Educational accountability is defined as "a condition of being accountable for the results . . . achieved in the elementary and secondary schools." Goals are basic to the accountability process. The effectiveness and efficiency of education are basically the responsibility of educators. The manner through which human and material resources are provided to support education is the responsibility of public groups. Agreement between the parties is essential, possibly through a written contract detailing objectives and responsibilities. School boards are accountable to the public for the selection of educational goals. Administrators and other district personnel are accountable to the school boards for maintaining a program appropriate for meeting agreed-upon objectives. Teacher accountability can be judged either by teaching ability and effort put forth or by specified pupil outcomes. Progress can be measured with a number of indices revealing the impact of schools upon the progress of students. The basic indices are school age pupil information, data on graduates, institutional information, and community information. The public is demanding proof that its educational system is doing what it is supposed to do. Colorado's Educational Accountability Act requires an accountability program in every district and emphasizes cost effectiveness. Colorado is the administering State for seven States involved in the Cooperative Accountability Project to study and provide assistance with accountability problems. (KM)
What strikes me about accountability, as a state commissioner of education, is the number of ways in which the concept is being translated. There is strength in the flexibility that a variety of interpretations provides. On the other hand, a lack of consensus about accountability can evoke fear, confusion, and resistance.

A brief but intensive experience in attempting to explain accountability has brought some insights I would like to share. In Colorado we are currently presenting this concept to a wide public. Those who are interested in learning anything about the subject ask first: "What do you mean by accountability?" It is an appropriate question and this is my answer:

Educational accountability is a condition of being accountable for the results that are being achieved in the elementary and secondary schools. It provides a basis for developing an understanding of the relationship between quality in education and the available resources in order to make educational improvements.

Goals and objectives are basic to the accountability process. This process implies a two-fold responsibility: First, the effectiveness and efficiency of education are basically the responsibility of educators. Second, the manner through which human and material resources are provided to support education is the responsibility of public groups such as state legislatures, school boards, and other citizens. The resources available must
be adequate to attain the mutually-accepted goals and objectives that have been cooperatively developed by all concerned individuals and groups.

I believe accountability, properly understood and well implemented, is a gift to parents and children, taxpayers, legislators, and educators. I think education can account for itself. In the accounting, it can develop proofs and insights to point the way to improved education.

In order to create proper understanding and to assist in the successful implementation of an accountability program, we need a corps of good translators. We need enthusiastic interpreters who bear good will toward good education. They should include parents and children, taxpayers, legislators and educators.

James Popham states that "educational accountability means that the instructional system designer takes responsibility for achieving the kinds of instructional objectives which are previously explicated." Myron Lieberman indicates that the objective of accountability is to relate results to resources in ways that are useful for policy-making resource allocation or compensation.

At the heart of these elements is the concept of agreement. Agreement, for example, is suggested in the kind of dialogue which leads to material acceptance of a negotiated, specified end. One possibility is a written contract which can include the following:

- A set of stated constraints;
- The agreed-upon ends in light of the constraints;
- Designation of responsibility in terms of who is responsible for what, to whom, and when;
Criteria for judging attainment of ends;
- Specification of the rewards and costs to include payment schedules.

When the question is raised such as "who is accountable to whom and for what?" it is noted that different participants are involved on various occasions.

School boards are accountable, or should be, to the public for everything they do. The foundation of this accountability relationship is in the educational goals. School boards are accountable to the public for the proper selection of goals and objectives in the school program.

After goals and objectives are selected, responsibility rests with the staff for the selection of instructional strategies or objectives that are most effective for achieving the identified goals. Teachers can only be held accountable within the constraints of the facilities and programs with which they have been provided.

Administrators and other district personnel are also ultimately responsible or accountable to the public. They are specifically accountable to the school board for maintaining a program which is appropriate for meeting the agreed-upon objectives. The adequacy of the instructional materials and the expectations for different characteristics of student groups must be examined. This is program accountability.

There are several ideas about what is meant by "teacher accountability." There are those who maintain that a teacher is accountable if he demonstrates that he is an able teacher in terms of his ability to teach and the amount of effort put forth on the job. This view considers the teacher as a program component, as an integral part of the instructional program.
The third type is outcome accountability. In this type, the instructional leader is accountable for specified pupil outcomes thought to be a function of teacher management of the instructional program. Teachers may only be held accountable within the constraints of the program with which they have been provided. It is generally believed that the accountability concept centers around the idea of achieving "quality" in education. Certainly, there are other aspects of accountability which are important, such as economic efficiency and close monitoring of the process of education. All these other aspects are considered operational components which lead to "quality education."

How are we to measure progress in the direction of quality education? One may respond by saying that the educational goals and objectives can provide a definition for quality education and, therefore, any progress toward the achievement of these goals represents progress toward quality in education. However, to measure progress toward quality as defined by the goals for education, we must establish an array of potential indices which can be used to reveal the impact of the schools upon the progress of students. Such an approach, with full disclosure, will serve to demonstrate both what the schools can and cannot do.

There are four basic indices from which data can be gathered: School age pupil information, data on graduates, institutional information, and community information. Within these four categories such indicators as student achievement, number of dropouts, college entrance and performance employment, accreditation data, demographic, financial, and instructional program data deserve consideration.
Not all of these indices will be of immediate use to all school districts. Some I have not mentioned may be very important. The purpose is to present a rationale or "frame of reference" for a determination of quality in education.

I believe that the American people are more vitally interested in public education than ever. In my role, I must be mindful of the taxpayers' ability to pay. I have heard their warnings and their protests; anyone looking at the appalling graph of failure of educational bond issues over the past several years has certainly heard. I take the situation and the warnings very seriously. But I believe that what the people are telling us basically is that they want some proof from the educational system that it is doing what it is supposed to do. They want to see a relationship between the money they put in, the time their children put in, the expertise that the educators put in, and the human learning that results. It is a reasonable request.

I. What are the positive aspects of accountability?

1. The public will very likely be more satisfied that the students are receiving what the taxpayer is paying for.

2. The effectiveness or ineffectiveness of specific approaches to teaching and learning can be determined as well as the corresponding costs of each.

3. Teachers, administrators, and boards of education will move toward documenting what they are doing.

What are the negative aspects?

1. Some teachers and administrators will perceive accountability as a threat.
2. Some administrators are not receptive to change.
3. If carried to extreme, cost-effectiveness becomes the dominant criterion against which educational programs are retained or discarded, accountability could spell the end of the values and aesthetic course content of the public school curriculum.

II. Where will the program lead us?

It depends:

1. If we treat accountability as an opportunity for innovation, the sky is the limit under the accountability umbrella.
2. If we treat accountability as an additional administrative chore thrust upon teachers and school administrators, it could be masked under "rose-colored" glasses when, in fact, business has continued as usual.

III. What should be the effects on instructional practices?

1. It should result in a curriculum which is based upon locally-determined objectives rather than merely following the sequence of a textbook author.
2. It could result in greater communication between neighboring school districts to share successful practices.
3. When a district employs the accountability process, and when objectives are developed by grade level for the various subject areas, in essence, the teacher has a contract with the district to teach the children entrusted to his care in such a way that the objectives are achieved.
This process in no way restricts the teacher from having freedom to use his personal teaching techniques...it enhances it.

In all of this I see no threat. It is true that much of the current popularity and push toward accountability starts with the public--acting for the most part through its legislators. But it would be erroneous to say the notion is alien to educators. We have for some 40 years been seriously searching for better ways to evaluate performance than the combination of standardized "objective" tests and teachers' "subjective" grades that still form the base for our measurement. Educational research for years has examined various performance techniques. When public, government, and profession alike demand better measurements of performance, better measurement certainly will become available.

System planning is another important element that will increase accountability of the educational establishment to its clients, students, parents, teachers, and taxpayers. It will result in greater efficiency and will avoid costly pitfalls. It relates means to ends and encourages creativity in designing alternative approaches. Time does not permit an elaboration today.

In Colorado, the order to make a giant step emerged with the passage in 1971 of an Educational Accountability Act. This act required every district (181) of the state to adopt, by July 1, 1972, an accountability program for the 1972-73 school year. Thereafter, they must report on and revise that plan annually.

This is not the place for an analysis of the act. But two aspects of it that remove any valid fear or threat do deserve mention:
1. The purpose of the act is "to define and measure quality in education, and thus, to help the public schools of Colorado to achieve such quality and to expand the life opportunities and options of the students of this state."

2. The act requires each school district to appoint an Advisory Accountability Committee including, minimally, a teacher, a school administrator, a parent, and a taxpayer. Colorado Department of Education rules and regulations further suggest strongly that each committee have representatives of students and minority groups.

At the outset, school districts found it difficult to be fully accountable until it was made clear what they were trying to accomplish. They were able to be accountable for disclosure, for exposing their products and processes as they are so that the legislature, the state board of education, and the citizens can know their needs and attempt to provide the resources to enable the schools to accomplish their objectives.

The term cost-effectiveness is used widely in the Colorado Accountability Act. It describes the results obtained in terms of the investment made in order to get the desired results from operating a program.

The school budget traditionally has been concerned with the numbers of teachers and other employees, books and other equipment which had to be purchased and assembled for the purpose of educating a given number of children.

A cost-effectiveness concept focuses upon objectives to be achieved, or "outputs" of the effort and then considers the man-
power and equipment required to obtain the desired results. One of the principles is that there must be a way to measure progress toward objectives. This, in turn, requires that objectives be defined in such a way that measurement is possible.

We in Colorado look for support from seven states that have embarked on an accountability project touching directly on this question of the roles to be played by various groups, such as the Colorado Department of Education, and on other accountability questions. The project is called the Cooperative Accountability Project (CAP) and was undertaken last April by Colorado, Florida, Maryland, Michigan, Minnesota, Oregon, and Wisconsin, with funding from the U.S. Office of Education. Colorado is the administering state.

The hope of all seven states is that the project output will be useful in assisting states and local districts to avoid some of the problems related to accountability—unnecessary pitfalls of time, resources, and the like. It is an ambitious project that deals, I feel, with the most significant issues and problems in education today. The project has established its goals and objectives, has devised programs to attain them, will measure performance and the amount spent per program, and report fully. In other words, the project itself will reflect a model for accountability.