

A Guide to Curriculum Development: Purposes, Practices, Procedures

The purpose of this guide is to provide some general instructions to school districts as staff begin to develop or revise their curriculum guides. This document provides an overview of the curriculum development process and suggests a series of steps to follow in creating curriculum documents. Currently, the State Department of Education has comprehensive program development guides in Mathematics, Physical Education and World Languages located at the curriculum web site.

Overview

A curriculum guide is a structured document that delineates the philosophy, goals, objectives, learning experiences, instructional resources and assessments that comprise a specific educational program. Additionally, it represents an articulation of what students should know and be able to do and supports teachers in knowing how to achieve these goals.

Accordingly, an exemplary guide is a tool that assists in planning and implementing a high quality instructional program. It:

- establishes a clear philosophy and set of overarching goals that guide the entire program and the decisions that affect each aspect of the program;
- establishes sequences both within and between levels and assures a coherent and articulated progression from grade to grade;
- outlines a basic framework for what to do, how to do it, when to do it and how to know if it has been achieved;
- allows for flexibility and encourages experimentation and innovation within an overall structure;
- promotes interdisciplinary approaches and the integration of curricula when appropriate;
- suggests methods of assessing the achievement of the program's goals and objectives;
- provides a means for its own ongoing revision and improvement; and
- provides direction for procurement of human, material and fiscal resources to implement the program.

The formulation of such a school or district curriculum guide should not be viewed as the culmination of the curriculum development process, but rather as an essential step in the process of ongoing curriculum development and implementation. Thus, no guide will be perfect. No guide will ever be a finished product cast in stone. No guide will be free from criticism. However, to be effective, a guide must earn acceptance by teachers and must be deemed educationally valid by parents and the community at large. This acceptance will be far easier to attain when the curriculum guide is:

- consistent with what is known about child growth and development;
- compatible with the general philosophy of the school system;

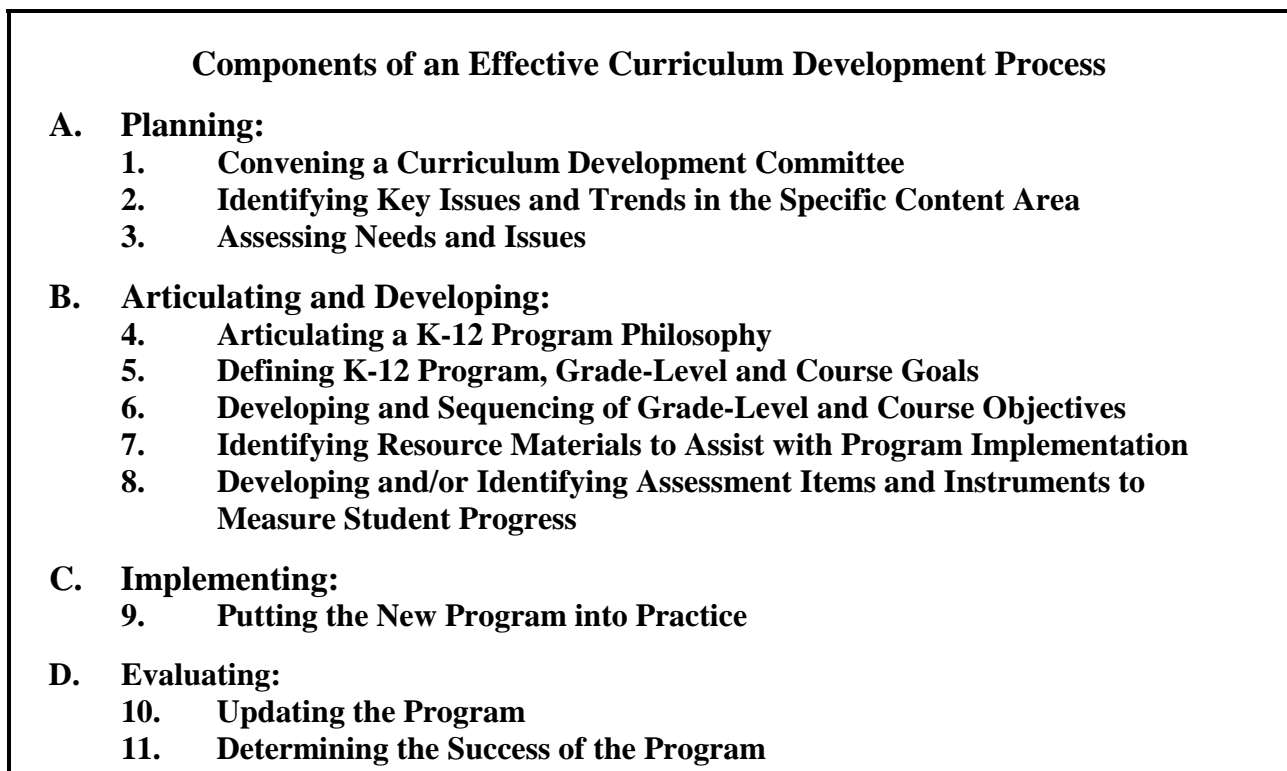
- based upon clear convictions about teaching and learning;
- representative of instructional activities to meet the needs of students with varying abilities and needs;
- articulated from kindergarten through grade 12;
- easy to use by all educators;
- filled with samples, examples, and suggested resources;
- developed collaboratively by a broadly-based committee of teachers and other interested stakeholders; and
- linked to teacher evaluation goals and professional development.

The Curriculum Development Process

The development of an effective curriculum guide is a multi-step, ongoing and cyclical process. The process progresses from evaluating the existing program, to designing an improved program, to implementing a new program and back to evaluating the revised program.

Many school districts carry out this process in a planned and systematic manner that includes the eleven components listed in Figure 1-1. Each of these components is addressed in the sections that follow.

Figure 1-1



A. Planning

- 1. Convening a Curriculum Development Committee.** Such a committee, consisting primarily of teachers who represent the various schools and grade levels in a district, administrators, members of the public and perhaps students, becomes the driving force for curriculum change and the long-term process of implementing the curriculum. It is critical that an effective, knowledgeable and respected chairperson lead such a committee and it includes knowledgeable and committed members who gradually become the district's de facto "experts" during the development phases of the process as well as the implementation phases.
- 2. Identifying Key Issues and Trends in the Specific Content Area.** The first step in any curriculum development process involves research that reviews recent issues and trends of the discipline, both within the district and across the nation. This research allows a curriculum committee to identify key issues and trends that will support the needs assessment that should be conducted and the philosophy that should be developed.

Research often begins with a committee's reading and discussing timely, seminal and content specific reports from curriculum associations. Committee members should examine what is currently being taught in the curriculum. They should examine state and national standards in the discipline. Committee members should also be provided with recent district CMT and CAPT results and be familiar with the instructional materials and assessments in use throughout the program. In addition, the committee should become familiar with newly available instructional materials – particularly those that may eventually be adopted to help implement the new curriculum. Committee members should also broaden their perspective and gather information by visiting other school systems that are recognized leaders in education.

As a result of this process, committee members are likely to identify many of the following issues and trends that will need to be addressed as the curriculum development process moves forward:

- meeting the needs of all students;
- learning theory and other cognitive psychology findings on how students learn;
- what determines developmental readiness or developmental appropriateness;
- the current expectations of the field;
- the knowledge of and readiness for change on the part of teachers;
- the availability of resources;
- the role and availability of information and technology resources;
- scheduling issues;
- methods and purposes of assessments; and

- professional development.

3. Assessing Need and Issues. Curriculum development should be viewed as a process by which meeting student needs leads to improvement of student learning.

Regardless of the theory or model followed, curriculum developers should gather as much information as possible. This information should include the desired outcomes or expectations of a high quality program, the role of assessment, the current status of student achievement and actual program content. The information should also consider the concerns and attitudes of teachers, administrators, parents and students. The data should include samples of assessments, lessons from teachers, assignments, scores on state standardized tests, textbooks currently used, student perception and feedback from parents.

Armed with a common set of understandings that arise from the identification of issues and trends, a curriculum development committee is wise to conduct a needs assessment to best ascertain the perceptions, concerns and desires of each of the stakeholders in the process. By examining this data carefully, it may reveal key issues that should influence the curriculum design. For example:

- teachers may be dissatisfied with older content and techniques in light of recent research;
- test scores may be declining or lower than expected in some or all areas;
- teachers may not have materials or may not know how to use materials to enhance understandings;
- teachers may want to make far greater use of technology to enhance learning;
- teachers and others may wish to relate the content of the program more closely to contemporary problems and issues;
- teachers may be looking for ways to increase the amount of interdisciplinary work in which students are engaged;
- students may express a need for different and enriched curricular opportunities;
- parents and others may have concerns about implementation.

Whatever the particular circumstances, an effective curriculum development process usually entails a structured needs assessment to gather information and guide the curriculum development process.

The information, commonly gathered through surveys, structured discussions and test data, most frequently includes:

- teacher analysis of the present curriculum to identify strengths, weaknesses, omissions and/or problems;
- sample lessons that illustrate curriculum implementation;
- sample assessments that illustrate the implementation of the curriculum;

- identification of what teachers at each grade level perceive to be the most serious issues within the curriculum;
- a detailed analysis of state and local test data, including CMT and CAPT scores, grade-level criterion-referenced test data and course final examination results;
- suggestions for change and improvement generated by meetings with teachers, guidance counselors and administrators; and
- parent and other community members concerns and expectations for the program obtained through surveys and invitational meetings.

An excellent resource for conducting a needs assessment may be found in various publications of the Association for Supervision and Curriculum Development (www.ascd.org) and discipline specific professional organizations.

The data collected from the needs assessment in conjunction with information obtained from research and various resources become the basis upon which the entire written curriculum - from philosophy to goals to assessment – is then built.

B. Articulating and Developing

4. Articulating a K-12 Program Philosophy. These fundamental questions guide the overarching philosophy of the program.

- * *"Why learn (specific discipline)?"*
- * *"Upon what guiding principles is our program built?"*
- * *"What are our core beliefs about teaching and learning in (specific discipline)?"*
- * *"What are the essential questions?"*
- * *"How will we use assessment to improve the program and student learning?"*

As such, the program philosophy provides a unifying framework that justifies and gives direction to discipline based instruction.

After having studied curriculum trends and assessed the current program, curriculum developers should be ready to construct a draft philosophy guiding the K-12 program. Such a philosophy or set of beliefs should be more than just "what we think should be happening," but rather "what our curriculum is actually striving to reflect."

Figure 1-2 provides a checklist for evaluating program philosophy statements.

Figure 1-2

<p>An effective philosophy statement has the following characteristics:</p> <p>A. Accuracy</p> <ul style="list-style-type: none">- The philosophy represents claims that are supportable.- The philosophy states an educationally appropriate case for the role of (specific discipline) in the K-12 curriculum and its importance in the education for all students. <p>B. Linkages</p> <ul style="list-style-type: none">- The program philosophy is consistent with the district's philosophy of education.- The philosophy provides a sound foundation for program goals and objectives.- The district's teachers are sincerely committed to each belief outlined in the philosophy. <p>C. Breadth and Depth</p> <ul style="list-style-type: none">- The philosophy is aligned with sound pedagogical practices.- The philosophy provides a clear and compelling justification for the program. <p>D. Usefulness</p> <ul style="list-style-type: none">- The philosophy is written in language that is clear and can be understood by parents and other non-educators.

- 5. Defining K-12 Program, Grade-Level and Course Goals.** The purpose of the K-12 program philosophy is to describe the fundamental beliefs and inform the process of instruction. The curriculum guide delineates K-12 program goals as well as grade-level and course goals that address the key cognitive and affective content expectations for the program.

An effective set of program goals has the following characteristics:

- *Each goal is broadly conceived, to provide for continuous growth K-12 and into adult life.*
- *Each goal grows logically out of the philosophy of the specific discipline and the linkage is clear.*
- *Each goal grows out of a district goal and the linkage is clear.*
- *The goals are comprehensive enough to provide the basis for a quality K-12 program for all learners at all places on the learning continuum.*
- *The goals include each of the outcomes suggested by the philosophy.*
- *Each goal is realistic.*
- *There is a manageable number of goals (usually between 4-8).*
- *Each goal lends itself to developing one or more objectives.*

- 6. Developing and Sequencing of Grade-Level and Course Objectives.** If the philosophy and goals of a curriculum represent the guiding principles of the curriculum, then the grade-level and course objectives represent the core of the curriculum. The specific grade-level and course objectives include clear expectations for what each learner is expected to know and be able to do and how it will be measured.

The committee should consider several key questions to identify, select, write and sequence objectives:

- Is the objective measurable and how will it be measured?
- Is the objective sufficiently specific to give the reader a clear understanding of what the student should be able to do, without being so detailed as to make the statement labored or the objective trivial?
- Is the objective compatible with the goals and philosophy of the program and the real and emerging needs of students?
- Is the objective realistic and attainable by students?
- Are appropriate materials and other resources available to make the objective achievable?

As objectives are selected and written, they should be organized in an orderly fashion. This order can be achieved in numerous ways: by grade, by strands, in units, in sequential levels of instruction, through essential questions or through some combination of these. Decisions about the organization of a curriculum guide should

be made carefully and reflect the overarching philosophy of the program and the preferences of the teachers who are to use the guide.

- A *graded* structure organizes objectives by the grade in which a student is enrolled and is the most commonly used structure.
- An organization by *units* groups objectives by main topics. Units may or may not be of differing difficulty and may be large or small, sequential or non sequential. A unit organization is most commonly used for middle or high school courses.
- A *strand* organization places all of the objectives for a specific topic or strand together in a sequential order, without regard to specific grade. Such an organization lends itself to individual instruction and continuous progress within a strand.
- A *sequential* organization outlines objectives in a continuous chain without regard for grade level or strand, and allows for individual student progress along a continuum of skills and experiences.
- An organization by *big ideas* or *essential questions* centers the curriculum on enduring understandings. This method develops assessments and determines criteria of acceptable performance related to the essential questions.

Often, an effective guide will incorporate more than one format. For example, a common arrangement lists objectives grouped by strand within each grade level. In this manner the third grade teacher is provided with a complete listing of the third grade objectives organized by strand or major topic. However, it is important for this teacher to have access to the second grade objectives containing skills that may have been introduced, but not taught for mastery, as well as forthcoming fourth grade objectives. This information is often provided in a scope and sequence listing by strand that would place a specific third grade objective, for example, in the context of the entire K-8 strand. Thus, one of the most important roles of grade-level and course objectives is assuring smooth transitions and curricular coordination among levels, particularly between elementary schools and middle schools, and between middle schools and high schools.

In addition to the delineation and sequencing of content through objectives, many curriculum guides provide additional information to help teachers more effectively implement the curriculum. For example, some curriculum guides:

- provide an example of what is meant by each objective;
- suggest instructional techniques and strategies for teaching specific objectives;
- suggest appropriate instructional materials that support instruction of specific objectives;
- provide examples of how to differentiate instruction and modify curriculum materials to meet the needs of high performing and/or highly interested students;
- provide information on how the objectives can be evaluated; and

- suggest interdisciplinary links, such as literature connections.

Accordingly, curriculum developers have a range of options for formatting and designing an effective curriculum guide.

- 7. Identifying Resource Materials to Assist with Program Implementation.** An effective curriculum guide goes beyond a listing of objectives and identifies suggested instructional resources to help answer the question, “What instructional materials are available to help me meet a particular objective or set of objectives?” As teachers and programs move away from a single textbook approach and employ a broad range of supplementary materials, instructional modules for particular units, computer software and the like, it is increasingly important that the curriculum guide suggests and links available resources to curriculum objectives.
- 8. Developing and/or Identifying Assessment Items and Instruments to Measure Student Progress.** In many cases, a set of grade-level criterion-referenced tests, performance based tasks and course final examinations that answer concretely the question, "How will I know that my students know and are able to do what is expected of them?" holds an entire curriculum together. This piece of the curriculum development process helps to focus instruction and ensures the often elusive, but critical, alignment of curriculum, instruction and assessment. Essentially the assessment piece of a curriculum is what drives curriculum. The assessments measure not only student progress, but also the effectiveness of the goals and objectives of the curriculum in meeting student needs.

Common grade-level, course criterion-referenced assessments and performance-based assessments should be created along with the curriculum and become part of the curriculum guide itself. The assessments should include clear performance expectations and a rubric that clearly defines the expectations for students and teachers alike. They help to clarify exactly what the grade or course objectives mean and provide a common standard for evaluating how successfully they are achieved.

C. Implementing

- 9. Putting the New Program into Practice.** Too often, traditional practice entails sending a committee away for several after-school meetings and two weeks of summer writing as prelude to a back-to-school unveiling and distribution of the updated or revised curriculum. The process envisioned here entails a much more in-depth and systematic approach to both development and implementation. Instead of assuming that the process ends with the publication of a new guide, an effective curriculum committee continues to oversee the implementation, updating and evaluation of the curriculum.

It is important to remember that any innovation introduced into a system - including a new curriculum – requires time and support to be fully implemented. First, teachers need time and opportunities to become **aware** of the new curriculum and its overall design, particularly how it differs from the past. Then teachers need time and opportunities to become **familiar** with the new curriculum - often school or grade level sessions that focus on those specific parts of the curriculum for which individuals are responsible. Next, teachers need at least two years to **pilot** the new curriculum and new materials in their classrooms. It is not unusual for this period to take up to two years before the new curriculum is fully **implemented** and comfortably integrated into day-to-day practice. It is critical that the curriculum development committee, resource teachers and principals are aware of this process and are available to nurture it.

D. Evaluating

- 10. Updating the New Program.** In this age of word processing and loose-leaf bound curriculum guides, it is easier than ever to update the guides and keep them as living, changing documents. One of the most common methods of periodically updating a curriculum guide is through grade-level meetings designed to share materials, activities, units, assessments and even student work that support the achievement of the curriculum goals that were unknown or unavailable when the guide was first developed. These approaches are invaluable professional development opportunities wherein teachers assume ownership of the curriculum they are responsible for implementing. In this way, the guide becomes a growing resource for more effective program implementation. Resource teachers are particularly effective vehicles for the preparation and distribution of these updates.

- 11. Determining the Success of the New Program.** The curriculum development cycle ends and then begins again with a careful evaluation of the effectiveness and impact of the program. Using surveys, focused discussions and meetings like those described in section 3, a curriculum development committee needs to periodically gather data on perceptions of program strengths, weaknesses, needs, preferences for textbooks and other materials, and topics or objectives that do not seem to be working effectively. This information should be gathered from data that represents overall student performance that is linked closely to daily instruction. Teams of teachers responsible for the specific discipline could accomplish this by sharing samples of assessments, performance tasks, student work, lessons and instructional practices related to the curricula.

The data from these surveys and meetings must then be combined with a careful analysis of more numerical data on the program such as:

- ongoing grade-level and course criterion-referenced exam data;
- teacher developed assessments, performance assessments, student portfolios;
- CMT results (overall, over time and by objective);
- CAPT results (overall, over time and by objective);
- course enrollments (particularly by level in middle and high schools); and
- SAT and AP results.

This detailed review and analysis of quantitative and qualitative information on the program's impact and on people's perceptions of its strengths and weaknesses forms the foundation for the next round of curriculum development and improvement.