

PREPARING THE PUBLIC WORK-FORCE FOR THE TWENTY-FIRSTCENTURY:

THE CHALLENGES

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ABSTRACT

The challenges of preparing the public work force for the future are a tall order. Not start with an agreed upon or clear definition of what we are likely to face in the twenty- first century; administrators of different ranks and in many agencies must reach an agreeable definition of what they consider to be a common present. The fable about the three blind men trying to describe the elephant to each other can easily represent the efforts of agencies to define a common situation. Without such a common definition of the present, each agency and each administrator would have to come up with their own courses of action to prepare for the twenty-first century. Each plan of action would then correspond to that agency or manager's assessment of the present situation. The result would be tantamount to customizing the effort to train employees on a case-by-case basis. The prospect of individualizing the preparation of employees on an agency-by-agency, bureau-by-bureau basis is not be forgotten as we search for a way to deal with this important issue at the system level.

Keywords: - Public Workforce, Government, Administration, Technology, Policy

INTRODUCTION:-

The twenty-first century is knocking at our doors, but do we know how to greet it? We know it's there waiting for us to let it in, but what are we likely to face when we open our institutional doors? What opportunities, uncertainties, or threats would it bring? Will we recognize the twenty-first century when we see it, or might confuse it with something seen before? Might we mistake an issue we should be prepared to deal with in the next millennium for a controversy of no significance? For government agencies the calendar is not much help. For public administration the twenty- first century is more than just a date. It is a state of affairs, a set of behavior patterns, opportunities to be explored, and risks to be avoided. Confronting the twenty-first century means emerging from a relatively certain past to confront an unsure future.

If only knew what the twenty-first century holds for us, we could prepare for it. But the difficulty to do so starts with the uncertainty about what we might find as we turn to write the next page of the history book. As administrators, we have devices that allow us to see what lies ahead of us as long as the road is straight, as long as there is continuity. We know how to extrapolate from the present into the future, and we think that we know how to handle probabilities. But we are helpless when it comes to dealing with issues that have relevance or even dysfunctional for dealing with emerging situations.

As public managers or as students of public administration, we have an image of the present. Yet, we must always be aware that we cannot be too sure about the accuracy of that image because it is subjective. We may use our notion of what reality is to guide our actions; however, that notion may only be as accurate as the shared image of a flat world, the image that influenced decision making in the pre-Columbian era. In short, we must be on guard against defining reality by relying too heavily on our past experiences. We must be willing to be discovering of new models, those which address and finally overthrow current orthodoxy. Unable to break away from the past, Columbus mistook the Native Americans for "Indians". He examined the reality he was facing without recognizing the irrelevance of his past experience.

Theoretically, only in hindsight, after all the facts have been collected and shared, can we accurately contemplate the parameters of a given situations. That kind of post-audit function we call the subject matter for study by historians and forensic experts. Yet, even in hindsight, descriptions of a given situation can vary with the vantage point of the observer. Recent changes in the personnel studying the Dead Sea Scrolls have resulted in a slew of new propositions challenging the 40-year-old certainty about the identity of authors. These developments in the case of the Dead Sea Scrolls suggest that even in retrospect it may be difficult to decide what the facts are. Yet public administrators are expected to have a future orientation to prepare for events ahead so that the ship of state will not be rocked by random events. To chart a course into the future, administrators must study the present, and do that as honestly and as accurately as possible.

OBJECTIVES OF THE STUDY:-

1. To study the history of preparing the public work force
2. To examine the challenges of public work force
3. To inquire the Technology and the context of Government

METHODOLOGY OF THE STUDY:-

The relevant secondary sources have been collected from various reports and documents f journals and various Magazines.

CONFRONTING THE EMERGING DEFICIENCIES:-

The difficulties administrators are likely to experience defining the present pale in comparison to those that arise in defining the future. Consider that in all countries, virtually every daily newspaper records a story about the failure of public managers to address important problems (the present). The lack or the inadequacy of action by a government agency has many times to do with the very same reasons that prevent administrators from dealing adequately with an issue at the present are likely to be the explanation for their failure to anticipate it.

The professional literature on agenda setting and policy-making addresses the reasons why agencies ignore some issues and tend to other1. For our purpose here, it is important to emphasize that the issue administrators will need to address in the future are, in part, a function of the issues the neglect or address in the present. Recognizing the importance of addressing or neglecting present issues in governmental

affairs may suggest a way for dealing with the challenge of preparing public employees for the twenty-first century.

The thesis of the rest of this paper is simple: if we cannot define the issues public administrators will have to address in twenty-first century, we should at a minimum make sure that they are ready to deal with today's problems. Though reality is not composed exclusively of problems of the moment, the present one part of reality that administrators are likely to be aware of (by definition), a segment of reality they cannot (and should not) ignore. My thesis develops from the propositions that: (a) public managers will find it relatively easy to make the necessary adjustments for dealing with twenty-first century issues if the adjustments are incremental (i.e., evolutionary) in nature-easier than if they require agencies to leapfrog into the twenty-first century (and go through a revolutionary change) all at once. And, (b) that the gap between the skills of younger employees and that evolved from the use of newer information technology at an earlier age and the skills of older employees may cause many problems². The two propositions deserve additional discussion. Since the second proposition requires the discussion of a boarder topic-the socio-economic characteristics of the public workforce after the year 2000, I will concentrate here only on the first one.

Even today there is a gap between what agencies can do and what they should be able to do in order to deal with twentieth century issues in an optimal manner. This gap is a result of incremental adjustments to the changing conditions. Arguing the logic of the incremental approach to policymaking, Charles Lindblom claimed that successive and rapid incremental adjustments can bridge the gap³. However; Lindblom was better at describing the reality of the policy-making process than at prescribing means to improve it. The nature of management in the public sector, which Lindblom labeled "muddling through", is not conducive to a rapid succession of changes. Thus, the pace of the incremental adjustment can never match the rate at which the work environment of public agencies changes, particularly in recent years. Without immediate steps to close the ensuing gap between the level at which agencies now act and the level at which they should be able to act, the ability of government agencies to cope with the uncertain future that awaits us in the twenty-first century grows weak.

A brief illustration may shed some light on the issue. During the last decade it was assumed by NATO and the Warsaw Pact countries that the capacity of sub-governments of the respective countries to deal with natural and man-made civil disasters could be augmented, if necessary, by mobilizing the available military resources. Indeed, from time to time, governments in the East and West had opportunities to prove this assumption right. In the aftermath of the changes that took place in Eastern Europe in the late 1980s and early 1990s, this assumption may be without a base. As the United States and its NATO allies in the West and the USSR and its Warsaw Pact allies in the East cut their defiance expenditures, the capacity of the two military organizations to help other government entities is no longer available for the future. Governments can no longer assume that soldiers will be available to help in rescue operations, enforce the law in the face of civil unrest, or pitch in when critical services, such as mail or garbage collection, are disrupted.

Yet, economic and political dislocations around the world slow down the pace at which governments, at the national and sub-national levels, are likely to make the necessary adjustments. These conditions which slow down the pace of adjustments are the ones diverting the attention of elected officials from the

need to prepare for the contingencies that could have been dealt with in the past with available military help. Geopolitical developments have shifted the limelight away from the need to address the growing disparity emergencies. The nature of public affairs is such that the seriousness of the gap is not going to become an obvious issue on the public agenda until after the next emergency.

ABSORVATIONS OF THE STUDY:-

The need to follow up, to digest, and to react to the global changes we have witnessed in recent years (and those anticipated in Western Europe after 1992) have made the need to address domestic policies and improve governmental mechanism required for their implementation secondary in importance. A case in point is the deep involvement of President Bush and his aides in the early 1990's in foreign affairs concerning the European, Middle Eastern, Asian, African, and Souththern American theatres. This involvement took place in spite of severe economic and social problems at the home. However, the changes that shape the global village of the 1990's are influencing the work environments and the contingencies that will face agencies in the future. The ability of agencies to handle these contingencies will depend on how far behind they are, from a management point of view, from being able to address the present in an optimal manner.

To bridge the gap from the 1990's to the 21st century, government agencies must:

1. Understand the immediate and the potential long-run productivity implications of information technology.
2. Continue development of management thinking and managers' ability to apply new concepts and approaches to their dairy practices.
3. Review and modify, if necessary, the way subordinates interface with their superiors and the organization.

In the rest of this paper I intend to explore some of the issues involving information technology because those issues have a direct bearing on what can and must be done to address both new managerial concepts and worker interface challenges. Understanding how the matter of information technology impacts on present worker' readiness can explain why and how we must bring the existing work force to terms with a key component in the effort to address present and future problems in public administration.

IMMEDIATE AND LONG-RUN IMPLICATIONS OF INFORMTION TECHNOLOGY :-

For several years the assumption was that the advent of information technology by itself is capable of improving productivity. The productivity gains were going to result from the following the attributes of the new technology:

- a) The ability t store and retrieve large amounts of information.
- b) The ability to update and share information on-line across bureaus and departmental lines.
- c) The ability to perform more powerful and more comprehensive "what if" analyses of date for better mapping of the likely results of alternative decisions under various contingencies.

- d) The ability to decentralize decision-making authority, to allow personal and professional growth on the job as a result of using expert programmes, and to individualize jobs to meet the habit and work preferences of individual employees.
- e) The ability to speed up the creation of official documents that agencies are expected to produce.
- f) The ability to harness the benefits of organic organizational structures through the use of groupware, which facilitates collaboration and greater exchange of information, without abdication of formal structures and thus, issues of responsibility and accountability

While these abilities can improve the productivity of public agencies, for the reasons that will be listed below,

Their potential contributions are not always realized. As a matter of fact, without the proper attention by managers, information technology's contribution to the productivity of public agencies may even be dysfunctional. Government may simply repeat the experience of the rest of the service industry and witness a decline in white collar productivity. Northrop et al. concluded from their study of 37 leading-edge cities in the United States that "the expected payoff from automation has been slow to be realized, but that may be the nature of the "beast". I prefer to address this issue as the paradox of declined productivity due to improvement in information technology.

THE PARADOX OF INFORMATION TECHNOLOGY AND PRODUCTIVITY DECLINE:-

Due to the proliferation of computers, cellular phones, fax machines, global paging, and instant news coverage, public managers are expected to react more quickly and in a better way to developing situations. The quicker pace of events is influenced by the new capacity to share information instantly, the connectivity of domestic and foreign markets within the global village, and the immediate reactions in any given public (policy) arena to the (real or anticipated) ripple effects of occurrences in any other public or private arena.

Most public officials are already aware of the need to react more quickly. This is one of the reasons public agencies invest heavily in sophisticated, albeit very expensive, hardware and software. Such investments are expected to facilitate quick but informed decisions on the basis of a very current set of data and by the use of the most thorough analyses of the implications of alternative courses of action.

However, the willingness and ability of managers to invest in computer technology is not always matched on the human side of the enterprise. According to Byrd and Ikerd, there is a gap between what the hardware and software can do and what the average user can get out of them. This finding corresponds to an earlier observation of Klay and Yu that computers help government to produce a copy of the budget proposal but do not contribute to improvement in policymaking. Like earlier studies of the private sector, Nelson and Byrd and Ikerd identified a gap between the organizational knowledge that information personnel should have about their agency and the knowledge they actually possessed. A corresponding weakness was observed concerning the knowledge other employees had about information technology along with a deficiency in the technical skills for using it. The technological ignorance of line managers, who from this knowledge and skills deficiencies.

The common practice of many agencies is to treat the investment in hardware/software as a capital budgeting issue and to keep training as a line item in the regular budget. As long as the two are not studied and dealt with together the disparity between the knowledge and skills that are needed and those

Possessed by employees is not going to be reduced. As a matter of fact, the developing trend to contract out more aspect of the information management function is likely to widen gap.

For our purposes here, the paradox of declining productivity in the face of new information technology s simply put: in relative terms, as improved of new information technology becomes available, the ability of agencies to exploit it declines. Because making automatic does not imply being informative even though agencies can do more with advanced technologies than they did in the past, there is a widening void between their actual performance and their potential performance. The disparity between what could be obtained by full utilization of a given high-tech information system and what is actually being used expresses the (relative) decline in productivity. The discussion of this paradox requires us to differentiate between what bring this phenomenon about and what makes this phenomenon a paradoxical one.

TECHNOLOGY VS. TRAINING OR TRAINING FOR TECHNOLOGY:-

The problem of resources is one of the explanations for the widening gap between what the installed hardware/software can do and ability of agency personnel to utilize it. Typically it is easier for agencies to obtain the necessary funds for replacing or upgrading an information system than it is to fund the training to use it. One reason is that the hardware and software components of the information systems are tangible commodities. Public officials can relate to them so objects of aesthetic value (slick machines with dazzling performance), they can display them as well as their own technological savvy. Visible forms of technology-computers-allow public administrators to compare their agencies favorably to the competition (I.e., other agencies or individuals or organization technology they are expected to regulate, who are also using sophisticated information technology). To justify the appropriations for hardware and software, politicians resort to the use symbols such as public safety, national security, economic interests, or national pride.

To justify the request for such appropriations, public managers use a language that reminds their audiences of Churchill's "give us the tools and we'll do the work." Funding the training for using the hardware and the software, however, is a different story.

Funding for the necessary training of government employees lags behind expenditures on hardware and software for one or more of the following reasons:

- a) The cost of training involves not only direct cost of the training itself but an indirect cost that results from the inability of the employee to devote full-time attention to regular duties. Since mastering the use of more advanced technologies may imply a longer training period, the associated costs escalate rapidly. Consequently, agencies look for shortcuts and crash courses, shorter in duration and inexpensive. These shortcuts may be the main reason for the inability of employees to use the most advanced (and thus the most expensive) features of a given system.

- b) Many managers are willing to believe that those who are intelligent enough to use the technology should be able to learn it on the job capitalizing on their knowledge of earlier forms of information technology. This attitude does not allow for the challenges to the learning process that often come into play, challenges to which anybody who switches from one word processing programme to another can testify. It ignores the dysfunctional effects of learning, i.e., that learning how to use one system. This, too, contributes to learn and demotivate the use of another system. This, too, contributes to the under-utilization of new and different features of a new software and hardware. These features may not only be the most expensive element of the cost for obtaining the new capacity but the actual justification for changing the system.
- c) Most agencies lack the logistical capability to deliver the necessary training to all the primary and secondary users of a new information system within a short period of time. Usually, a correlation exists between the complexity of the new hardware/software and organizational characteristics,

Such as the size of the agency (number of employees), the intricacy of the process it uses to carry out its mission (i.e., what students of organization theory call the core technology) the complexity of its work environment (the public it serves and its stakeholders), its geographical spread (the number of locations and time zones), or the possible consequences of its performance for other agencies. Each one of these characteristics may be the impetus for the introduction of a new information system. Each one may also be the obstacle for delivering the effective training that helps the agency within a short period of time to exploit all the potential of the new system.

Due to any one of the above organizational characteristics, the move from the old to the new information system must be gradual. Unlike many organization in the private sector, most public agencies cannot shut down for an extended period of time. Unlike their counterparts in the private sector government agencies cannot assume that “the market” will deal with a temporary decline on the supply side while all their employees get the necessary training and convert from the old to the new. In the aftermath of the conversion fiasco at the U.S. Internal Revenue Service (IRS) that took place in the late 1980s, public managers in the U.S. are moving with even greater caution. That means that the introduction of any new system is gradual. Before starting the transition, managers want to assure compatibility between the new and the old. Though commendable in one sense, this ounce of precaution increases the cost of the transition and can postpone, if not prevent, the introduction of the most radical changes. For the sake of compatibility with the previous information system managers are willing to forgo new features that can move an agency from one performance curve to another.

Give the place of changes in information technology, by the time the overly cautious agency has adequately trained their weakest users of a system's advanced capabilities, the agency could already be exploring, if not introducing, the next generation of informational technology. Under such circumstances managers may have little motivation nor rationale to request or spend resources for completing the training. In particular, managers are likely to be reluctant to ask for funds to complete the training of some employees for the use of an existing system when they expect to put in a request for the funding of an upgrade.

From the point of view of productivity, the logistical inability to train employees to use the most advanced features of a new system within a limited period of time (and thus, to sanction an agency-wide use of these features shortly after the introduction of a new system) implies that agencies can never realize all the potential performance of any given information system.

- d) Finally, traditional attitudes toward training make it the first victim of any budgetary cuts. Agencies have an easier time making a connection between computer hardware and software and expected performance than between training and performance.

INFORMATIONAL TECHNOLOGY AND THE CONTEXT OF GOVERNMENT:-

Though the gap between a system's potential performance and an employee's ability to exploit it may be explained by a lack of training, the productivity loss due to the inability of government agencies to use all that a given information system can give them is only a part of the explanation. Another part of the explanation has to do with the influences of information technology influence the context for government action has to do with the government's mere willingness to use new technologies. I have pointed out elsewhere (Halachmi : 1988, 1991) that government agencies cannot lag behind in the Technological advances used by those they are expected to regulate⁹. However, the opposite is also true. To use an analogy, as soon as police departments introduce a new radar gun to catch speeding motorists, drivers upgrade and purchase new warning devices that can detect the new radar devices.

Yet, advancement in information technology has an even more profound effect than the one suggested by the radar gun analogy. The ability to retrieve, store, analyze and manipulate large amounts of data at an affordable cost broke the government monopoly on information. Existing information technologies allow non-governmental entities to obtain a capacity that used to be reserved for government alone. Orwell's "Big Brother" may have been cloned many times, and not only in the public sector. In the past, due to legal constraint and cost, only government agencies were in position to collect, analyze, and share with each other vast amounts of data and information about various actors or groups in their respective areas of action. The new information technologies allow non- government entities to retrieve information from a variety of sources and to compile a data bank that is similar or even better than ones in use by some major government agencies. With the new information technology, non-governmental entities can gather the kind of data that government agencies collect directly. They can do this through manipulation of data and information that is available from governmental and non-governmental sources¹⁰.

Knowing what data an agency is using in order to reach a given decision allows non-governmental entities to predict government action and to position themselves accordingly. A case in point is the availability of cheap software Packages that can evaluate whether an income tax return or any claim on it may trigger an audit

It seems that one reason for the decline in governmental ability to influence events in any given arena is a function of the ability of a pending decision. The ability of the other actors, as pointed out earlier, is to some extent a function information technology they are using. These actors consider the characteristics of a government agency's information system in selecting and designing their own information system.

Another problem for government is the way in which information technology influences the context of government action by altering the time dimension. With the increased use of computer networks, groupware software, satellite communication, fax machines, cellular modems, groupware software, satellite communication, fax machines, cellular modems, and penbased notebook computers, more and more decisions are made in real time. Information about each decision is disseminated instantly. The constant update of files that can be accessed by multiple users that are not aware of each other and the instant dissemination of the information about the decision that was reached make a change, due to the instant triggering of actions and counteractions by many other players, managers may be tempted to do the safe thing rather than the best thing. The present state of information technology deprives decision makers of the luxury enjoyed by their predecessors-to make a decision and reflect on it before it is executed. Delaying an action in order to reflect implies the need to collect more information since the working environment of the agency is likely to change in reaction to the delay of the expected decision. This, in turn, may induce decisions that are unduly conservative or more daring than those that used to be made in the past when all organizations used a less developed and slower information system.

Yet, even as a governmental player is forced to make decisions in real time, other moves made simultaneously in reaction to the same development by other governmental and non-governmental players change reality and, thus, the intended consequences of a given action. The plunging of the financial market in New York in 1987 illustrates the possible consequences of this brave new world. The ensuing decision to restrain the use of computer-triggered selling in the stock market is an attempt of the market's regulators to regain control. Other government agencies may not enjoy the same ability to influence activities in their respective arenas of action.

Another salient illustration of the paradox of productivity and information technology can be observed at the level of the individual employee. As employees are provided with programmes that are capable of more complicated desk-top publishing out of word processing or fancy graphics out of spreadsheet programmes, more time goes into the polishing of the appearances of printed presentations and less into the completion of other tasks. The decline of productivity is particularly observable in the case of managers. The easy access to a personal computer tempts many managers to carry out the clerical aspects of a given task instead of assigning it to their capable but less-skilled and low-paid support staff. Thus, many highly paid and highly trained executives end up doing the job of less-skilled and low-paid personnel, leaving managers with less time to do their own jobs, i.e., make decisions, meet the public, or supervise their employees. Thus, computers can reduce productivity by subverting the division of labour in one direction. Unfortunately, information technology can undermine the division of labour in the other direction as well, i.e., by escalating the performance of a task to a higher level than the one at which it should be completed.

CONCLUSION :-

Citing several studies, Zachary suggests that contrary to expectations, computers do not improve productivity at least partly because the added data delivered to workers do not lead to better decisions. The reason is that most employees are incapable of handling and comprehending various kinds or large quantities of data. The present state of the informational arts facilitate the conversion and the simultaneous presentation of various kinds of data in graphic form, which is easier to understand.

However, most government employees are not able to do the conversion on their own to facilitate the completion of tasks that are assigned to them. They tend to avoid chores that involve manipulation of large amounts of data deferring them to other employees. This, too, reduces productivity because the increasing distance between the point where the data is being manipulated and point where it is being acted upon increases the odds of mistakes.

It is not easy to deal with these and all the other aspects of the paradox of productivity and informational technology. However, the decision to deal with the human component of the performance equation is possible and is very promising in terms of its potential to improve the return on the investment in hardware. Training activities that can bring the existing work force to terms with the information technology of the 1990s is a pre-requisite for preparing employees for the 21st century. Regardless of what the issues in the twenty-first century are likely to be, to take them the government work force will have to rely on the information technology of that time. The move from the multi-media, Object-oriented, portable, high-speed and high-capacity 2000 s technology to a 2020s technology will be more feasible than the leap needed from a 1970s or even a 1990s technology.

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