge the progress of a class and of each student with regard to specific performance criteria for each objective and/or standard.

2. Plan corrective types of instruction in the current unit or in subsequent units to bolster student learning (i.e., content and thinking skills) in those areas where student performance is weak.

3. Help students assess their own progress toward mastery of objectives and standards and identify ways in which they could improve their own performances and learning.

4. Make decisions about fundamental changes in the course or instructional program:

   - Changes in resource materials used
   - Changes in the scope and sequence of content within the course
   - Changes in instructional strategies used by the teacher
   - Changes in what students will be taught with regard to social studies content and skills (e.g., research, communication, problem solving, decision-making, test-taking, etc.)
   - Changes in the types of assessment used

Such instructive uses of assessment data to improve both student learning and classroom instruction are possible only if all the parts are related in a single system: that is, the assessments are aligned to standards, the curriculum, and the instruction.