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ABSTRACT

This paper considers how to respond to new requirements for adequate disclosure of the schools' performance to the public. It proposes the use of three powerful constructs--quality control, quality assurance, and an independent educational accomplishment audit (IEAA). The essential elements of quality control are agreeing on and specifying desired outcomes of instruction (the standards), translating the desired outcomes into measurable objectives or verifiable proxy experiences (the design), formally comparing what is actually happening with what was intended (the evaluation for conformance to design), deciding what is required to be done to achieve conformance to design (the control plan), and doing what is required when such action is feasible (the control action). The agenda of quality assurance is the organization's quality control program. An IEAA is an audit of program accomplishment, in output terms, done by an outside agency. The audit would consider the quality control in a program and the program's cost-effectiveness. The intention of an audit must be viewed as positive and necessary if organizations are to learn and change for the better. Ideally, the net effect of an educational audit will be an emergence of an increasing number of success strategies.
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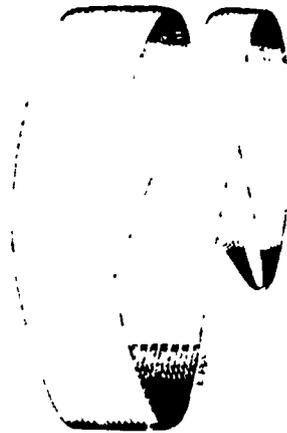
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Educational Auditing and Quality Assurance



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EDUCATIONAL AUDITING AND QUALITY ASSURANCE

In spite of continued assaults upon it, the "people's right to know" remains a fundamental tenet of all democratic societies. In education, we have the opportunity to demonstrate belief in this principle, not with preachments but with action; not by timidity but by firm resolve. We can seize the initiative to respond to new requirements for adequate disclosure of the consequences of our stewardship. How to do this, is the subject of this paper. We propose the utilization of three powerful constructs: quality control, quality assurance, and an independent educational accomplishment audit (IEAA).¹ To be considered are: what an educational audit is and is not; the relationship between quality control and quality assurance; pitfalls to avoid; functions of the audit; the spirit of the audit; and necessary safeguards.

Basic Differences Between Quality Control and Quality Assurance

Quality control is internal; Evaluation is formative and interventive. Quality assurance is external; Evaluation is summative and interventive. The principal tool of quality control is a dynamic information management system; with quality assurance, the principal tool is the external audit with its resulting report. With both processes, the operating adjective is responsive. Stated in simplest terms, quality control means formative evaluation plus timely remediation; quality assurance means summative evaluation for the purpose of feedback and redesign.

The Audit

If the educational accomplishment audit is to have face validity, it must be externally administered. The precedent for external audits is firmly established in government at all levels, in all social institutions, and private business -- indeed, in every school district in the country. True, we are talking about a fiscal audit. But why should we audit the way in which money is spent and not audit the results achieved with our resources?

Actually, program auditing has been going on a long time. Granddaddy of such audits is the General Accounting Office (GAO), an arm of Congress. Every federal law is subject to the scrutiny of GAO. So is the President. The audit has three foci:

¹/ IEAA was first described in Every Kid a Winner, by Leon M. Lessinger (Science Research Associates, 1970).

- 1- Compliance with the law;
- 2- Efficiency. Was the money allocated utilized in the most efficient manner?
- 3- Effectiveness. Were the objectives achieved?

To put matters in true perspective, there have been educational audits for decades: various accrediting associations have long performed useful audits in higher education and pre-collegiate institutions. Unfortunately, these audits have two glaring defects: (1) Although most educational auditing (or study) teams come from outside the system, the audit remains by and large, internal; (2) auditing standards are almost exclusively based on input-indicators. It is noteworthy that many accrediting groups are currently working diligently to correct this latter condition. But, much more needs to be done.

Interestingly, there may be a significant breakthrough for the IEAA. Its impetus comes not from the educational establishment, but from the Greater Dallas Chamber of Commerce and the U.S. District Court in Texas. In an "Opinion and Order" (Eddie Mitchell Tasby and Philip Wayne Tasby et. al. vs. Dr. Nolan Estes, General Superintendent, Dallas Independent School District et. al.), Judge W. M. Taylor directs the Dallas ISD to "secure the service of an independent professional firm" to conduct an independent audit and report to the court annually. A related development is the court's endorsement of the Dallas Chamber's concept of accountability. This, in itself, may represent a landmark development in judicial decisions.

Los Angeles County, under the leadership of Dr. Richard Clowes, Superintendent, has installed the most comprehensive educational auditing program in the country.² In Montgomery County, Maryland, Superintendent Charles M. Bernardo established a Department of Quality Assurance, designed to create and implement an IEAA, and all it implies.

Defining Quality

In the first paper of this series ("Quality Control: the Missing Link in Educational Management"), quality was defined as fitness for use as judged by the user. This definition applies equally to control and assurance.

2/ For more information, contact Dr. Gordon Footman, Director, Division of Program Evaluation, Research and Pupil Services, Los Angeles Co. Education Center, 9300 E. Imperial Hwy., Downey, Ca. 90242.

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Basic Elements of Quality Control

Since quality assurance is integrally related to quality control, it is useful to identify the essential elements of quality control:

- (1) agreeing upon and specifying desired outcomes of instruction (the standards);
- (2) translating the desired outcomes into measurable objectives or verifiable proxy experiences (the design);
- (3) formally comparing what is actually happening with what was intended (the evaluation for conformance to design):
- (4) deciding what is required to be done to achieve conformance to design (the control plan);
- (5) doing what is required when such action is feasible (the control action).³

Thus, the agenda of quality assurance is the organization's quality-control program. A synergistic relationship exists between quality control and quality assurance. It follows that IEAA ideally should be implemented following the establishment of a program of quality control. If the audit is performed before a quality control program has been installed, the level of threat is likely to be very high. Conversely, in organizations with sound quality-control programs, the audit will be relatively painless. For those organizations that do not have formal quality-control programs, the use of an organizational audit is suggested.⁴ This approach allows an analysis of the system, specifically in relation to quality control.

Quality and the Zero-Reject Ideal

When designing anything, few people set out to create the ordinary. Our designs are likely to represent ideal states. The polar star of educational planning is an ideal or ultimate standard. Achievement of articulated objectives is the ideal standard in education. If every student achieves every objective, then the ideal state is reached.

3/ Leon M. Lessinger, "Quality Control and Quality Assurance in Education," Journal of Education Finance, Spring, 1976, p. 504.

4/ One instrument to perform such an audit is Independent Educational Management Audit: A System Approach, by James E. Conner, Leon M. Lessinger, Roger A. Kaufman, and Richard L. McVity (Washington, D.C., College/University Press, 2141 Wyoming Ave., N.W., 1973).

It's possible to define a zero-reject ideal in symbolic terms for use in a quality control program. Such a design standard may be expressed in symbols as $B \times C$, where B is the total number of objectives served by the particular instructional program, and C is the total number of students to be trained or educated. The product BC is the zero-reject ideal: each student has successfully achieved all objectives.

Let's take an example: assume we have a mathematics program whose total output is encompassed by 60 objectives, and we have 30 students to serve. If each of the students achieves all of the mathematics objectives, the zero-reject ideal, in numerical terms, would be 1800.

It goes without saying that not everyone will achieve the zero-reject ideal. The control function, however, will provide the actual achievement allowing us to make improvement decisions on the basis of these data.

To pursue our mathematics example further, suppose that the 30 students actually achieve an aggregate of 1350 mathematics objectives (total number of objectives achieved times number of students). Let's call the actual number of objectives achieved by students, A . Now, we have the ingredients of the basic design formula for an effectiveness index:

$$EI = \frac{A}{BC}$$

where EI is effectiveness of an instructional system. In our example,

$$EI = \frac{1350}{1800} \times 100$$

or 75. (The 100 is used in the formula to avoid the use of decimals.) The 75 EI says the class was 75 percent effective in achieving the zero-reject ideal. Is this good or bad? It is neither. What we have is a baseline upon which to evaluate our efforts toward achieving an ideal. Whether 75 percent is good or bad can only be determined by considering many factors.

Cost-Effectiveness Formula

The dimensionality of the effectiveness formula can be increased by factoring in cost. Unfortunately, the present state of the art in cost accounting in education is not at a high level. Nevertheless, the development of cost-effectiveness ratios should receive high priority. The low state of the art, notwithstanding, it is possible to develop a highly useful cost-effectiveness formula, while allowing for the impreciseness of instructional program cost figures. The formula is as follows:

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$$C/EI = \frac{EI}{C} \times 1000 \qquad EI = 75 \qquad C = \$20,000$$

where C is the computed cost for any instructional program in a given classroom. Using the effectiveness index from a hypothetical classroom, on the basis of an estimated cost of \$20,000 to provide reading instruction, the figures would be computed as follows:

$$C/EI = \frac{75 \times 1000}{20,000} \qquad C/EI = 3.75$$

Suppose figures on another classroom -- with a comparable population -- were as follows:

$$EI = 68 \qquad C = \$15,700$$

Thus,

$$C/EI = \frac{68 \times 1000}{15,700} \qquad C/EI = 4.33$$

The higher the C/EI, the greater the cost-effectiveness.

The Spirit of the Audit

The Germans have a word: Zeitgeist, which translates to "spirit of the age." It is imperative that educators and the public develop and promulgate the correct spirit of the educational audit. The audit should not be punitive but facilitative. It might be useful to internalize an image of the audit as a flip card, having on one side, "audit". When the card is flipped over, it reads: "for the purpose of feedback and redesign". For the purpose of feedback, so that people may note deviations from standards and possess sufficient information to redesign systems or programs. In its finest expression, the audit contributes to development of synergistic organizations -- organizations that place a high premium on collaboration and cooperation, for the purpose of achieving results.

Gene Glass suggests that the evaluator might adopt the attitude of the therapist, who is inclined to temper judgment with such statements as: "I may be wrong but . . .", or "How do you feel about the possibility that . . .?" Such an approach by evaluators would not only reduce threat on the part of teachers and principals, but would open up additional communication and foster greater acceptance of necessary change.

In the final analysis, the whole spirit of evaluation and audit may be captured in the statement: The purpose of evaluation is to improve, not to prove.

Educational Measurements and the Absurd

The Jefferson Airplane had a song that went:

Something's happening here,
What it is ain't exactly clear.

There is obviously a high degree of opacity regarding educational measurement. Much that happens would be funny if the consequences were not so serious. But then, the only way matters may be appreciated is through humor, or within a context of the absurd.

Consider the use of standardized norm-referenced achievement tests. These tests are designed to measure individual differences; not the effects of an instructional program, except in gross terms. Take the classroom teacher who is responsive to achievement discrepancies as measured by the standardized, normative tests. What does the conscientious teacher do? Naturally, teachers provide instruction to overcome noted discrepancies. And if the teacher is successful, what happens? The item "taught to" is invalidated and thrown out by the test makers because if there are enough conscientious teachers around, the item will no longer discriminate. Thus, as soon as teachers are successful, their success is negated. Perversely, normative tests are directed at measuring failure at least for a prescribed number of the population. Children, under the normative system, are stretched on a rack of self-fulfilling prophecy known as a normal distribution. Not surprisingly, failure for some students is pre-ordained. Another unfortunate consequence of the normal distribution syndrome is that teachers also become tragic victims of "rate control," a state of mind that surrenders personal initiative to outside forces beyond one's control. The antidote to this norm-induced Weltanschauung of quiet desperation is adoption of a zero-reject ideal and learning mastery, as espoused by B. S. Bloom.⁵

This is not to suggest we throw out normative tests; it is a strong plea to put these tests into proper perspective. For one thing, the public still has great confidence in normative tests; although recent discoveries of functional incompetence among students and graduates have eroded this confidence somewhat.

It follows, assessments used in auditing should rely on a number of approaches: normative tests, criterion-referenced tests, teacher-created tests, and professional judgment. And in our pursuit of precision, care must be constantly exercised to utilize fully the latter.

^{5/} Every Kid Can: Learning for Mastery, Learning Support Systems (Washington, D.C. 20008, Suite 21, 2141 Wyoming Ave., N.W., 1973).

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Specific Responsibilities of Quality Control and Quality Assurance Unit

We have discussed the inseparability, even the synergistic linkage, of quality control and quality assurance and pointed out that the content of any quality-assurance program is the quality-control processes in an organization. Therefore, major units in education should establish a quality-control function. The general responsibilities of the unit are:

- (1) Documenting the quality specifications inherent in quality design;
- (2) Verifying conformance to design;
- (3) Reporting and triggering efforts to overcome sporadic problems;
- (4) Working cooperatively in planning to master chronic problems.

The specific responsibilities of the unit are:

- (1) Developing test situations;
- (2) Supervising the testing;
- (3) Processing and interpreting test data;
- (4) Formally communicating the results in a report;
- (5) Providing assistance and training to personnel to meet the new rigors of the zero-reject mind-set.

The Importance of the Pre-Audit

In the pre-audit stage, the organization to be audited develops a clear set of specifications, procedures, and guidelines for the audit, the substance of which constitutes the basic material for a contract with an external auditor. Matters relating to instrumentation, data analysis and interpretation, and security of data should be spelled out. Every attempt should be made so that audit results are not used improperly. The spirit of the audit should be articulated. It is also important to include a code of ethics for the audit.

A Management Audit as a First Step

Most school districts are not ready to conduct a full-

scale educational program audit; the reason being that most do not have sound quality-control procedures. For those districts that find themselves in such a predicament, a management audit is suggested. In such an audit, an attempt is made to look at overall management procedures as they relate to program design, logistics, and support.

Summary

Sound quality-control and quality-assurance practices represent a quantum jump toward increased educational effectiveness. Control is concerned with monitoring and responding to conditions as they occur (formative); assurance is a summative process to provide feedback for redesign. The intentions of both processes must be viewed as positive and necessary, if our organizations are to "learn" and change for the better. Ideally, the net effect of an educational audit will be an emergence of an increasing number of success strategies. Equally important, mistakes or discrepancies when they occur, are likely to be reduced in their magnitude. The audit, properly administered and reported, will go a long way toward strengthening the public confidence in our institutions.

Before launching programs of educational auditing, quality control, and quality assurance, the reader is well advised to study the instructive words of Aaron Wildavsky in his "Recipe for Revolution":

Promise a lot; deliver a little. Teach people to believe that they will be much better off; but let there be no dramatic improvement. Try a variety of small programs but marginal in impact and severely underfinanced. Avoid any attempted solution comparable in size to the dimensions of the problem you are trying to solve...⁶

The challenge facing educators is greater than ever before, calling for extraordinary leadership. Perhaps, what is most needed is a slight alteration of our language; substituting the word challenge for the word problem. Such a substitution constitutes not a transmogrification of language, but a transience. With a seemingly simple (though difficult) alteration in viewpoint, we begin to see problems as sources of social energy which, to be maintained, must be rooted in optimism. As John Platt states:

We see the gap between what is and what might be as the only source of power in the world.

^{6/} Aaron Wildavsky, The Politics of the Budgetary Process (Boston: Little Brown, 1974).

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