IN-HOUSE EDUCATION, RECONSIDERED

manpower development as a tool to solve present and future organizational problems

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The dependence on secondary and university education by business and industry in a high stage of technological development has been recognized[1], more widely acknowledged, if of lesser significance, is the relationship of continuing education programs sponsored by corporations to the productivity of their employees Many companies, plants, head offices, as well as federal and state agencies, have at least one "trainer"[2] on board, and the larger firms have a staff of them

Manpower training and development has become accepted as a proper and necessary part of "personnel work," while in the more forward-looking corporations it is now regarded as central to success as finance or marketing and almost as engaging as advertising and public relations In addition to in-house educational activities, seminars and special institutes conducted for supervisory and executive personnel by universities and consultants are now widely available This interest has increased as management has come to admit that many of the large problems they now face are undentable with such traditional methods as financial analysis or better engineering, and they cite the now familiar list technological change, greater sophistication of product and equipment, skills obsolescence, difficulties in managing an increasingly complex and specialized bureaucratic apparatus, more contentious relationships with unions, consumers and governmental agencies The selection and development of the next generation of managers and the redevelopment of the present generation to respond properly to change is a further concern

PROBLEMS IN THE FIELD

There is one other very large problem--or set of problems--which has brought training into prominence Managers refer to it as "motivation," a term which conceals beneath its familiarity a complex set of historical and social forces, as well as factors in the job situation, which affect the effort and productivity of employees Recent treatment of the employee motivation problem in popular magazines has lent legitimacy to such explanations as "alienation," although this concept has been in the literature for some time [3]

The recognition of management's many problems, technological as well as motivational, has led to calls for aid, counsel and doing-something-about "Communication" and "education" are more frequently seen as the way toward improvement But now that he has been at last summoned from the wings, the educator's first lines sound like excuses Academicians, behavioral scientists and training specialists explain the complexity of a situation which took well over a century to develop and point out the difficulties in effecting change The general strategy is clear, however Worker disaffection and alienation is too extensive to change directly (given the present disposition of assets in physical plant and organizational structures), so the effort must be directed toward making supervisors more effective, especially in relationship to their charges, the do-ers. The efforts toward the latter will be in job skills and predictable behavior in tending increasingly complex equipment linked in long, interdependent sequences

It is the purpose of what follows to gather together these difficult questions, questions which the training industry as a whole faces These questions have been recognized long ago in public education and have been subjected to an enormous amount of research and study by generations of thoughtful men and women They are less well formulated in industry My own preferences as to the proper direction toward resolution of some of these problems will be apparent

CURRICULUM AND NEEDS ANALYSIS

If there is any topic which suggests tedium, surely it is curriculum stuffy committees spending long afternoons in stuffy rooms, worrying over catalog offerings, requirements and prerequi-

sites! But questions about what should be taught cannot be ignored because there is no end to what people need to learn Identifying what they need to learn most, and assigning priorities for limited resources is a job that must be done, or done better, because saying, "We ought to put on a course in labor relations!" (or salesmanship or cost control) just isn't very good That's another form of managing by campaigns, and quite probably will not get at the real problems or will ignore others equally real

The curriculum problem can be seen as having four dimensions

- Employees and job requirements
- "Subjects" or topic areas
- Objectives (facts, understanding, skills, attitude/motivation)
- Methods - resources

The components and possible interactions of these dimensions are shown on Chart A

Not every combination of the four variables will occur Service repairmen will probably not need speed reading and executives will not need machine safety The types of work and the specific problems the work engenders will also vary from company to company The actual combinations of potential needs will nevertheless work out to a large educational task, especially if we consider the numbers of employees involved, increased as well by promotions, retirements, transfers and expansion, which continually require new candidates for one improvement or another Department stores and hospitals, for example, experience high turnover in their large groups of low-skilled help, and this requires a continual input of a certain kind of orientation training Apprentice tool and die makers in a machine shop will require a different set of inputs, and insurance claim adjusters still another

DETERMINING SUBJECTS

The listing of "subjects" is for analysis only and not meant to beg the question Training activities should not be determined by shopping through a parts list or menu of what's available Rather, we study the organization to find out where it is achieving its stated (and implicit) purposes and why it is not We decide whether training can help

There are several possible sources of information on where educational efforts are in fact needed Ratings by supervisors should assess developmental needs, and may in fact do so As often as not, however, appraisals mention

Chart A

POSSIBLE INTERACTIONS OF NEEDS, AIMS, AND ACTIVITIES OF THE TRAINING EFFORT

JOB OR POSITION REQUIREMENTS	SUBJECT AREAS	OBJECTIVES	METHODS
Executive management	Managing and business administration (principles of organization, problem solving and decision making marketing economics of the firm)	Understanding of general principles, concepts, structure, process, self or others	Lecture
"Professional" (legal, medical, science research accounting, engineering, teachers)	Supervisory methods and policies	Knowledge of facts and information	Guided discussion—conference
Middle management	Communication skills (interviewing, rapid reading, improving written communication, better meetings, etc)	Skill development or improvement	Open discussion
First-level supervision	Estimating and pricing	Motivation, attitude change interest, confidence commitment	Case study
Sales representatives technical, wholesale, etc	Policies of the organization and dept	Behavior change—employees will perform certain acts and behaviors in a specified way and not perform others	Simulation exercises
Skilled trades (tool and die, electrical, design, etc)	Employee motivation	Measurable results—fewer complaints delays, stoppages, errors defects, accidents, reduced cost waste, turnover absenteeism improved profit market share coverage etc	Programmed instruction (machine or workbooks)
Repairmen—vehicles, special purpose equipment	Basic electronics metallurgy, chemistry, etc		Films—video tapes—slides—exhibits
Clerical—discretionary, incl EDP programmers	Cost, waste, inventory control		Study of job manuals
Routine clerical, "office occupations"	Creativity and better methods		On the job observation/doing
Operation of construction and transportation equipment	Product line information		Coached performance
Retail sales and route salesmen	Quality control and reliability		Job rotation, internship
Assemblers checkers and inspectors	Computer programming systems design		Laboratory and encounter groups
Routine factory machinery operators	Apprenticeships—mechanical and design trades		
Warehousing packers, dockmen, custodial	Accident and fire prevention, sanitation		
Food, hospital and health care service	Machine and equipment repair		
Marginal work force (retarded illiterate, chronic health problems, culturally disadvantaged, etc)	Machine and equipment operation		
	Procedures schedules and routes		
	Customer or client relations salesmanship		
	Nomenclature and records		
	Employee benefit programs		
	Basic literacy		
	New hire induction and orientation		
	Substantive changes in most of the above		

only specific "courses" the employee needs or cite his personality defects--which only the most exotic development program can cure Moreover, appraisers often lack the ability or disposition to make a realistic analysis of what the employee needs (or needs to do) to improve or to get ready for a more responsible position, as distinct from problems which inhere in the situation A senior clerk's chronic indecision and procrastination, for example, may not be so much a matter of what's "under the skin" and therefore suggesting a course in "Judgment and Decision Making," but rather a climate of dependency cultivated by management tradition There is further the reticence which naturally arises when writing for unseen readers far up in the tiers of the organization, or when the appraiser knows he must discuss (justify) the rating with the employee In theory, of course, the appraiser's own appraisal should be based in part on how well he appraises his employees If he needs to improve, we should educate him But that may not work out much better than in the original problem!

An alternative approach is to talk to supervisors and section heads and try to get them to think clearly about where--if at all--their employees need to improve, individually and as a group The clientele themselves, at whatever level, may also have worthwhile viewpoints and from a different perspective This is not to imply they will always, or even often, know what they most need to do a better job, but knowing how they see themselves in their jobs is information we should have to plan properly They should be consulted in any case, even if only because they are the recipients of all this improvement Otherwise, it's rather grand, and succeeds in putting adult employees back in the "we know best" status of elementary school where there were no electives

Data on departmental performance, such as budget overruns, schedule delays, turnover, unit output or cost, complaint letters, and so forth, point to needs. Analysis of this data can show all sorts of deficiencies and problem situations which should be improved, some of which can be helped by training, and for some of which it is irrelevant The hard decisions arise when we are forced to assign priorities for the application of the limited available training resources Training takes time and money, it's expensive Priority setting also means deciding that certain problems cannot be handled now, and will therefore continue

LEARNING THEORY AND MOTIVATION

To discuss educational objectives as distinct from needs may seem redundant To those of a very practical turn of mind, meeting needs, resolving problems *is* the purpose and objective of education, and doing otherwise wastes time and treasure The matter is not quite so obvious, however, when nonspecific behaviors are sought or when the lack is not a specific skill as such but the willingness to utilize it, and utilize it well What is really involved here is a basic question in education, and in learning theory Part ⟶ whole vs whole ⟶ part is a convenient way to refer to it Examples of the former are familiar enough because it is the way most of us were taught, starting with 2 x 2 and a - b - c, later moving to memorizing equations and famous poems This method of learning produces early efficiency at lower levels of competence and is relatively easy to do for large groups, and where teachers are of only average quality or worse Highly structured part ⟶ whole learning (and behavioral conditioning theory) is the basis for programmed instruction, where many small bits of information are assembled one by one so that the pattern originally designed into the mosaic is imprinted in the student There are good arguments, however, that rote learning has limited potential for transfer and for cognitive growth, that the "facts" it teaches soon deteriorate or are displaced in times of rapid change, and that the process itself alienates a large proportion of students The opposite theory of instruction seeks to teach understanding, transferrable basic principles and concepts, how to find out when you don't know, how to separate true from less true, to move from the specific to the general, in short, to think [4] To further complicate the issue, some individuals profit more from well-organized and structured learning situations, while others are stimulated when learning becomes a discovery and exchange process Similarly, some instructors work best with a lesson plan (or "conference leader's guide") while others find it confining

LEARNING METHODS

All this is not mere theory spinning, but directly relevant to the objectives and methods of industrial training Much audio-visual hardware is used these days to transfer canned messages from management into the employees do's and don't's, how something operates, important information about Discussion is guided toward the official solution by prepared word charts and slides It's done this way because much of the material appears to lend itself to such presentation and because of hidden assumptions about what employees "ought" (i e , to want to do the right, want to learn the correct facts) and because of habits of telling and downward thinking Again, the practical businessman seeks results and right away, if possible A whole ⟶ part approach to learning which also requires active inquiry tends to be more time consuming, and therefore costly Free discussion/discovery, moreover, can get out of hand and lead to different solutions and understandings than one had in mind But the *application* of skills and information, especially flexible and intelligent application, depends on motivation, on volitional and interest factors, and this in turn is related to how people participate in the learning process In the education of upper management personnel, for example, techniques which are conceptual and which seek to involve learners (such as case study, computer simulation, and in-basket ex-

ercises) are widely used and appreciated

On the whole, however, motivation in industrial education operates at cross purposes Motivation to learn faces intrinsic limitations, but motivation for work is enhanced The reasons for the limitations are obvious The trainee has not selected the subject as he can do in college or even in high school, and he attends merely because he is told to His lack of commitment is more probable because he has made no personal investment in the program, meetings are held on company time, no tuition fees are charged and no grades announce success or failure His future with the organization usually depends not on what happens in the class, but on how well he does his job and how well his boss likes him Interest in learning is all the more questionable in those employees who, for a variety of a reasons, are unpromotable and know it The dissatisfactions and mistrusts an employee brings to the meeting do not help He may, for example, anticipate new duties or criticism for any one of many things he has or has not done in the past Or he may view all such meetings as futile because they are not directed toward that which is really important to him (for example, that he considers himself underpaid, unappreciated and subordinated to others less qualified than himself)

Sensing resistance, the conference leader employs several familiar tactics to overcome it He shows a "pleasing personality" (genial, ingenuous) and this is disarming to critics He promotes a fictitious equality among the participants and toward himself, and this inhibits envy and elicits a democratic climate Since there are no prerequisites and no ability grouping, the material must be simplified so no one fails to get it, and this protects self-esteem Visual aids contribute to this simplification in the process of focusing attention and keeping things lively Trainers also try to make the material interesting in itself, as well as relevant to the employee's own concerns Appealing to the sense of curiosity and a desire for competence and self-improvement motivates some employees Suggesting that the subject matter is important to the company's competitive position or profitability is effective with others These motivational efforts may or may not facilitate learning, which may or may not be reflected in the desired behavioral change and/or broadened understanding and effectiveness Nevertheless, the fact that they have been invited into a series of meetings where someone is taking the time to talk to them appears, in itself, to improve employees' attitudes and motivation in general It's a form of job enlargement Holding meetings with employees may be desirable not so much because of what is presented, but because it builds solidarity between management and employees, it renews work interest, and it provides a feeling, at least, of receptivity Probably the best motivation-by-training-as-such, although limited in applicability, is sending a supervisor or department head off to a university or a seminar Few can fail to be impressed by being so chosen, by the regard implicit in the decision of others to invest in oneself

RECRUITMENT AND STATUS

We might expect that with all these responsibilities, these demands for versatility and results, industrial training people would need to be carefully selected and serve a long indenture, finally recognized by a position of high status in the organization Such is not the case Most trainers did not start out in education, but wandered into the field by way of the usual occupational serendipity Most of what they know about the learning process is self-taught Once there, however, they seem to like their work at least as much as anyone else It's varied and engaging, asks little in the way of the common drudgery, and provides the opportunity, especially for those who like to talk, to be heard There are more than average opportunities for lunching and meeting new people There is occasionally the satisfaction of believing that one is exercising a meliorative influence

There are role conflicts, however The trainer may have something to do with development of individuals selected for, or already in, higher management positions of which he has incomplete understanding because he has not progressed that far himself Similarly, it's easy to get caught being "jack-of-all-trades"--passing himself off as an expert in all the areas he deals with cost, management, safety, salesmanship, engineering and so forth But the role conflict goes deeper Being an information agent for managerial decisions contrasts with the middling position he actually occupies, and the fact (known to all) that he often does not share in the making of the decisions for which he acts as apologist All this results in a certain amount of status anxiety, and a nervous concern for maintaining appearances

Moving toward an identity as professionals, as some of them are now consciously attempting to do,[5] industrial educators also sense a certain strain between the broader values inherent in this identity, and their status as employees Businessmen tend to think of training as a service bought and paid for like any other What the trainer should do and say and produce is quite clear to them Admittedly, history is full of creative and professional people for whom the yoke of patronage was no burden The wish for autonomy and integrity is now in the air, however, and some are finding it harder to become a salesman for a position when their agreement with it is only formal This is no idle issue of academic freedom, because the effectiveness of the training representative depends to a large measure on his credibility with his clientele His disposition toward expressing his own viewpoints and values will increasingly become a problem for him and perhaps for his employers

EVALUATION

Training is expensive, as we've insisted, and it's not surprising that management wants to know what they're getting back for their investment The question arises continually in public education

where it is not only a matter of the proper use of gross tax revenues, but of evaluating alternative methods of instruction Numerous factors have been studied class size, length of class periods, ability groupings, tracking, heuristic as against essentialist tactics, and so forth. The literature on this research is already voluminous and in educational circles the call is for even more As with advertising, there's a general feeling that half of the money spent is wasted, but it's hard to tell which half. Most of the results of this research have not found their way into industrial training, and it is doubtful if the research can be replicated here Educational research benefits not only from the labor of countless graduate students and federal research grants, but is also able to validate the effects of experimental variables against scores on recognized tests (reading level, mathematical and verbal achievement, and scholarship examinations) Such standardized measures are not, and will not, be available for the numerous and diffuse subject areas of industrial training Of course, there are basic questions as to whether the goals of education--or any other activity--are not subtly distorted to provide outcomes which are amenable to counting and measurement

INSTRUCTOR EFFECTIVENESS

One type of evaluation which is a considerable problem even for public education is the appraisal of instructor effectiveness [6] Obviously, some teachers are better than others, a few are great, but more are marginal The reasons behind these gross subjective judgments, however, are not at all clear so there's not much to do about them, without at least risking arbitrary action We are not even sure of the nature of the teacher-student transaction, the specific interactive process which facilitates learning and is specifically different from reading, watching TV, observing someone else do the work or other impersonal learning One familiar technique for evaluation is to pass out rating sheets asking trainees to report whether they found the program interesting, whether the instructor appeared to know his subject and seemed to be well organized, and so forth The objection is not so much that these brief ratings resemble a popularity contest, but that they provide no analysis of strengths and weakness as a basis for future improvement The alternative possibilities for unified, quantifiable evaluation instruments are either to agree on some ideal type of personality or set of personality traits we'd like to see for instructors, or to specify certain emitted behaviors which constitute "good teaching," or to measure teaching effectiveness by what students actually learn The first is objectionable in principle, and wouldn't work any better than it has for other positions The alternative of analysis of process behaviors could be researched and codified for general use, as the Balesian categories of interactive conference behaviors The third alternative is unlimited by the great variability of specific knowledge and skills required between companies or even within a company Attempting to evaluate the worth of a program (or its instructor) on a cost-effectiveness basis is also difficult because of intervening and extrinsic variables How can we be sure that a course in safety or customer relations really was responsible for (x) fewer accidents or (y) more sales, and that these extra dollars in turn "paid for" the cost of the training? Even where matched pairs are studied in an experimental design, much doubt about specifics (such as incremental values) remains

A more subjective but perhaps more constructive approach to teacher improvement would involve careful observations by an experienced and sensitive diagnostician He would work with each individual instructor to develop understanding of how he performed with the group, to help him become aware of where he needed to improve, to suggest ways to improve consistent with his own personal style and to provide a source of possible modeling. This instructional diagnostician would work in much the same way as a drama coach or golf pro, patiently, intelligently and supportive of individual strengths and aware of inherent weakness Coaching would be assisted (now that such equipment is generally available) by joint review of video tapes of the individual performance These diagnostic and counseling services could best be provided by an outside consulting company and would fulfill a real need in developing the competence of training people This improvement, of course, is applicable where the trainer is personally involved in instruction rather than administration of programs

CONTENT EVALUATION

The other important area of evaluation is *content* Gross error in educational material is weeded out as a matter of course, but attention to content doesn't end there Training people have the responsibility to criticize and recommend rejection of material which is wrong not only because false, but when superficial and oversimplified A good example of what I have in mind is observed in educational films produced for showing to business and industrial audiences Films offer great potential educational value in that they attract and focus attention, provide variety and interest, summarize and emphasize important topical material, and serve as common cognitive base for group discussion There are hundreds of films now in circulation which are of interest to management and employees, and the production of non-theatre films of all kinds [7] is big business The economics of this business, however, have a direct influence on content and educative value The films themselves must achieve early currency because they have a relatively short shelf life and audiences are quick to note and discount the "dated " Production costs require relatively simple and brief (15 to 30 minutes) treatment, while potential markets, either sale or retail, require broad, widely applicable treatment of subject matter Many subject areas, particularly those of most concern to management, such as "employee motivation" or "im-

proving communication," present inherent complexities which are difficult to state and resolve in this limited format [8] The result is too often a product characterized by cliches, cant, slogans, guff, banalities, newspeak and irrelevance It's not what we need to help understand and solve our problems These faults, so obvious in films, may be present as well in package training programs, the proprietary assemblages of slides, tapes, leader guides, tests, handouts and so forth, which are becoming increasingly available on the training scene When meretricious programs are offered to management, the resident training specialist has a responsibility to speak up and protect his employer's cash, even at the risk of giving offense to an otherwise smiling merchant His hard decision is then not only to look further, but whether, having so looked, to use the second or third rate because nothing better is available, or to put together a worthwhile alternative

ORGANIZATIONAL DEVELOPMENT

This, of course, is one of the newer arrivals on the management stage Lacking anywhere else to go, it is frequently assigned in with the training function, and for those who are able to make the transition, OD presents a most stimulating challenge Certain inherent difficulties must be anticipated, however While many of these have to do with diagnosis and strategies for change, I am more concerned here with their effect on the training man himself

After its initial successes in loosening up communication and returning a sense of unity to a typical dysfunctioning bureaucratic industrial unit, OD easily leads to conflict as it pursues its mission The convenience of and predictable responses to authority are replaced by imprecision and delay, the interminable consultations of participation, the mystique of office is scrutinized by former "subordinates", previously secure tenants see themselves being dislodged as hierarchical structures begin to be dismantled, participation which begins at management's invitation on subjects of its choosing gets out of hand and moves to areas previously considered sacred, such as rewards or the tenure of the administration The training specialist then finds himself in the center of stresses he has helped engender as "change *agent* " He releases new as well as previously buried hostilities, he is aware of tensions from competing loyalties He encounters the ambiguity of leading away from known ways to unmapped territory It's familiarly said that he must be "willing to confront conflict and change" but it will be interesting to see how many do Contemporary organizational society is not noted for nurturing heroes although they are much admired

ASSESSMENT OF MANAGERIAL POTENTIAL

Another of the educator's (frequent) assignments is to assist in the identification and development of the future successors to present management Although the best and most promising candidates for selection are normally sought, trainers should be aware that difficult problems are involved in doing the task even moderately well One of the important questions concerns agreement on criteria, those standards of behavior or sets of qualities which determine who is (probably) qualified for advancement, and who is not There are questions as to the validity of the data we have for making judgments, derived from limited opportunities for observation and who is qualified to make such decisions Another question has to do with the general, and continued, relevance of our present standards of success or failure, not only for the various levels and positions in the management structure, but for the way the job, the organization and the business environment will be 10 or 20 years from now The educator, as "internal consultant," has the responsibility to persuade today's management not to choose tomorrow's leadership on the basis of yesterday's standards Furthermore, the integration of management ranks with minority group--and female--employees will require clarity of perception and realistic criteria based on actual job requirements, rather than the narcissistic search for people "just like us" upon whom to bequeath the aggregations of corporate influence

PROSPECTS

Both technology and the socio-cultural system continue to move forward (or sideways) as if with a life of their own, and in doing so, exert pressures and pulls on the business enterprise for response, adaptation, change The best agency for influence and change is thought to be, in its broadest sense, "education " The expectations now held for business and industrial education are reminiscent of the great expectations once held for universal free public education and universal literacy

We hear about the importance of communicating, and "if only we were able to convince our employees that " Informing and persuading goes on by way of numerous meetings, posters, promotional campaigns, booklets, letters, lapel pins, slogans, films The air is full of messages these days, so senders turn up the volume Experience with the outcomes of certain past efforts (facile "Human Relations" programs, e g) has made us aware of the limits of talk, by itself, as a method for producing change This is not to slight its wide cognitive value, or even its personal therapeutic potential (as in T-groups) Talking is also the active functioning of intelligence, in analyzing, summarizing, clarifying, defining, comparing, valuing It can also be the means of providing support to individuals who are ready to change and to grow, but who need encouragement to do so There is a point, however, when ideation and articulation fail in their effort when unaccompanied by alterations in objective conditions or structure Where these are joined, the educator may indeed enjoy high expectations

REFERENCES

1 Galbraith, J K , M Harrington, and P Goodman have detailed this

symbiotic relationship, *passim*

2. The title of "trainer" has connotations not only of conditioned performance, but of transitiveness However, "to motivate" and "to manage" (people) are also transitive and all three terms are in general use

3 See "Blue Collar Blues on the Assembly Line" and "It Pays to Wake Up the Blue-Collar Worker," J Gooding, *Fortune*, July and Sep , 1970, also "Blue Collar Worker Blues," *Time*, Nov 9, 1970

4 Programmed instruction advocates are offended, of course, by suggestions that they don't also teach people to think and then go on to behaviorist arguments that if you can't observe and measure thinking (or anything else), you shouldn't be talking about it anyway This complex and quarrelsome subject is outside the scope of this paper

5 Typical statements of the current movement are "The Training Director Toward a Professional Status," N Allhiser, *Training and Development Journal*, May, 1970, "Professionalism in Training and Development," H M Engel, *Journal*, Jan , 1970

6 An excellent summary of teacher appraisal is contained in a recent study, "Selection and Evaluation of Teachers," by D L Bolton for the U S Office of Education

7 See, for example, the thick catalogue, "Educators Guide to Free Films," (Educators Progress Service)

8 The problem is compounded when the producers try to outguess (rather than research) the prejudices and intelligence of the presumptive audience and avoid rejection by being "too controversial" or "too theoretical " When the aesthetic ambitions of the directors may be modest as well, we are treated to wooden actors reading awful lines or flunked Hollywood types attitudinizing and being generally unreal Story lines resemble daytime TV or old movie reruns Settings are empty and sterile "offices" or alternatively, richly decorated interiors which suggest the mythological country of advertising executives

COMMISSIONER SAYS EDUCATION SHORT OF ASPIRATIONS

U S Commissioner of Education Sidney P Marland, Jr., predicts that in the next five years the United States can accomplish more improving education than it has managed to achieve in the past 20 years

This observation was made by Dr Marland as part of his first report to Congress required by Public Law 91-230 The law calls for the commissioner of education to discuss "the condition of education in the nation "

"We know that ours is the greatest educational system ever devised by man," Dr Marland declared "But it falls short of our aspirations We must improve it "

Recalling that the United States will celebrate its 200th birthday in 1976, Dr Marland said, "I would suggest this bicentennial year as a useful deadline against which we measure our capacity to effect change and sincerity in seeking it "

Dr Marland called for more concern in providing children with exciting, rewarding and meaningful experiences, in and out of the formal classroom environment. He added that Americans must provide an education that will enable young people either to elect to prepare for higher education or to enter "immediately into satisfying and appropriate employment We must eliminate anything in our curriculum that is unresponsive to either of these goals "

Dr Marland also observed, "The sheer size of the American commitment to education is amazing, with over 62 million Americans actively engaged as students or teachers More than three million young men and women will graduate from high schools throughout the country in June 1971, as contrasted with fewer than two million 10 years ago Nearly 8.5 million students are enrolled in higher education as contrasted with slightly more than four million 10 years ago "

Among Dr Marland's many recommendations is that the nation set aside the traditional boundaries of learning, "the days, the hours, the bells, the schedules "

He added, "Let us find ways to keep more schools open 12 to 15 hours a day and 12 months a year to make sensible contructive use of our multibillion-dollar investment in facilities and personnel Let us construct a school environment sufficiently systematic to be responsive to young people, yet informal enough to enable youngsters to come and go in a spirit of freedom and honest interest "