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ABSTRACT

Issues relating to the design, selection, and evaluation of learning activities have been relatively neglected in educational research and scholarship. This paper identified some fundamental questions in need of scholarly attention, reviews recent research findings, and then offers a conceptual analysis and a tentative list of principles that might be used as a tool for designing, selecting, or assessing activities. (Author)

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ACTIVITIES AS INSTRUCTIONAL TOOLS: A FRAMEWORK FOR ANALYSIS AND EVALUATION

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Abstract

Issues relating to the design, selection, and evaluation of learning activities have been relatively neglected in educational research and scholarship. This paper identifies some fundamental questions in need of scholarly attention, reviews recent research findings, and then offers a conceptual analysis and a tentative list of principles that might be used as a tool for designing, selecting, or assessing activities.

ACTIVITIES AS INSTRUCTIONAL TOOLS: A FRAMEWORK FOR ANALYSIS AND EVALUATION

Jere Brophy and Janet Alleman[1]

Certain roles and functions are basic to teaching, whatever the grade level or subject matter. In the process of enacting intended curricula, teachers spend most of their time doing the following: managing the classroom and motivating students, presenting information and demonstrating procedures, asking questions and engaging students in content-related discourse, introducing and scaffolding student progress on activities and assignments, and evaluating student learning. Given that these are enduring and fundamental aspects of the teacher's role, it stands to reason that each would become the focus of sustained scholarly analysis and research, and most of them have. This has not been true of activities and assignments, however, despite their virtually universal perceived importance and use in the classroom. In this paper, we present a conceptual analysis, a set of principles, and tentative criteria for evaluating activities and assignments. Although developed in the context of analysis of social studies curricula, the principles and criteria are intended to be applicable to the analysis of activities and assignments in all school subjects.

By "activities and assignments" we mean anything that students are expected to do, beyond getting input through reading or listening, in order to learn, practice, apply, evaluate, or in some other way respond to curricular content. Thus, activities and assignments call for students to speak (answer questions orally or participate in discussions, debates, or role-play

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exercises), write (short answers to questions, longer essays, research reports), or engage in various goal-directed actions (conduct inquiry or research, try to solve problems, construct models or displays). These activities might be done in or out of the classroom (i.e., homework and other out-of-class assignments are included); in whole-class, small-group, or individual settings; and under close and continuing teacher supervision or largely on one's own. What these various forms of activity have in common is that they are intended, at least ostensibly, as means of enabling students to accomplish curricular goals, and students are expected to engage in them for that purpose. Hereinafter we will designate them collectively using the single term "activities."

Related Literature

Our interest in activities developed as a result of analyses of commonly used social studies curriculum series that are being done as part of the research agenda of the Center for the Learning and Teaching of Elementary Subjects at Michigan State University. The first of these analyses (Brophy, 1990b) identified a variety of problems in the selection and design of the activities included in these series. Because many of these problems concerned issues that have not received much scholarly attention, we decided to search the literature more thoroughly and try to develop a conceptual analysis that could serve as a basis for work on the design, selection, and evaluation of activities.

We began our search with the third edition of the *Handbook of Research on Teaching* (Wittrock, 1986) and recent scholarly books and journals. These sources did not yield much theory or research on activities. The process-product, ethnographic, and other relatively generic work done during the 1970s and early 1980s focused mostly on classroom management and on the teacher and

student discourse occurring during lessons, without much attention to other activities. Even the more recent research on the teaching of particular school subjects for understanding and higher order applications (see Brophy, 1989, for examples) has focused on content selection and representation and on teacher-student discourse much more than on activities. The research that has been done on activities has produced useful information, but it has been confined to descriptive data on relatively generic issues without much analysis of the intended roles of activities as tools for accomplishing curricular goals or evaluation of their effectiveness in doing so.

Several investigators have developed information about the role of the teacher in selecting activities of appropriate difficulty level, providing initial structuring of these activities for their students, and then monitoring and scaffolding the students' work. Kounin (1970) noted that the quality of seatwork activities was one important determinant of students' task engagement rates, and that skilled classroom managers had learned to provide their students with seatwork that was pitched at the right level of difficulty (new and difficult enough to be challenging but not frustrating) and was sufficiently varied to sustain interest. Combining data from several different lines of process-product research, Brophy and Good (1986) concluded that both task engagement rates and student achievement gains are enhanced when teachers (a) give students assignments that they can complete successfully if they invest reasonable effort (rather than assignments that the students find confusing and frustrating); (b) provide clear directions and, if necessary, lead the students through practice examples before releasing them to work independently; (c) circulate the room to monitor progress and provide help; and (d) keep helping interactions brief so as to be able to continue to monitor and circulate.

Several investigators reported data indicating that these practices frequently are not followed. Bennett, Desforges, Cockburn, and Wilkinson (1984) found that only about 40% of the tasks assigned in the British primary grade classes they studied appeared to be well matched to the students' current readiness levels. About one-quarter of the tasks were classified as too easy (especially those assigned to high achievers), and about a third were classified as too difficult (especially those assigned to low achievers). The latter problem appears to be especially frequent in the United States. Fisher et al. (1980) and Jorgenson (1977) found that teachers often gave students tasks that were too difficult for them, and Anderson (1984) found that many students, especially low achievers, did not understand the purposes of assignments and tended to concentrate mostly on just finishing the work rather than on learning what they were supposed to be learning. She attributed these problems largely to teacher failure to make clear the purposes of assignments and to model the cognitive strategies that students should employ in working on them.

Other investigators, notably Doyle (1986), have emphasized that activities are the primary determinants of how the curriculum is experienced by students. Doyle noted that many of the tasks assigned to students are confined to lower level, routine work involving recognition or reproduction of memorized in orma-tion or practice of isolated skills, without much emphasis on developing understanding of content or applying it in meaningful ways. He attributed this in part to student resistance to tasks that embody ambiguity and risk. Similarly, Sedlak, Wheeler, Pullin, and Cusick (1986) have suggested that many high school teachers implicitly "bargain" with students by offering low-level and routine work in exchange for high levels of cooperation. Whether or not they attributed the problem to these reasons, most investigators of subject-matter teaching have complained that it focuses on memorization of discrete facts and

practice of skills in isolation from other content rather than focusing on teaching the content for understanding and higher order applications (Brophy, 1989; Goodlad, 1984; Stake & Easley, 1978; Woodward, 1987). Thus, there is widespread concern that current curriculum and instruction, including activities, are too restricted to low cognitive levels.

A few investigators have commented on aspects of activities other than their cognitive levels. Blumenfeld, Mergendoller, and Swarthout (1987) have noted that aspects of task format (procedural complexity, individual versus group setting, method and focus of evaluation) may or may not be well matched to a task's goals and content, so that tasks need to be analyzed to assess the degree to which their formal aspects support their intended purposes. Osborn (1984) analyzed the tasks found in reading and language arts workbooks and developed a set of 20 guidelines for authors (e.g., instructions should be clear and easy to follow, response modes should emphasize actual reading and writing rather than circling, underlining, etc.).

The various theoretical perspectives and research findings included in these and other recent writings on activities are useful but do not yet cohere as a systematic knowledge base on the topic. We believe that additional conceptual analysis is needed to provide a foundation for developing such a knowledge base, and that this conceptual analysis ought to include attention to some very *fundamental questions*: What are the purposes of activities within various types of curricula? What are their intended functions, and what is known about the mechanisms through which they perform these functions (*if* they do)? What is it about ideal activities that makes them so good? What are some common faults that limit the value of less ideal activities? What principles should be followed by curriculum developers in designing activities and by teachers in implementing them with students?

We did not find much attempt to address these questions in the recent scholarly literature or even in curriculum and instruction texts. The latter texts often contained many examples of activities that might be used for teaching representative topics or skills, but not much theoretical analysis, let alone empirical findings, on these fundamental questions. Most of the ideas they did contain were based on positions outlined some time ago by theorists such as John Dewey, Hilda Taba, and Ralph Tyler.

Zais (1976), for example, offered a useful chapter on learning activities built around the writings of these three individuals. Following Tyler (1950), he summarized historical developments in educators' thinking about the roles of activities in curriculum and instruction. Distinguishing between learning *activities* as specified in curriculum plans and the actual learning *experiences* that occur as students confront the response demands built into those activities, Zais noted that it is the experiences, and not merely the activities, that influence what is actually learned. Curriculum planners can prescribe activities for students to engage in, but they cannot guarantee that these activities will result in the desired learning experiences (e.g., one can require students to write answers to questions about the Declaration of Independence, but this will not guarantee that the students think critically about the issues involved). Thus, although one might speak of activities at the curriculum planning stage, one must consider experiences when evaluating learning outcomes. Following Zais, we accept these distinctions and qualifications, and we use the term *activities* here because our focus is on analysis of intended curricula rather than evaluation of enacted curricula (although, in addition to considering the features of activities themselves, we will consider the role of the teacher in introducing and scaffolding those activities so as to maximize their probable effectiveness as learning experiences).

Zais (1976) also offered criteria for the selection of learning activities. Like most authors who have commented on the subject, he began by stating that *the primary standard for judging the merit of proposed learning activities should be how well they contribute to the attainment of curricular goals.* He then offered additional criteria, suggesting that good activities provide for the attainment of multiple goals rather than just one, engage students in active forms of learning, support foundational commitments (e.g., help develop values and critical thinking capacities), be built around important content, and be well matched to the learners' abilities and interests.

Zais (1976) wrote from a general curriculum perspective. Fraenkel (1980), influenced by Taba (1962) and writing with a more specific focus on social studies, offered a similar list of criteria: justifiability (the activity serves goal-related purposes); multiple focus (it furthers progress toward multiple objectives such as knowledge, thinking, skills, and attitudes); open-endedness (it encourages a variety of responses rather than just retrieval of answers to closed questions,. potential for increasing self-confidence in ability to learn (it encourages students to inquire, think for themselves, or solve problems); sequential structure (it builds on what came before and prepares for what will come later); transferability of acquired knowledge (it enables students to apply what they have learned to new or different situations by developing explanations, making and testing predictions, or hypothesizing or solving problems); and variety (across a curriculum unit, there will be a suitable mixture of intake, organization, demonstration, and expression/creation activities).

Among the lists of principles or criteria for selecting activities we have encountered in our review of the literature, those suggested by Zais (1976) and by Fraenkel (1980) strike us as the most useful ones because they are among the

most complete and yet do not include principles that we would classify either as invalid or as supported only by adherents to educational philosophies that do not enjoy wide acceptance. We believe that these lists provide a good starting place for developing a conceptual basis for scholarly work on activities, and in this paper we attempt to build on them in four ways: (1) The lists can be expanded to include additional principles that appear to have validity and broad applicability; (2) the principles can be grouped according to priority levels; (3) the principles that apply to each individual activity can be distinguished from those that apply only to *sets* of activities considered as groups; and (4) the principles describing how teachers might structure and scaffold activities for their students can be identified in addition to those describing features of the activities themselves.

Procedures

We created such an expanded and differentiated list of principles in the process of initiating a programmatic line of scholarly investigation into the roles of activities in curriculum and instruction in general and in social studies in particular. We began with the fundamental questions mentioned earlier and gradually developed a set of principles and supporting rationale by bootstrapping back and forth between top-down and bottom-up approaches to analysis. The top-down approach involved discussing our respective initial perceptions and negotiating ultimate agreement concerning the validity, breadth of applicability, and level of importance of each of the principles that emerged from our review of the literature. In addition to discussing these principles at the level of abstract generalities, we applied them to particular social studies activities to see if the implications they suggested matched intuitive impressions of the value of these activities that had been expressed

by ourselves or others in a related study that involved critiquing a widely adopted contemporary elementary social studies series (Brophy, 1990b; Prawat, Brophy, & McMahon, 1990). For the bottom-up approach, we identified activities (that had been suggested in that same curriculum series or in a variety of other sources) that we agreed were particularly useful or were flawed in various ways, analyzed them to articulate more clearly what it was that made the good activities good and the other activities undesirable or ineffective and then (where possible) transformed these insights into general principles.

After several months of such bootstrapping and revisions of earlier drafts, we have articulated a theoretical position and developed a set of principles that doubles as an analytic tool. We present these below, beginning with our basic assumptions.

Basic Assumptions

First, we assume that curriculum development is driven by major long-term goals, not just short-term content coverage concerns. Thus, we assume that everything in the curriculum, not only the activities but also the content selected for representation and explication to students, is included because it is viewed as a means for helping students to acquire important dispositions and capabilities, not just to acquire cultural literacy construed in a narrow, "name recognition" sense. We further assume that the content is organized into networks structured around important ideas and that these ideas are taught for understanding (not just memorization) and for application to life outside of school. These assumptions about curricular goals and content may seem tangential to our focal topic of activities, but in fact they are not only directly relevant but fundamental. Curricular goals imply criteria for deciding what kinds of activities would be most appropriate and valuable, and content (as

represented to students) provides the cognitive base for such activities. A goals-driven curriculum designed to teach important ideas for understanding and application will provide a basis for a broad range of activities that call for students to think critically and creatively in the process of conducting inquiry, solving problems, or making decisions (see Brophy, 1989, 1990a, 1990b or Prawat, 1989 for more information about the characteristics of such curricula).

In contrast, a parade-of-facts curriculum that emphasizes breadth of coverage over depth of development of ideas has severely limited potential as a basis for identifying worthwhile activities. In fact, if one is limited to the content presented in parade-of-facts curricula that emphasize broad but shallow exposure rather than important ideas taught for understanding and application, one will be restricted to a reading, recitation, and seatwork approach. The activities will be mostly low-level ones calling for retrieval of definitions or facts (matching, fill in the blanks) or isolated practice of part-skills. They will not cohere as an interrelated set designed to move students toward major goals. One cannot improve parade-of-facts curricula simply by replacing their worksheets with better activities; one must first replace the knowledge component or at least supplement it in ways that emphasize important generalizations that can provide a content basis for better activities.

A second set of assumptions concerns the nature and role of activities. We assume that activities are not self-justifying ends in themselves but instead are means for helping students to accomplish curricular goals. They fulfill this function by providing structured opportunities for students to interact with curricular content (the knowledge, skills, values, and dispositions being developed), preferably in ways that engage students in processing it actively, developing personal ownership and appreciation of it, and applying it to their lives outside of school. *Any particular activity* might be designed to

fulfill such functions as setting the stage for a new unit or topic by providing opportunities for students to apply their existing knowledge to questions or problems relating to the new content; helping students to learn the new content with understanding; providing opportunities to practice, develop, and extend learning; providing opportunities to apply the learning in problem-solving or decision-making contexts; providing opportunities to synthesize and communicate what has been learned; providing opportunities to develop new knowledge or creative applications in the content area; or providing opportunities to think critically about the content and make personal decisions or take personal actions that relate to it. *Sets of activities* should include opportunities for students to do something with the content--to use it in the context of problem solving, decision making, or other higher order applications (i.e., not just to recognize or reproduce memorized facts or skills). This is more likely to occur when major long-term goals, rather than short-term content-mastery objectives, are used as the primary criteria for selecting activities.

Also implied here is the assumption that the propositional or declarative knowledge (here called knowledge) and the procedural or strategic knowledge (here called skills) elements in the curriculum not only have been included because they are considered means of accomplishing major long-term goals, but also have been integrated with one another in ways that are consistent with this principle. Thus, elements of knowledge would not be taught as ends in themselves but instead would be embedded within application contexts that provide students with opportunities not just to learn the knowledge but to think critically about it and use it in the process of solving problems or making decisions. Similarly, skills would not be taught as ends in themselves and practiced in isolation but instead would be taught and used as strategies

for applying the knowledge. The skills included in a curriculum unit or strand would be the ones that were most naturally suited to important applications of the knowledge.

We assume that curricula will be organized into units or strands of content that include sets of activities and, in combination, are expected to complement other components to comprise an appropriate plan for accomplishing major goals. Within units, different types of activities will be needed to serve different functions, and these functions will evolve as the unit develops. Thus, whenever one is *introducing* new content (at the beginning of the unit as a whole or of its major subparts), one might include activities designed to stimulate interest in the new topic, establish an anticipatory learning set, or link the new learning to prior learning (such as by providing students with opportunities to compare/contrast or make predictions from the old to the new). In *developing* content clusters, one might stress activities that allow students to extend and apply their learning. When *concluding* subparts or the unit as a whole, one might plan activities that would help students to appreciate the connections among content elements taught in separate subparts and provide them with opportunities to synthesize their learning.

However, the notion of an introduction-development-conclusion sequence of activities should not be treated as a necessary feature of all curriculum units. For one thing, the most natural forms of introduction to many topics center around teacher explanation or activities that are limited to teacher-student discourse rather than around activities that call for students to make or do something. Many "introductory" activities of the latter sort, especially those intended to function as motivation builders, are not worth the time and trouble they require. Also, although it is important to help students to see the connections between parts of the curriculum, to synthesize their learning,

and to appreciate the progress they are making toward major goals, there are many ways to do this in addition to or instead of through major "culminating" activities scheduled at the ends of units. Many suggested culminating activities, especially those calling for pageant-like performances or construction of complex displays, require a great deal of time and trouble to implement and yet do not appear to be particularly valuable as ways to help students to synthesize or apply their learning.

In combination, the assumptions stated so far imply that *sets of activities* embedded within curriculum units or strands should be assessed with reference to the degree to which they are effective and efficient as methods for accomplishing major goals, and that *particular activities* should be assessed within this larger context. Thus, given the goals that the curriculum as a whole and its major subparts are designed to accomplish, different activities might be considered (a) essential, (b) relevant and useful, even if not essential, (c) relevant but less ideal than other activities that serve the same functions more effectively or efficiently, (d) relevant but not very useful because they do not promote progress toward major goals, or (e) irrelevant.

Our next set of assumptions harks back to the distinction between activity and experience and to our earlier statement that good activities engage students in actively processing curriculum content, developing personal ownership and appreciation of it, and applying it to their lives outside of school. We assume that students construct knowledge through active information-processing and sense-making efforts, and that they undergo conceptual change and restructuring of their ideas as they do so. Consequently, *the key to effectiveness of an activity is its cognitive engagement potential*--the degree to which it gets students thinking actively about and applying content, preferably with metacognitive awareness of their goals and metacognitive control of their strategies. If the

desired learning experiences are to occur, student involvement must include cognitive engagement with important ideas, not just physical activity or time on task.

This brings us to our final assumption, which is that the success of an activity in producing thoughtful student engagement with important ideas will depend not only on the nature of the activity itself but also on the nature of the *teacher structuring and teacher-student discourse* that occur before, during, and after the time period in which the students respond to the activity's demands. Activities are likely to have their maximum impact when the teacher (a) introduces them in ways that clarify their purposes and engage students in seeking to accomplish those purposes; (b) scaffolds, monitors, and provides appropriate feedback concerning the students' work on the activity; and (c) leads the students through appropriate postactivity reflection on and sharing of the insights that have been developed. Included in this assumption is the notion that teachers will lead students through activities in ways that engage them not just *cognitively* (implying use of appropriate cognitive strategies with metacognitive awareness and control) but also *affectively* (implying sufficient interest in and feelings about the content as well as motivation to accomplish the activity's purposes).

We believe that teachers will succeed in doing this not so much by offering performance incentives or by trying to make learning fun, but instead by embedding activities within a context of application to students' lives outside of school and by using strategies for motivating students to learn (Brophy, 1987; Good & Brophy, 1990) such as projecting enthusiasm, framing the content in ways likely to induce interest or appreciation, or arousing curiosity through provocative questions. Even though students fear ambiguity and risk and may initially resist worthwhile but demanding activities, some encouraging

evidence exists to suggest that when teachers plan good activities and implement them in ways that emphasize their value as worthwhile learning experiences, students will not merely cooperate but come to perceive the class as both more valuable and more interesting than other classes (Marshall, 1987; Newmann, 1988: Stodolsky, 1988).

In summary, we do not think of activities as physical tasks that students do largely on their own or just with peers. Instead, we think of them as opportunities for students to thoughtfully process, integrate, and apply curriculum content, structured for them in goals-driven ways and accompanied by a great deal of teacher-student discourse.

Principles for the Design, Selection, and Evaluation of Activities

Having explained our goals and procedures and stated our major assumptions, we now offer a list of principles for the design, selection, and evaluation of activities. To facilitate use of the list as a tool for assessing activities, we have organized it in tabular form (see Table 1).

Table 1 includes five sets of principles: (a) primary principles (necessary criteria) that *must* apply to each individual activity, (b) secondary principles (desirable criteria) that *may* apply to each individual activity, (c) principles that apply to *sets* of activities (even though they do not necessarily apply to each individual activity), (d) additional principles (*alternate criteria*) that are associated with particular philosophies, and (e) principles that apply to the teacher's *implementation* of activities. In addition to the principles themselves, the table includes elaborative comments and examples, especially examples of the kinds of faulted activities that result if the principles are not followed. The examples are drawn from social studies and the principles and comments occasionally refer to "social

education" goals; however, the contents of the table are intended to apply to all school subjects, and they can be adapted to any particular subject by substituting appropriate terms and examples whenever specific references to social education appear.

We are continuing to analyze the activities suggested in social studies curriculum series, methods texts, and other sources, seeking to elaborate and develop banks of examples relating to each of the principles. In the process, we expect to qualify and refine the set of principles shown in the table, and probably add additional principles as well (especially principles that would help one to discriminate the very best activities from those that are good but not ideal). In the meantime, we hope that Table 1 will prove useful as a set of formative evaluation criteria for readers who are involved in development of curriculum or selection of materials, and that the article as a whole will stimulate increased scholarly attention to issues surrounding the design, selection, and implementation of learning activities. We welcome comments and suggestions.

Table 1. Principles for the Design, Selection, and Evaluation of Activities

A. Primary principles. These are necessary criteria that must be applied to each individual activity.

Principles	Comments and Examples
A1. Goal relevance. Activities must be useful means of accomplishing worthwhile curricular goals. Each activity's primary goal must be an important one, worth stressing and spending time on, and there must be at least logical (preferably empirical) reasons for believing that the activity will be effective as a means of accomplishing that goal.	A1. Many activities lack an important primary goal and are mostly busy work: word searches, cutting and pasting, coloring, connecting dots, learning to recognize states from their outlines, memorizing state capitals.
A1a. The activity must be built around powerful ideas that are basic to accomplishment of the overall goals of the curriculum.	A1a. Many activities are built around definitions or facts that are peripheral to the main ideas in the unit and have minimal application potential.
A1b. These powerful ideas must be represented accurately. This means not only valid phrasing of concepts and generalizations, but also appropriate selection and accurate representation of examples.	A1b. Social studies activities often violate this principle because they are built around exotic or otherwise unrepresentative content (instead of prototypical illustrations of important generalizations), or because they are built around forced categorizations (e.g., exercises in distinguishing things done at home from things done at school or foods eaten today from foods eaten long ago). The problem is often compounded by ambiguous examples that could be placed into neither or both of the categories rather than either one or the other.
A1c. Format specifications should promote efficient accomplishment of the primary goal. Response demands made on students should be naturally suited to accomplishment of the primary goal and uncontaminated by artificial complications or unnecessary restrictions.	A1c. Response format specifications often are unnecessarily complicated in ways that may confuse students or distract them from the key ideas (e.g., concept discrimination exercises that require students to color depicted examples in specified ways or to cut and paste labels under them instead of just checking or writing in the proper label under the example). Ill-considered attempts to integrate across subjects often result in activities that violate this principle (see B1a).
A2. Appropriate Level of Difficulty. As implemented (i.e., taking into account not only the activity itself but also the degree of scaffolding provided by the teacher), each activity must be pitched within the optimal range of difficulty (i.e., the students' zones of proximal development). It must be difficult enough to provide some challenge and extend learning but not so difficult as to leave many students confused or frustrated.	A2. To the extent that classes are heterogeneous, this principle identifies a dilemma that teachers can only manage as best they can rather than a problem that they can eliminate. Still, too many activities (especially those built around skills that are reviewed year after year, typically at the beginning of the year) are unnecessarily repetitive or otherwise too easy for students. Even more activities

	embody prior knowledge assumptions or procedural complexities that make them too difficult for students to understand and negotiate successfully (unless the teacher is willing to invest considerable time in advance preparation).
A2a. Implicit assumptions about students' ability to access and bring to bear relevant prior knowledge or skills must be justified.	A2a. Mere exposure to needed knowledge or skills is not sufficient; this prior learning must have been retained and stored in ways that make it accessible, as well as organized or transformed in ways that make it applicable to the activity's response demands.
A2b. Teacher structuring and scaffolding must be sufficient to enable students to accomplish the primary goal if they invest reasonable effort in attempting to do so, yet not be so extensive as to nullify the activity's value as a means of accomplishing that goal.	A2b. If students are to accomplish the primary goal, the activity must function as an occasion for them to undergo certain affective, cognitive, and metacognitive experiences in the process of performing certain tasks. If they are unable to perform those tasks, or if the tasks are (in effect) performed for them by the teacher, they will not undergo the desired experiences and the activity will not fulfill its intended function.
A2c. The activity must not combine difficult new processes with difficult new content. Difficult new processes should be introduced in the context of applying easy or familiar content. Where the main purpose is to get the students to process and apply new content, the activities should employ easy or familiar formats and processes.	A2c. Given limitations in cognitive capacity and working memory, it is wise to avoid complexities that may induce confusion or frustration. One way to do this is to make sure that either the knowledge on which an activity is based or the procedural skills needed to negotiate response demands are familiar and easily accessible to students (thus freeing most of their cognitive capacity for concentration on the less familiar aspects).
A3. Feasibility. Each activity must be feasible for implementation within the constraints under which the teacher must work (space and equipment, time, types of students, etc.).	A3. Suggested activities are unlikely to be implemented if they call for consumption of expensive or hard-to-find materials, use of specialized equipment, noisy construction work, risk to physical safety or emotional security, and so on.
A4. Cost effectiveness. The social education benefits expected to be derived from an activity must justify its anticipated costs (for both teacher and students) in time and trouble.	A4. Even when feasible for implementation under typical classroom conditions, many suggested activities require more time or trouble than they are worth (time-consuming work on murals or other construction projects, pageant-like "culminating" activities, overly ambitious or complicated simulations and games). Collage and scrapbook activities that call for a lot of cutting and pasting of pictures but not much thinking or writing about ideas linked to major goals also present cost-effectiveness problems.

Principles	Comments and Examples
A4a. The version of the activity that will accomplish the goal(s) with the least time and trouble is preferable to alternative versions that contain needless complications that do not add social education value to the activity and may distract students from the primary goal.	A4a. Frequently an activity can be operationalized in different formats (as an ordinary assignment vs. as a game; within individual, small-group, or whole-class settings; in connection with individual, competitive, or cooperative reward structures) or with different response demands (oral vs. written; respond to close-ended questions by choosing from provided alternatives vs. supplying one's own response; respond to open-ended questions by following a prescribed sequence of steps vs. deciding for oneself how to frame and organize a response). Some of these versions (e.g., those that involve converting the activity into a competitive game) may introduce unproductive or even counterproductive complications.
A4b. Any assumed prior knowledge or skill that is not already in place (so that it can be made available merely by cueing) must be taught explicitly as part of the introduction to or the initial scaffolding of an activity, and the time and trouble of doing so must be taken into consideration in assessing its cost effectiveness.	A4b. The teacher's role in introducing and scaffolding activities for students is elaborated in Section E. The issue is introduced here, however, to underscore the point that the time and trouble required to prepare students for an activity must be included in assessing its costs.

B. Secondary principles. These principles identify features of activities that are desirable but not strictly necessary. Each individual activity should embody all of the primary principles listed in Section A and as many of these secondary principles as can be incorporated in ways that are consistent with the primary principles.

Principles	Comments and Examples
B1. Multiple goals: An activity that simultaneously accomplishes many goals is preferable to one that accomplishes fewer goals (so long as it is just as effective in accomplishing the primary goal).	B1. This principle is probably the most useful one for distinguishing the best activities from other activities that also meet minimally necessary conditions represented by the primary principles listed in Section A. The best activities are affectively engag as well as cognitively instructive; provide students with opportunities to use critical and creative thinking, inquiry, problem-solving, and decision-making skills in the process of applying knowledge; and call for natural and realistic applications rather than just for isolated practice or artificial forms of application that do not connect to students' lives outside of school.

Principles	Comments and Examples
B1a. Activities that allow for integration across subjects or for inclusion of special topics (i.e., career education) may be desirable, so long as such integration does not interfere with accomplishment of the primary social education goal.	B1a. Some such activities would appear to accomplish multiple goals (e.g., assigning students to combine critical thinking skills and language arts knowledge with historical knowledge in order to write advertisements that might have been used to lure Europeans to immigrate to colonial Pennsylvania; asking them to compare historical accounts of Paul Revere's ride with the romanticized version in Longfellow's poem and to discuss differences between historians and poets in goals, processes, and products). Others, however, seem forced or pointless (e.g., alphabetizing the state capitals, matching cities whose names begin with the same letter, writing a job resume for Thomas Jefferson, looking up the geographical coordinates for Revolutionary War battle sites).
B2. Motivational value: Other things being equal, activities that students are likely to enjoy (or at least find meaningful and worthwhile) are preferable to activities that students are not likely to enjoy.	B2. This is an important but nevertheless secondary principle. Unfortunately, curriculum writers often treat it as primary and end up recommending "fun" activities that lack goal relevance, feasibility, or cost effectiveness. Another point worth noting here is that following our other recommended principles will have the effect of addressing most motivation concerns (because this will eliminate tedious, pointless, and otherwise boring activities, and because the teacher will introduce and scaffold activities in ways that encourage students to engage in them with motivation to learn).
B3. Topic currency. Activities built around currently or recently taught powerful ideas are preferable to "orphan" activities built around isolated content.	B3. Current curricula often lack coherence because they address too much content in not enough depth and because continuity is frequently interrupted by insertions (profiles of individuals or brief treatments of special topics not included in the regular text). Unfortunately, activities often focus on briefly mentioned minor details or inserted content rather than on the key ideas that are (or should be) developed in the unit.

Principles	Comments and Examples
B3a. Most activities should be continuous with the content of current lessons rather than being self-contained insertions into the curriculum.	B3a. Following this principle would eliminate not only "orphan" activities that occur for the reasons described in B3 above, but also many of the artificially forced across-subject integration activities that do not promote progress toward major goals in either subject.
B3b. Skills should be developed as strategies for applying currently taught knowledge rather than being developed through activities that comprise (in effect) a skills curriculum taught separately from the knowledge curriculum.	B3b. Following this principle would eliminate the problems caused when skills curricula are intrusively superimposed on knowledge curricula in ways that use isolated bits of knowledge as bases for skills exercises (with the result that neither the knowledge nor the skills get applied in natural or useful ways) instead of using skills as tools for applying networks of connected knowledge.
B4. Whole-task completion: Opportunities to complete whole tasks are preferable to isolated practice of part-skills, matching of words to definitions, or other work that does not cohere and result in closure as completion of a meaningful task.	B4. This principle is important for both affective and cognitive reasons. Students are likely to be more motivated and to make more significant progress toward major long-term goals when working on whole-task activities than on worksheets limited to vocabulary reinforcement or isolated practice of part-skills.
B5. Higher order thinking: The best activities challenge students not just to locate and reproduce information but to interpret, analyze, or manipulate information in response to a question or problem that cannot be resolved through routine application of previously learned knowledge.	B5. Such activities engage students in sustained and thoughtful discourse or writing about content in ways that cause them to think critically and creatively about it as they attempt to conduct inquiry, solve problems, or make decisions.
B5a. Discourse should go beyond recitation to include discussion or debate in which students articulate and defend positions on problematic issues, assess the merits of alternative policy decisions or suggested solutions to problems, develop and test explanations or predictions, and so on.	B5a. Many of the best opportunities for critical thinking, decision making, and other forms of higher order application occur during teacher-student and student-student discourse (done in pairs, small groups, or whole-class activities). Yet, descriptive research suggests that most discourse that occurs in classrooms is recitation, not reflective dialogue.
B5b. Writing assignments should call for sustained writing, not just filling in blanks or doing other brief writing.	B5b. In particular, such assignments should call for composition of coherent explanations or arguments, not just copying from the textbook or some other information source.

C. Principles that apply to sets of activities. The principles in Sections A and B apply to each activity considered individually. In contrast, the principles in Section C apply to sets of activities developed as part of the plan for accomplishing the goals of a unit or curriculum strand. Each principle might not apply to each separate activity in the set, but the set as a whole should reflect these principles (insofar as it is possible to do so while still meeting the primary goals).

Principles	Comments and Examples
C1. Variety: The set should contain a variety of activity formats and student response modes.	C1. Such variety accommodates individual differences in students' learning styles and activity preferences (within the constraints imposed by the responsibility to accomplish major goals).
C2. Progressive levels of difficulty or complexity: Activities should progressively increase in levels of challenge as student expertise develops.	C2. As students become more accomplished in meeting the demands of various activity formats, they can take on more complex assignments, assume greater autonomy in deciding how to organize their responses, gather data from a broader range of sources, and so on.
C3. Life applications: Students should get to apply what they are learning to current events or other aspects of their lives outside of school (in ways that make sense given their levels of development).	C3. Many so-called applications are confined to decontextualized "academic" examples or cases that do not allow students to apply concepts or generalizations to their lives outside of school (e.g., making predictions about a fictional country based on supplied information about its geographical features). If students are to develop appreciation for the value of geographic principles, they will need opportunities to apply them to their lives outside of school (e.g., opportunities to see how these principles help them to understand historical and current developments in their own country).
C4. Full range of goals addressed: As a set, the activities should reflect the full range of goals identified for the unit or strand. In particular, to the extent that values or citizen action goals are included along with knowledge and skills goals, the set should include activities designed to develop values or citizen action dispositions. Where the goal implies doing, activities should include actual doing, not just reading or talking about it.	C4. Publishers often claim that their curricula address a full range of goals, but the activities included in these curricula often are confined to knowledge and skill exercises, without much opportunity for application or much attention to values or citizen action dispositions.

Principles	Comments and Examples
C5. Concrete experiences: Where students lack sufficient experiential knowledge to support understanding, sets of activities should include opportunities for them to view demonstrations, inspect realia or photos, visit sites, or in other ways experience concrete examples of the content.	C5. These concrete experiences are especially important in connection with knowledge that children ordinarily do not get much opportunity to develop through their everyday experiences (e.g., conditions of life in past times or in different societies and cultures).
C6. Connecting declarative knowledge with procedural knowledge. To the extent that doing so is important as part of developing basic understanding of a topic, students should learn relevant processes and procedural knowledge, not just declarative or factual knowledge.	C6. For example, sets of activities in government and civics units should go beyond teaching facts about government (capitals, names of office holders) to include activities designed to develop understanding of governmental processes (what different levels of government do and how they do it) and citizen participation dispositions and skills (voting, lobbying).
C7. "Natural" applications: Activities that are "naturals" for developing understanding of certain content (e.g., charting to compare and contrast different Indian tribes) should be included in the set for the unit.	C7. Retrieval charts and related comparison/contrast methods should be used whenever the content has focused on different examples or cases of concepts (Indian tribes, geographic regions, governmental forms) or generalizations (population development tended to follow water transportation routes prior to the invention of motorized vehicles). Activities built around developing understanding of sequences of causes, effects, and subsequent implications are "naturals" in history teaching. So are activities built around comparison of historical events with contemporary events that appear to be following similar patterns.

D. Optional principles (alternate criteria). The principles presented in Sections A, B, and C should be acceptable to most educators. Additional principles have been suggested, however, by proponents of educational philosophies that do not enjoy wide acceptance. These principles are listed here in Section D. We do not believe that they possess the same general validity or breadth of applicability as those listed in Sections A, B, and C, and we do not include them among the criteria that we use in judging the value of activities. We list them here, however, in part to further delineate our position and in part to alert others who hold different positions to additional principles that they might want to include in their own lists.

Principles	Comments and Examples
D1. Inductive inquiry. Activities should engage students in inquiry that will enable them to induce concepts, generalizations, or principles.	D1. This principle would be favored by those who believe that all learning should proceed through inductive or discovery learning.
D2. Disciplinary inquiry. Activities should engage students in the same kinds of inquiry that disciplinary practitioners engage in (e.g., using the same investigative tools applied to the same kinds of raw data or evidence).	D2. This principle would be supported by those who favor a social science approach to social studies, and in particular an approach that features engaging students in social science research methods.

D3. Student initiation/choice. Activities should be structured around questions that students have initiated themselves, or at least around questions that they have selected (from a provided list) for investigation.	D3. This principle would be supported by those who believe that the only worthwhile activities are those that are built around the students' current interests and self-identified problems.
D4. Subject-matter integration. Activities that integrate across subject-matter lines are preferable to activities that do not.	D4. This principle would be favored by those who believe that cross-subject integration is a good thing in its own right (independent of the value of an activity for accomplishing worthwhile curricular goals).
D5. Extra content insertion. Activities can be used as vehicles for insertion of topics or content themes (career education, global education, equity issues, etc.) that are considered important but are not already included as unit topics.	D5. This principle would be favored by those who believe that it is important to find ways to infuse certain topics or themes into the curriculum (even though this may disrupt curricular continuity).
D6. Culminating activities. Curricular units should close with culminating activities that allow students to integrate and apply their learning and communicate it to others via creation of a major product or performance.	D6. This principle would be favored by those who believe that a curriculum unit is not complete unless it culminates in some major production or pageant-like activity.
D7. Homework. Students should be required to do homework in addition to assignments that they can complete during school hours.	D7. This principle would be favored by those who believe that there is inherent value in assigning homework in addition to work that can be completed at school.

E. Implementation principles. The principles in Sections A through D refer to the features of activities themselves. The principles in Section E refer to the ways that activities are implemented, and in particular, the ways that teachers structure and scaffold the activities for their students.

E1. Completeness. A complete activity ordinarily would include the following stages: (a) introduction (teacher communicates goals and purposes and cues relevant prior knowledge and response strategies), (b) initial scaffolding (teacher explains and demonstrates if necessary, then asks questions or has students work on sample items to make sure that they understand what to do before releasing them to work mostly on their own), (c) independent work (students work mostly on their own but with teacher monitoring and intervention as needed), and (d) debriefing/reflection/assessment (teacher and students revisit the activity's primary purposes and assess the degree to which they have been accomplished).	E1. This principle operationalizes the point that the key to the effectiveness of an activity is not just physical actions or time on task but cognitive engagement with important ideas, and that this in turn depends in part on the teacher structuring and teacher-student discourse that occur before, during, and after students' responses to the activity's demands. Even for an inductive or discovery learning activity, an optimal type and amount of teacher structuring and teacher-student discourse will be needed to maximize the activity's impact.

E2. Introduction. If students are to get the intended learning benefits from engaging in an activity, they will need to understand its intended purposes and what these imply about how they should respond to the activity. These understandings are not self-evident, so teachers will need to develop them in the process of introducing the activity to the students.

E2. Good introductions to activities fulfill at least four purposes or functions: (1) motivating students' interest in or recognition of the value of the activity, (2) communicating its purposes and goals, (3) cueing relevant prior knowledge and response strategies, and (4) establishing a learning set by helping students to understand what they will be doing, what they will have accomplished when they are finished, and how their accomplishments will be communicated or evaluated.

E2a. The best way to ensure that students find an activity meaningful and worthwhile is to select or design it with this in mind in the first place. Students are most likely to appreciate the value of activities that involve life applications--that require them to think critically and creatively about content and apply it while trying to solve problems or make decisions on policy or value issues.

E2a. Even when activities do not lend themselves well to direct life applications, teachers can stimulate student appreciation of the value of these activities by using strategies for motivating students to learn--stimulating students' curiosity or interest, asking questions designed to get them into a problem-solving mode, building anticipation of the knowledge or skills that the activity will develop, and so on.

E2b. Teachers should introduce activities in ways that make their goals and purposes clear to students.

E2b. Students should understand that the activity calls for cognitive and affective engagement with important ideas undertaken to accomplish curricular goals, not just completion of a series of steps to fulfill requirements.

E2c. In introducing activities teachers also should cue any relevant prior knowledge.

E2c. This might include comparison or contrast with previous activities, asking students to use relevant prior knowledge to make predictions about the upcoming activity, explaining where the upcoming activity fits within a sequence or bigger picture, or helping students to make connections between the subject-matter content of the activity and their personal knowledge or experiences.

E3. Initial scaffolding. Before releasing students to work mostly on their own, teachers should provide whatever explicit explanation and modeling that the students may need in order to understand what to do, how to do it, and why it is important. To the extent that the activity calls for the use of skills that need to be taught rather than merely cued, such instruction should include explicit explanation and modeling of strategic use of the skills for accomplishing the tasks that are embedded in the activity.

E3. In some cases, teachers may have to work through several examples themselves and then guide students through several more examples using appropriate task simplification, coaching, or other scaffolding strategies before the students will be ready to work mostly on their own. All such instruction should emphasize the use of skills as strategies for accomplishing the activity's goals and should encourage students to retain metacognitive awareness of those goals and use them to maintain metacognitive control over their subsequent engagement in the activity.

E4. Independent work. Once students have been released to work mostly on their own, the teacher should monitor their efforts and provide any additional scaffolding or responsive elaboration on the instructions that may be needed to structure or simplify the task, clear up confusion or misconceptions, or help students to diagnose and develop repair strategies when they have made a mistake or used an inappropriate strategy.

E4. Such interventions should not involve doing the tasks for students or simplifying them to the point that they no longer can be expected to engage students in the kinds of cognitive processes that are needed to accomplish the activity's goals. Instead, interventions should involve scaffolding within the students' zones of proximal development in ways that allow them to handle as much of the task as they can at the moment but also to progress toward fully independent and successful performance.

Principles	Comments and Examples
This principle implies that activities should be planned so that students will get feedback about their performance, not only in the form of information about correctness of responses but also in the form of diagnosis of the reasons for errors and explanation of how these errors may be corrected or general qualitative aspects of performance may be improved.	To the extent possible, teachers should provide immediate feedback as they circulate to monitor performance while students are actively engaged in the activity, not just delayed feedback in the form of grades or comments provided at some future time.
E5. Debriefing/reflection/assessment. Activities should be brought to closure in ways that link them back to their intended goals and purposes. For students, this means opportunities to assess performance and to correct and learn from mistakes. Ordinarily there also should be teacher-led postactivity debriefing or reflection that reemphasizes the purposes and goals of the activity, reflects on how (and how well) these have been accomplished, and reminds the students of where the activity fits within the big picture defined by the larger unit or curriculum strand.	E5. Too often, students work through activities without reflecting thoughtfully on the key ideas that they are supposed to develop and apply, and when they finish the activities they put them aside without another thought. To minimize this problem, teachers should include a debriefing/reflection/assessment phase following each activity. In addition, as they complete units or curriculum strands, they should lead the students through a review of how the entire set of activities helped them to develop key ideas and make progress toward major goals.
For teachers, postactivity assessment and reflection includes evaluating the effectiveness of the activity for enabling students to accomplish the goals.	Depending on the relative success of the activity and the ascribed reasons for it, this may require follow through in the form of remedial actions or adjustments of plans for next year.
E6. Optimal format. Where alternatives are possible, the activity should be implemented in whatever format will maximize the time that the students spend in active and thoughtful cognitive engagement (and thus minimize the time that they spend being passive, confused, or engaged in busy work).	E6. Many activities involving communicating about or debating content, for example, are better done in pairs or small groups than as whole-class activities that offer active roles to just a few students and require the others only to listen.
E7. Optimal use of instructional time. If the independent work phase of an activity calls for forms of work that are time consuming but do not require close teacher monitoring, these aspects of the work can be done outside of the time allocated for social studies instruction (during general study periods or at home).	E7. Ordinarily, students should do activities such as reading and taking notes for a research assignment, editing initial drafts for grammar and spelling, or working on elaborate illustrations or constructions during independent work time or at home (assuming that students have access to whatever resources may be needed).

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