

Decision-Making Theory

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A general theory of administration must include principles that will insure both correct decision making and effective action (Simon, 1947). The task of “deciding” is fundamental to administration, and there is a variety of strategies for deciding. The following descriptions focus on contemporary views and concludes with a synthesis and contingency model of decision making in educational organizations (Hoy and Miskel, 2013).

THE CLASSICAL MODEL: AN OPTIMIZING STRATEGY

Classical decision theory assumes that decisions should be completely rational and optimal; thus, the theory employs an optimizing strategy that seeks the best possible alternative to maximize the achievement of goals.

1. A problem is identified and framed.
2. Goals and objectives are established.
3. **All** the possible alternatives are generated.
4. The consequences of each alternative are evaluated in terms of goals.
5. The best alternative is selected—that is, the one that maximizes goal achievement.
6. Finally, the decision is implemented and evaluated.

The classical model is an ideal (a normative model), rather than a description of how administrators really make decisions. Most scholars consider the classical model an unrealistic ideal. Why?

- Decision makers virtually never have access to all the relevant information.
- Generating all the possible alternatives and their consequences is impossible.
- The classic model assumes information-processing capacities, rationality, and knowledge that decision makers simply do not possess.

Although it may be an ideal, the classic model is not very useful to practicing administrators.

THE ADMINISTRATIVE MODEL: A SATISFICING STRATEGY

The severe limitations of the classical model make more realistic conceptual approaches to decision making inevitable. The complexity of problems and the limited capacity of the human mind prohibit the use of an optimizing strategy on all but the simplest problems. Herbert Simon (1947) was the first to introduce an administrative model of decision making to provide a more accurate description of the way administrators both do and should make organizational decisions. *The basic approach is satisficing—that is, finding a satisfactory and sufficient solution rather than the best one.* The satisficing decision-action-cycle includes the following steps. The administrator must:

1. **Recognize a problem** and then frame it and define it clearly and concisely.
2. **Analyze the problem** by examining relevant data.
3. Before proceeding: **Establish criteria for success**—outcomes that are satisfactory and sufficient.

4. **Develop a plan of action** by identifying a set of alternatives, considering the likely consequences of each option. At this stage the decision maker exams all relevant options and their consequences, deliberates, and selects a multi-step plan of action with contingencies included in the plan.
5. **Initiate the action plan**
6. **Evaluate the implemented plan** in terms of the criteria you have established for a satisfactory solution.
[These steps are summarized in an action cycle in Figure 1.]

There are some similarities between the classic model (optimizing) and the administration model (satisficing). The major difference is that the administrative model calls for a decision that is satisfactory rather than the ultimate best solution. This difference comes into play early in the decision-making cycle. After the problem has been defined and analyzed, and before proceeding with the generation of alternatives, the decision maker confronts the issue of the criteria for a satisfactory outcome. What is the minimum that is acceptable as an outcome? What is satisfactory in this circumstance? What is sufficient? These questions are answered before developing a plan of action. If time is short, the process may be limited to a short list of alternatives, the so-called *truncated model of satisficing*

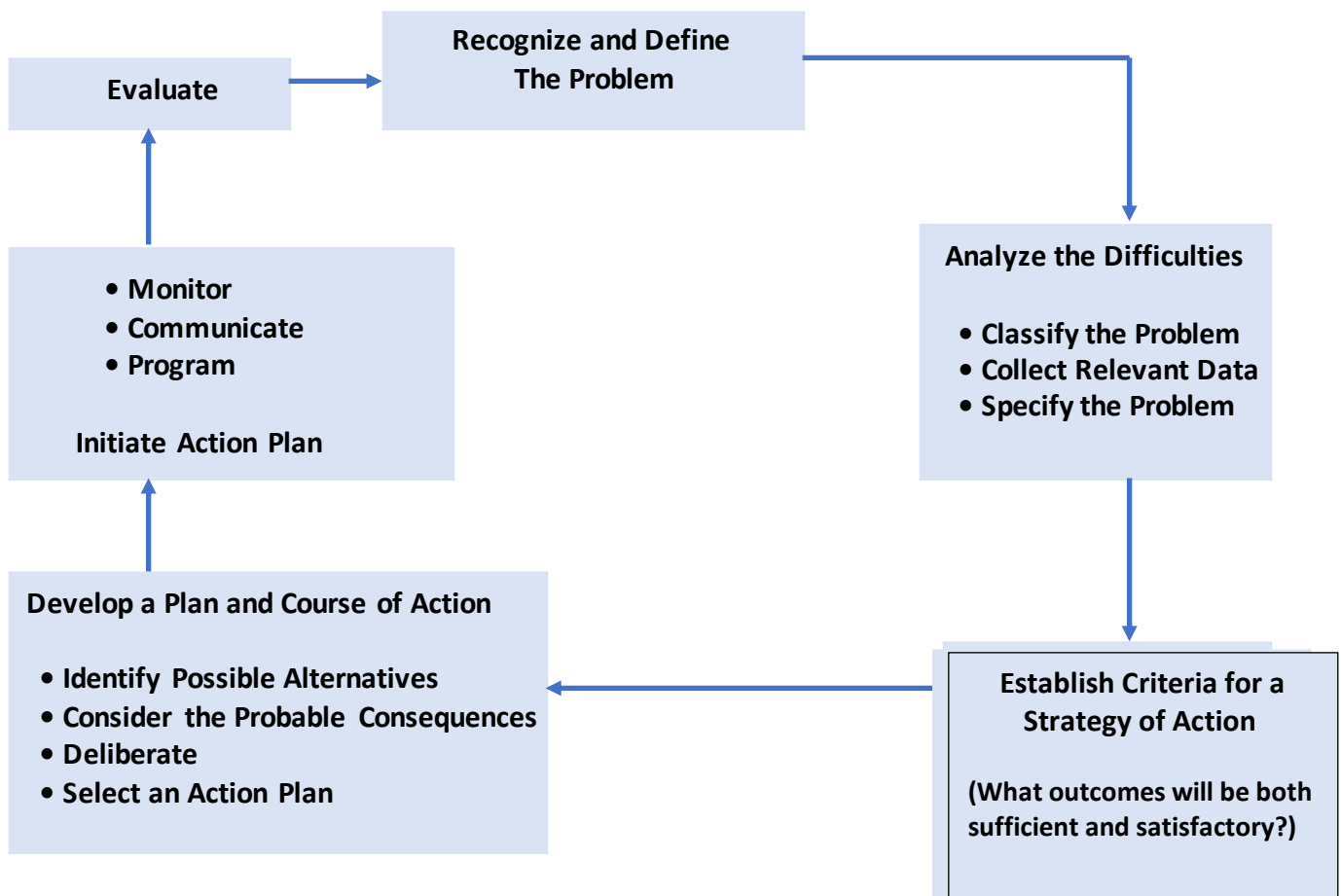


Figure 1 Decision Making Action Cycle

INCREMENTAL MODEL: MUDDLING-THROUGH STRATEGY

Although the satisficing strategy that we have just described is well suited to dealing with many problems in educational administration, occasionally some situations require an incremental approach. When alternatives are difficult to discern or the consequences are so complicated as to elude prediction, satisficing may be unproductive. For example, to what new activities should a school administrator allocate more resources? The answer to this question is probably more adequately addressed by considering only alternatives that differ marginally from existing conditions. The underlying assumption of this strategy is that small incremental changes will not produce major unanticipated negative consequences for the organization; hence, in complex and unpredictable situations, an incremental approach of muddling-through may be appropriate.

Charles Lindblom (1959, 1980) first introduced and formalized the incremental strategy. He characterizes this method of deciding as the **science of muddling through**; he argues this may be the only feasible approach to systematic decision making when the issues are complex, uncertain, and riddled with conflict. The process is formally described as a method of successive limited comparisons. **The incremental approach of muddling** *does not require objectives, nor exhaustive analysis of alternatives and consequences, nor a priori determination of satisfactory outcomes. Instead only a small set of alternatives, unlikely to dramatically alter the existing situation, is assessed by successively comparing their consequences until one seems reasonable and safe; that is, a feasible course of action emerges as alternatives and consequences of action are explored. The marginal differences in value among alternative courses of action rather than any prior objectives serve as the basis for deciding.*

The incremental model also greatly reduces the number of alternatives considered. The strategy considers only alternatives that are unlikely to cause disruption, analyzes only differences between the current state and proposed outcomes, and focuses on the decision maker's narrow range of interest. With this approach, the complexity of decision making is reduced and made manageable. Lindblom (1959) argues that simplification of analysis, achieved by concentrating on alternatives that differ only slightly, is not capricious; limiting the emphasis to small variations from existing situations merely makes the most of available knowledge. Further, administrators who restrict themselves to a reasonable set of alternatives on the basis of their experiences can make predictions of consequences with accuracy and confidence. This narrow focus on outcomes avoids possible paralysis caused by attempts to predict and analyze all possible outcomes of a specific course of action.

The incremental model of muddling through is an alternative to theory. In both the classical and the administrative models, theory is viewed as a useful way to bring relevant knowledge to bear on specific problems. As problems become increasingly complex, however, the inadequacies of our theories to guide decisions become more prevalent. *Muddling through*, as this a strategy of incremental comparisons is most commonly known, suggests that in complex situations, decision makers make more progress if they successively compare concrete empirical options rather than emphasize more abstract, theoretical analyses.

Although muddling through may be a common approach used by administrators, it has its drawbacks. As the term suggests the strategy has little direction; thus, the process is likely to produce aimlessness, organizational drift, and habit of "playing it safe." The strategy is also conservative and avoids significant change that may be needed.

THE MIXED-SCANNING MODEL: AN ADAPTIVE STRATEGY

Most administrators make decisions with only partial information and under the press of time. Amitai Etzioni (1986, 1989) offers a model of decision making that is a pragmatic approach to complexity and uncertainty. His mixed-scanning model is a synthesis of satisficing and incremental strategies, the last two models discussed. Mixed scanning is driven by two questions:

- 1) What is the organization's mission and policy?
- 2) What decisions will move the organization toward its mission and policy?

Mixed scanning seeks to use partial information to make satisfactory decisions without getting bogged down either by examining all the information or by proceeding blindly with little or no information. Mixed scanning uses a strategy of adaptive satisficing, which is a mixture of shallow and deep examination of data that unites the comprehensiveness of the administrative model with the flexibility of the incremental model (Etzioni, 1986).

As we have suggested, there are times when alternatives are difficult to discern and when consequences are hard to predict. In these situations, administrators too often muddle through. Their incremental decisions are tentative—small steps taken in directions not far afield from the existing state. These decisions are patently conservative and often without direction. Unless decision makers evaluate these incremental decisions in terms of some broad, fundamental policy, organizational drift is likely.

The mixed-scanning model has its roots in medicine. It is typically the way effective physicians make decisions. Unlike incrementalists, medical doctors know what they are trying to achieve (healthy functioning of the patient). Moreover, unlike decision makers who seek to optimize, they neither engage all their resources on the basis of an initial diagnosis nor wait for every conceivable bit of personal history and scientific data before beginning treatment. Doctors survey the symptoms of a patient, analyze the difficulty, initiate a tentative treatment, and, if it fails, try something else (Etzioni, 1989). The principles for mixed scanning are straightforward; seven basic rules for a mixed-scanning strategy have been advanced by Etzioni (1989) and Hoy and Tarter (2003) as follows:

1. **Use focused trial and error.** Search for reasonable alternatives; then select and test them; and adjust and modify the action as the outcomes become clear. Focused trial and error assumes that, despite the fact that important information is missing, the administrator must act.
2. **Be tentative; proceed with caution.** Be ready to modify a course of action as necessary. It is important that administrators view each decision as experimental, expecting to revise it.
3. **If uncertain, procrastinate.** Waiting is not always bad, especially when the situation is ambiguous. Delay as long as possible so that more information can be collected and analyzed before acting.
4. **Stagger your decisions.** Commit to a decision in stages, evaluating the outcomes of each phase before proceeding to the next phase.
5. **If uncertain, fractionalize decisions.** Do not invest all your resources on a decision, but instead use partial resources until the consequences are satisfactory.
6. **Hedge your bets.** Implement several competing alternatives, provided that each has satisfactory outcomes. Adjust on the basis of the results.

7. **Be prepared to reverse your decision.** Try to keep decisions tentative. Reversible decisions avoid overcommitment to a course of action with partial information.

Educational administrators can skillfully employ all of these adaptive satisficing techniques as they employ mixed scanning. All illustrate flexibility, caution, and a capacity to proceed with partial knowledge. When time is limited or the decision is not that important, *truncated adaptive satisficing* may be appropriate, in which case, both the range and number of facts and choices are limited and the analyses are not as deep or penetrating. In sum, the mixed-scanning model has the following distinctive features:

- Broad, organizational policy gives direction to tentative incremental decisions.
- Good decisions have satisfactory outcomes that are consistent with policy and mission.
- The search for alternatives is limited to those close to the problem.
- Analysis recognizes that important information is missing but action is imperative.
- Theory, experience, and successive comparisons are used together.

A CONTINGENCY MODEL: MATCHING STRATEGY AND SITUATION (Hoy & Tarter, 2030)

We have examined four decision-making models thus far—the Classic Model (Optimizing), the Administrative Model (Satisficing), the Incremental Model (Muddling Through) and the Mixed Scanning Model (Adaptive Satisficing). Which is the best way to decide? There is no one best way to decide just as there is no one best way to organize, to teach, or to do research. As in most complex tasks, a contingency approach is best—match the approach with the situation.

The Classic Model. The decision strategies can be ordered according to their capacity to deal with complexity and conditions of increasing uncertainty and conflict (Grandori, 1984). When decisions are simple, information complete and certain, and a collective preference (no conflict) exists, then an optimizing strategy seems most appropriate, but as we have already noted, organizational problems are almost never simple, certain, and without conflict in preferences; thus, optimizing is not really a choice.

The Administrative Model. When uncertainty and conflict prevail, as is typically the case in administrative decision making, a satisficing strategy becomes appropriate. The administrative model is flexible and heuristic. Decisions are based on comparisons among consequences of alternatives and the decision maker's aspiration level. Only a partial exploration of the alternatives is performed and the aspiration level is lowered. Lack of time, of course, may truncate the process by forcing the consideration of fewer options.

The Incremental Model. When alternatives are difficult to discern or consequences are so complicated as to elude prediction, even a satisficing strategy has its limits. In such situations, an incremental strategy may seem appropriate because such an approach deals with both uncertainty and conflict of interest by assuming that small changes will not produce large negative consequences. Thus, when the organization is in turmoil and without direction, muddling through (incremental approach) may be the appropriate *short-run strategy*.

The Mixed Scanning Model. Some students of organization, however, argue that even when the decisions are complex and outcomes are difficult to predict, incrementalism is too conservative and self-defeating. Small, incremental decisions made without guidelines are often counterproductive and lead to action without direction. Instead, mixed scanning (adaptive satisficing) is recommended to deal with exceedingly complex decisions. Mixed scanning combines the best of both the satisficing and the incremental models; a strategy of satisficing is combined with incremental decisions guided by broad policy. Full scanning is replaced by partial scanning of a set of satisfactory options, and tentative and reversible decisions are emphasized in an incremental process that calls for caution as well as a clear sense of destination. Time again may limit the number of possibilities considered before action. In brief, the appropriate decision strategy depends on a number of factors.

A Contingency Model. All of the previous models, with the possible exception of the classic model, have their utility, but it should be clear that none of these models is always appropriate. A simplified contingency model for selecting the appropriate decision strategy based on three questions is proposed:

1. Information: Is there sufficient information to define a satisfactory outcome?
2. Time: Is there time to engage in a comprehensive search?
3. Importance: How important is the decision?

If there is sufficient information to define a satisfactory outcome, then satisficing is the model of choice. But depending on time and the importance of the decision, the satisficing strategy can be truncated and adapted. For example, if there is sufficient time to engage in a comprehensive search, but the decision is not that important, then truncated satisficing is the appropriate strategy. If, however, there is insufficient information, then adaptive satisficing is the preferred strategy. But again, depending on time and importance of the decision, adaptive satisficing may be truncated or moderated by muddling through. For example, if there is insufficient information or limited time or the decision is not that important, then muddling through seems an appropriate decision strategy. See Figure 2.

The three questions guide the decision maker along eight possible paths—each with an appropriate decision strategy. Satisficing, adaptive satisficing, truncated versions of each, as well as muddling through are appropriate depending on the situation. These situations are defined by information, time, and importance. As you can see from the decision tree in Figure 2, most decisions school administrators will confront require a form of satisficing—full satisficing or adaptive satisficing and a truncated version of either if the decision is not important. Muddling only rarely is called for in chaotic or complex situations, and then, only for temporary relief. In general, a simple guide to selecting the appropriate decision strategy is to evaluate and choose either a satisficing or adaptive satisfying strategy or some variation of these two.

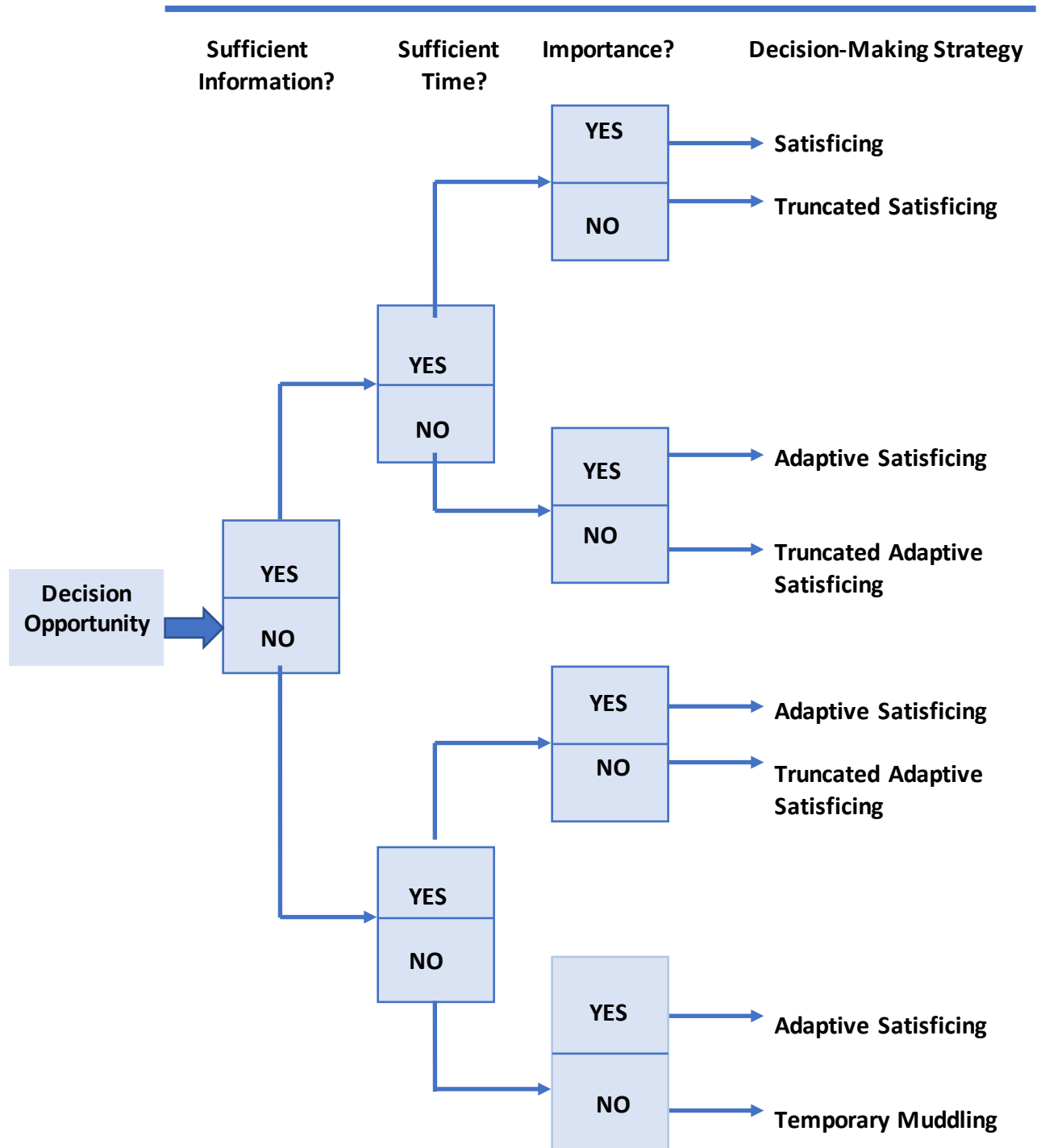


Figure 2 Contingency Model of Decision Making: Matching Strategies with Situations (©Hoy, 2011)
For a comprehensive description and analyses of these models, see Hoy and Miskel (2013).