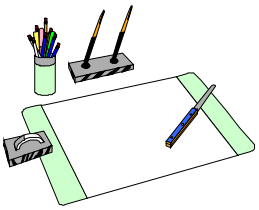
DEVELOPING THE LESSON PLAN



Introduction

A lesson plan is a plan for learning. As is true in most activities, the quality of planning affects the quality of results. Successful executives and professional people know that the price of excellence is careful preparation. A lawyer spends hours planning a case before appearing in court. A minister does not ad-lib a sermon but plans days or weeks in advance. In anticipation of the big game, the coach spends hours planning the plays and watching the team execute them. Should we attempt such a complicated process as learning with less attention than is given to other important activities? The answer is obvious: of course not. The effective instructor devotes much time and energy in carefully planning and preparing each lesson, whether the lesson encompasses one or several periods of instruction.

To ensure the greatest probability of learning, we must carefully select and arrange activities that will produce the desired learning outcomes in our students. Only through careful planning can we be certain that we include all necessary information and have our lesson plan properly organized to achieve the lesson objective. The complete cycle of lesson planning includes eight steps:

(1) Determine the objective
(2) Research the topic as defined by the objective
(3) Select the appropriate instructional method
(4) Identify a usable lesson planning format
(5) Decide how to organize the lesson
(6) Choose appropriate support material
(7) Prepare the beginning and ending of the lesson
(8) Prepare a final outline.

Determining The Objective. Often we will begin our lesson planning with an objective or objectives clearly in mind. At other times the objective may be shaped by the research and additional planning we do. In other words, although the first step of the lesson planning process is to determine the objective, our objective may not fully evolve until after we have completed other steps of the process.

Objectives need to be student-centered. We should not state them in terms of what we want to teach, but rather they should be stated in terms of what we want our students to learn. For instance, the objective of a lesson on developing a lesson plan might be for each student to know the eight steps of effective lesson planning as listed in this chapter. Of course the lesson might be taught at higher than the knowledge level. We might want each student to comprehend the eight steps appropriate to effective lesson planning or even to be able to apply the eight steps of lesson planning. But whatever the level, the student-centered objective should guide our subsequent planning. Without a clear objective, we won't know if we ever get there. Think about that statement.

Researching The Topic. After we have written or been provided with an instructional objective, we are ready to decide on the main points of the lesson and gather materials about the lesson topic. Normally we do not collect a mass of research materials and then develop an objective to match the findings. Not only is this latter approach inefficient, but it is also likely to be ineffective. It may well ignore the specific needs of the students. The objective should determine the research that needs to be done. On the other hand, research may justify a decision to modify an objective or rearrange main points for greater accuracy or clarity.

Usefulness and appropriateness are two important criteria for selecting relevant material. To be appropriate, information should relate to the lesson objective and have a high possibility for student retention. To be useful, it should aid both the instructor and the students in the teaching-learning process. If the instructor selects material solely on the basis of its interest value, a lesson may be filled with interesting information of little learning value to the student. On the other hand, dry, uninteresting facts even though they are very important-may also defeat the instructor's purpose. Students are more likely to grasp and retain facts and concepts that are enriched with interesting support material and arranged in a way that enhances learning.

With the objective clearly in mind, we are now ready to gather actual material or do research on the subject. The sources for this material are our own experiences, the experience of others which we gain through conversation and interviews, and written or observed material. Instructors concerned with teaching a good lesson will often draw from all of these sources.

Self. The first step in researching a lesson topic is to see what we ourselves know about the subject. Our personal knowledge may suggest a tentative organization, but more important, it will point up gaps in our knowledge where we need further research.

Others. The second step in the research process is to draw on the experience of others. People who are interested in the topic may provide ideas during the course of conversation. The most fruitful source is the expert who may help us clarify our thinking, provide facts and testimony, and suggest sources for further research.

While personal experience, conversation, and interviews provide valuable content for lessons, we must usually do further research elsewhere. If we have properly narrowed our subject and kept the purpose in mind, our research task will be easier.

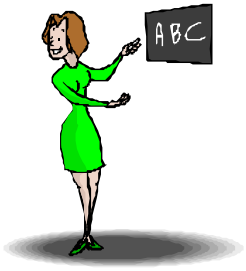
Library. Modern libraries provide us with an abundance of sources: books, newspapers, popular magazines, scholarly journals, abstracts, subject files, and microfilms. Quantity is no problem; quality is more difficult. We must always concern ourselves with the accuracy and relevance of the material we select. Using an article from 1950 to discuss atomic physics today might well lead to inaccurate, irrelevant conclusions.

The next step in the research process is to evaluate the material gathered. We will probably find that we have enough material for several lessons. We must now combine some ideas, eliminate others, and perhaps expand on what we found in the research materials. We will

also want to give special attention to the types of support material we have selected (definitions, examples, comparisons, statistics, and testimony). Later in this chapter we will discuss types of support material in detail.

Sometimes we have an organizational pattern in mind before we start. If not, as we gather our material, we will probably see that the ideas are beginning to form into some type of pattern. Later in this chapter. we will discuss ways of organizing the lesson.

During the research phase, the instructor is likely to find material that students should read to prepare for a given class session. If we keep this possibility in mind when we begin our research, we can prepare a suggested student reading list and save time in selecting student references. When deciding on supplementary reading for the students, we should choose interesting and informative materials that reinforce or support the lesson objectives.



Selecting Instructional Methods. After deciding exactly what to teach, the instructor determines how best to teach it and what instructional method to use. When related to instruction, "method" refers to a combination of techniques or skills used by the instructor to engage students in meaningful learning experiences. A method is a broad approach to instruction-for example, the lecture method or the guided discussion method. A technique, on the other hand is a specific concrete skill or procedure used in implementing a method-for example, the technique of using the chalkboard or of using an analogy as support material.

Philosophy Underlying Selection. We should choose a teaching method suited to the student's needs as a learner. In making the selection, we consider the ways that people learn: by doing, by discussing, by listening, by observing, by participating. We should select the instructional method that will most effectively guide students toward desired learning outcomes. Our role is to select the method and the techniques that will result in a meaningful learning experience.

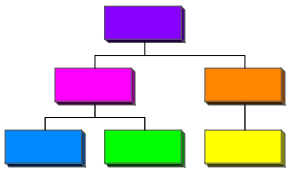
The Selection Process. No one method is suitable for all teaching situations, because no single method is **sufficiently** flexible to meet the needs of students in every learning situation In general, as we have seen, the nature of a learning outcome suggests the type of activity that will be most helpful to the students in achieving that outcome. If, for example, we want students to gain skill in performing a certain task, one of the activities should be practice in performing the task. If the desired outcome is knowledge, students should observe, listen, or read so they can relate what they are learning to their own experience. If students must learn to apply a principle, the instructor should ask them to solve problems or perform tasks requiring an application of that principle.

The instructional approach we choose for one learning outcome may be different from the approaches that we select for other outcomes in the same lesson. Our primary concern is to plan and select the most appropriate approach for students to achieve each outcome.

Lesson Planning Format. Good lesson planning is essential for any systematic approach to instruction. Although many instructors become discouraged by the time required for good lesson planning, a well written and properly used lesson plan can be a very worthwhile

teaching aid. Experienced instructors use written lesson plans for a variety of purposes. They can be checkpoints to ensure well-planned learning experiences. They can serve as teaching guides during lessons and as references for other instructors who may teach for us in emergencies. They also serve as convenient records of an instructor's planning techniques and methods of teaching. One of the most practical functions of lesson plans is that they serve as step-by-step guides for instructors in developing teaching and learning activities.

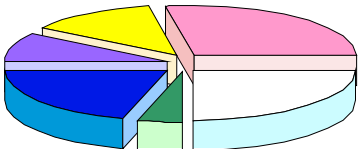
Authorities differ about the content and form of lesson plans, and many commands and schools have developed their own formats to satisfy particular needs. On the whole, however, most authorities generally agree on the essential characteristics of a good lesson plan. Figure 6.1 lists these characteristics, as well as those items of information which they routinely include.



Organizing The Lesson. After we have researched the topic, selected the appropriate instructional method, and identified the lesson planning format to use, we must decide how to organize the lesson. Every lesson needs an introduction, body, and conclusion. In most instances the body of the lesson should be prepared before the introduction or conclusion. After we prepare the body or main part of the lesson, we will be in a better position to begin or conclude the lesson. The first consideration in planning the body is how to organize the main points, but organization of sub-points is also important. Arrangement of the main points and sub-points of a lesson will help both the instructor and the students-the instructor in teaching it and the students in learning. Most lessons, regardless of their length, divide nicely into from two to five main points.

The typical ways of organizing main or sub-points of a lesson are by the patterns of time, space, cause-effect, problem-solution, pro-con, or topic. Furthermore, certain strategies can be used with each pattern from known to unknown, for instance, or from simple to complex. How does an instructor decide which patterns and strategies to use? The lesson material will often organize itself more easily with one pattern and strategy than with another. Let us consider how various patterns and strategies can be used to organize the main points of a lesson.

Major Components of a Lesson Plan



Information/Materials to be Included:

Part 1: Cover Sheet

- Course/phase/lesson Identification
- Instructor's name
- Method used
- Objective (with behavioral indicators of achievement)
- Main teaching points or task steps
- References consulted
- Instructional aids used
- Handouts needed

Part II: Lesson Development

- Content outline
- Notes on delivery techniques
- Cues for use of visual aids
- Notetaking space for student inputs '
- Comments on effectiveness of plan made after lesson is presented

Part III: Evaluation

- Test items
- Record of student performance on test items
- Statistical analysis
- Record of test item revisions

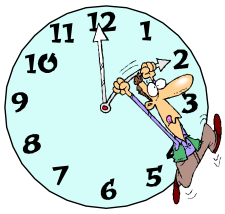
Part IV: Related Materials

- Handouts
- Homework as assignments
- Reading assignments
- Supporting documents
- Actual instructional aids
- Class text

Figure 1. Recommended Content and Components of Lesson Plan

Plan of Instruction Organization

Time. Our vocabularies are filled with words which refer to time: now, tomorrow, yesterday, today, sooner, later, earlier, last week, a month from now, four years ago, next time. We work, play, sleep, and eat at certain times. Major events in our lives are organized by time: births, engagements, marriages, deaths. Time or the chronological pattern of lesson organization is a natural way of arranging events in the sequence of order in which they happened, or in giving directions in the order to be followed in carrying them out. This kind of organization is sometimes called sequential organization. Certain processes, procedures, or historical movements and developments can often be explained best with a time sequence pattern.



The medical technician presenting a lesson on mouth-to-mouth resuscitation would probably use the time order for the main points:

(1) preliminary steps-proper body position, mouth open, tongue and jaw forward
(2) the mouth-to-mouth process
(3) caring for the patient once breathing resumes.

Time order is also a logical approach to lessons dealing with such subjects as "How to Pack a Parachute," "Development of the F-15 Fighter," or How to Prepare a Speech."

Furthermore, any lesson on a subject with several phases lends itself well to the time pattern. For example, given an objective for students to know the three planned phases of the Common Market (where phase one was to precede phase two, and phase two precede phase three), a lesson might have these main points:

(1) Phase one-a customs union where nations agreed to reduce duties,
(2) Phase two-an economic union allowing laborers and goods to move freely across national borders,
(3) Phase three-a political union with national representatives as members of a common parliament and using a common currency.

Of course, rather than looking forward in time from a given moment, the strategy might be to look backward from a point in time. In other words, the strategy might be to move from recent to earlier time rather than 'from early to late. Regardless of which strategy is used, the flow of the lesson and the transitions should make the chronological relationships between main points clear to the students.

Space. A spatial or geographical pattern is effective in describing relationships. When using this pattern, the lesson material is developed according to some directional strategy such as east to west or north to south. For instance, if an instructor were describing the domino theory of guerrilla infiltration, a good strategy would make the main points of the lesson correspond to the geographical locations of various nations.

With lessons about certain objects, the strategy might be to arrange the main points from top to bottom or bottom to top. A fire extinguisher might be described from top to bottom, an organizational chart from the highest ranks to the lowest in the organization, a library

according to the services found on the first floor, then the second, and finally those on the third.

Sometimes, the strategy is to organize the lesson from the center to the outside. For example, the control panel in an airplane might be discussed by describing first those instruments in the center most often used, then by moving out toward the surrounding instruments which are used least often.

In all lessons arranged spatially, we need to introduce each aspect or main point according to some strategy. Just as with a lesson organized by time, the subject matter and the transitions should include elaboration and clarification of how the main points relate to one another. A simple listing of the various objects or places without elaboration as to how they are related may confuse the students and make the points harder to remember.

Cause/Effect. A cause/effect pattern of organization is used in a lesson where one set of conditions is given as a cause for another set. In such lessons we may use one of two basic strategies to arrange our main points. With a cause/effect strategy, we begin with a given set of conditions and show that these will produce or have already produced certain results or effects. With an effect-cause strategy, we take a certain ,set of conditions as the effects and allege that they resulted from certain causes.

The cause-effect strategy might be used in a lesson concerning the increasing number of women in the Air Force. The lesson might first discuss the fact that women are now assuming more responsible leadership roles in the Air Force. One effect of women assuming such roles might be that women are joining the Air Force with increasing frequency.

The effect-cause strategy might be used in a lesson on child abuse. The first point might explain the effects of child abuse upon the children themselves, the parents, and even on society. The second point might suggest that the causes are that parents themselves were abused as children or that they lack proper education on parenting.

Whichever strategy is used, two cautions must be observed:

(1) Beware of false causes. Just because one event or circumstance precedes another does not mean that the former causes the latter. Many persons assume that "First A happened, and then B took place, so A must have caused B."

(2) Beware of single causes. Few things result from a single cause. There may be several causes and they may not act independently. Their effect may be greater or less than the sum of their parts. Lack of safety features on automobiles does not by itself cause most highway accidents, but this cause plus careless driving and unsafe highways may, in combination, account for many highway accidents.

Problem-Solution. This pattern, sometimes called the disease-remedy pattern or the need-satisfaction pattern, presents students with a problem and then proposes a way to solve it. With this pattern we must show that a problem exists and then offer a corrective action that is (1) practical, (2) desirable, (3) capable of being put into action, and (4) able to relieve the problem. It must also be one that does not introduce new and worse evils of its own. For

example, the issue of controlling nuclear weapons has long been debated. Those against control argue that erosion of national sovereignty from arms control is more dangerous than no control.

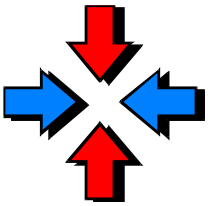
There are different strategies we might employ when using the problem-solution method. If the students are aware of the problem and the possible solutions, we might discuss the problem briefly, mention the possible solutions, and then spend more time in showing why one solution is better than others. For instance, our objective is for students to comprehend that solar energy is the best solution to the energy crisis. Our main points might be:

(1) the world is caught in the grip of an energy crisis,
(2) several solutions are possible, and
(3) solar energy is the best long-term solution.

If the students are not aware of the problem or need, we may describe in detail the exact nature of the problem. Sometimes when students become aware of the problem, the solution becomes evident, and little time is needed to develop the solution in the lesson. At other times we need to spend time developing both the problem and the solution.

Still another strategy is to alternate or stagger portions of the problem with portions of the solution. For example, the cost of a project may be seen as one problem, workability another, time to do the project as a third. Taking each in turn and providing solutions to cost, work ability, and time as we present these aspects of the problem may be more satisfying to students than if we had discussed all of the problem and then its total solution.

Whatever strategy is used, with the problem solution pattern students must become aware that a problem exists before a solution will be agreed upon.



Pro-Con. The pro-con pattern, sometimes called the for-against pattern or advantages-disadvantages pattern, is similar to a problem-solution pattern in that the lesson is usually planned so as to lead to a conclusion. A major difference, however, is that fairly even attention is usually directed toward both sides of an issue with a pro-con pattern.

There are various strategies to consider when using the pro-con pattern. One consideration is whether to present pro or con first. Another is whether to present both sides and let students draw their own conclusions or to present the material in such a way that students are led to accept the "school solution." For instance, with a lesson on the effects of jogging we have to decide whether to present the advantages or disadvantages first. Then we must decide whether to let students decide for themselves whether the advantages outweigh the disadvantages. Pro-con plus one is the label given to the organization used when we draw a final conclusion based on the two sides.

When deciding the specific strategy to use with the pro-con pattern and determining how much time to spend on each, the following guidelines may be helpful:

(1) giving both sides fairly even emphasis is most effective when the weight of evidence is clearly on the favored side;
(2) presenting both sides is more effective when students may be initially opposed to the school solution;

(3) presenting only the favored side is most effective when students already favor the school solution or conclusion;
(4) presenting the favored side last is generally more favorable to its acceptance, especially if the side not favored is not shown in too strong a light.

Topical. A topical division of the main points of a lesson involves determining categories of the subject or lesson objective. This type of categorizing or classifying often springs directly from the subject itself. For instance, a lesson about a typical college population might be divided into topical divisions of freshmen, sophomores, juniors, and seniors, with each class division serving as a main point. Housing might be discussed in terms of on-base and off-base housing. A lesson on the Minuteman intercontinental ballistic missile might be arranged with the main points of warhead, guidance, and propulsion systems.

At times the material itself suggests certain strategies for ordering the main points. For instance, a lesson on levels-of-learning lesson planning would most likely begin with knowledge-level planning as the first main point, since knowledge-level lessons are generally simpler to understand. Then the lesson would move on through the hierarchy to comprehension, application, analysis, synthesis, and finally evaluation levels. In other words, our lesson would follow a simple-to-complex strategy in organizing the "topics" or levels-of-learning.

Other topically organized lessons might follow strategies of known to unknown, general to specific, or specific to general. The number of strategies for arranging topical main points is practically infinite. The important consideration, as with any pattern, is that we give thought to the strategy of arrangement in order to improve student understanding and learning.

Combining Patterns. If we use a single pattern to organize the main points, our lessons will make more sense. We will be able to remember more readily what the main points are when we teach the lesson. Even more important, students will be able to follow the lesson more easily and retain the material if we use a single, logical pattern of organization.

While we may choose a certain organizational pattern for the main points, we may decide to use different patterns for sub-points. Consider the following tentative outline of a lesson with an objective for students to know the importance of nonverbal factors of communication.

Non-Verbal Communication

I. Performance factors
    A. Upper body (head and face)
        1. Positive effects
        2. Negative effects
    B. Middle body (arms, hands, torso)
        1. Positive effects
        2. Negative effects
    C. Lower body (hips, legs, feet)
        1. Positive effects
        2. Negative effects

II. Nonperformance factors
    A. Objects
    B. Space
        1. Personal or body
        2. Furniture arrangement
    C. Time

Notice that the main points (I. Performance factors and II. Nonperformance factors) are arranged topically. The sub-points for main point I (upper, middle, and lower body) are organized spatially. A pro-con pattern is followed in discussing positive and negative effects from each body performance factor. The sub-points of main point II (objects, space, and time) are organized topically as are the two sub-points under space. The important thing to remember is that each set of main points or sub-points should follow a given pattern of organization. Our tentative outline reflects this fact.

Of course, it may be that none of the formal patterns of organization discussed in this chapter adequately fits our content. If this is the case, we must simply strive to organize our lesson in the way that will help present the information to our students in the most meaningful fashion. As we construct our tentative outline, we must do so with our students' needs in mind. But whatever pattern or strategy we choose, it should be a conscious and rational choice and we should be able to defend or explain it. Quite often, the experienced teacher revises the outline three or four times before being satisfied and finally putting it into final form on the lesson plan.

The Strategy Statement

Character and Purpose. The strategy statement is simply a detailed plan which explains one's overall lesson objective and the steps one intends to take in achieving that objective most efficiently and effectively. A well-written strategy statement benefits the writer of the lesson plan by helping to determine the best options to adopt when deciding on methodology, teaching techniques, interim objectives, and type and amount of proof and clarification support. It also helps anyone else who is tasked to teach or modify the lesson later on by spelling out the detailed rationale for choosing these options. When the teachers understand why the different elements of a plan are included and when these reasons are sound, the teachers can more easily adopt the process as their own or adapt the plan more coherently-both internally and as it relates to other lessons in the curriculum. And, just as importantly, the strategy can also benefit the students immensely because it provides a well-formulated overview for the lesson introduction itself by telling the students exactly what will be covered in the lesson without exposing the lesson itself.

The strategy statement should be designed in such a way as to walk the instructor through the entire lesson, focussing on every element of the lesson. In this way, a comprehensive strategy statement helps the writer of the plan by forcing the writer to consider questions that are often taken for granted:

(1) whether the overall lesson outline and order of main points and sub-points are the most logical and intuitively acceptable;

(2) whether the teaching techniques one decides to use are the most appropriate for the lesson; and,
(3) how much leeway one can take in the presentation before one changes the actual objective. Moreover, it provides a quick mental outline of the entire lesson that helps prevent the instructor's having to script, or slavishly rely on the lesson plan (thereby destroying the spontaneity of the presentation).

Method of Presentation. The strategy statement should move the reader through the lesson simultaneously from the general to the specific elements as well as sequentially, from attention step through the closure. No part of the lesson plan and no decision about teaching techniques (use of demonstrations, use of questions, where to insert mini-lectures) should be overlooked or assumed in the statement. Spelling out each element about which we sometimes make subconscious decisions in lesson formulation often reveals conventions that we sometimes misuse or overuse in the practice of education-again, a benefit to the writer and any other teacher of the lesson.

We suggest that you start by looking at your lesson objective and organizational pattern to decide on an overall strategic ordering of the main points. State this ordering up front; e.g., general to specific, specific to general, most to least important, known to unknown, simple to complex. This decision will give you a general focus to lead you toward the objective efficiently.

Follow this with a sequential statement of each main point and its associated sub-points to include method of presentation and rationales for the method and order of presentation. Each of these steps is important to help the lesson planner fit the elements together and consider all the factors necessary for justifying each decision. In effect, this method can be simplified by meticulously asking and answering the three questions that are indispensable for comprehensive lesson development: "WHAT, HOW, and WHY."

Interrelating the Questions. Whenever there is a .significant lesson element, it constitutes an answer to the "What?" question that must be answered in the strategy. A significant lesson element is every main point or sub-point that the instructor includes in the lesson and each must be denoted in the strategy statement. Often, segments of the lesson, e.g., the introduction, attention step, interim summary, or conclusion, represent significant elements that should or must also be mentioned in the strategy. Significant lesson elements tell the teacher (and sometimes, the student) what will be covered or where there is an important or required tactical decision. But this is just the beginning of the process because, if we were to stop with these determinations of what we intend to do and where we intend to do it, we would be left with simply a laundry list of elements to be touched on during the lesson. Of more significance to the lesson planner are the answers to the "How?" and "Why?" questions.

Asking and answering "How?" to each of these "whats" force us to determine and delineate the method, manner, or sequence of presenting the significant elements that will be included. It is important to make these determinations because we have a palette full of teaching techniques, patterns, and methodologies from which to choose. And it is often helpful to specify these decisions to encourage precision in our lesson formulation. For example, very often we state that we will "discuss" a particular topic when we have absolutely no intention

of discussing it at all (as evidenced by our failure to plan discussion questions in that part of the plan). Answering the "How?" question will help us to focus our intentions and prevent us from making the mistake of saying we will discuss something without providing discussion questions within the lesson plan. Alternatively, we might want to demonstrate, or even have a student demonstrate, something within the lesson or we might want to show a movie or slides to illustrate a lesson element most effectively. But if we state, in the strategy, that we will "explain" a given concept in this part of the lesson, this disconnect with what we actually plan in the lesson will be more evident.

But one cannot determine the final answer to "How?" without giving full consideration to why the decision is made. Therefore, the answer to "Why?" must be fully integrated into the strategy statement. This answer provides the intellectual glue that binds the parts of the strategy statement into a cohesive whole. It justifies each decision the planner makes and fits the elements of this puzzle together. It helps to prevent our adding the dazzle and flash that add no educational value to the lesson. Everything must have a sound reason for its inclusion or it should be left out of the lesson. The "Why" should ask why the main points and sub-points are in the order we choose as well as force us to provide a reason for our choice of techniques, patterns, methods, and the inclusion of every other "what" in the lesson.

This explanation of the role of **"WHAT, HOW, and WHY"** in writing a comprehensive strategy should stimulate at least a preliminary understanding of how the strategy statement can help us plan much better lessons. A full appreciation can only be aroused, however, by our use of this technique and by comparing lesson plans based on this process to those written without comprehensive strategies. But beyond the immediate benefits to lesson planning, there are other benefits that are just as valid and sometimes more helpful. For example, lesson plans are continuously modified or updated-often by other than the original lesson developer. What a benefit it is to be able to make minor adjustments with a clear understanding of the reasoning that dictated the original form of the lesson!

Significance of the Questions. Why is it so important to be this specific in writing the strategy? The answer is self-evident since all techniques and methods (or combinations of these) are potentially appropriate in a lesson until the lesson planner decides which is most effective. If the writer does not make this decision or doesn't realize what is best to do in a given scenario, the lesson will never be as effective as it could be. In almost any human endeavor the effectiveness of interpersonal communication is inversely proportional to how much one allows to be left unstated or "understood."

In order to emphasize the importance of including the answers to each of these questions in the strategy statement, an appropriate comparison can be made between the strategy statement and a cooking recipe. In each case, the intended result is a palatable concoction of ingredients. But none of us can combine a list of ingredients (what) of a dish (what) to produce the desired result unless we knew the correct measurements of each (how) as well as the method (how) and the time (how) of cooking. Even the order of combining the ingredients (how) at each stage of the cooking process is often important to get the desired result. Needless to say, adding salt too early in a meat recipe could reduce the succulence of the ' dish. But without a working understanding of what each of the ingredients does in a

recipe (why) we would be unable to easily and successfully modify the recipe for the microwave in lieu of the oven or to substitute elements such as mayonnaise for oil and eggs in a cake recipe.

Therefore, it is imperative to ask and answer these three questions in a well-developed strategy statement. And it is equally important to interweave the answers throughout the strategy. This careful choice and justification of all lesson plan elements will result in better preparation.

The following are examples of strategies that demonstrate the principles outlined above. Two things should be noticed about these examples. First, the "WHAT, HOW and WHY" statements are interwoven throughout the statements. This intertwining of elements helps to ensure that everything in the plan has a justifiable purpose. Second, some of these statements serve double duty, e.g., some "what" statements are also "how" or "why" statements. This is perfectly legitimate and any type statement can serve more than one purpose. This phenomenon may even help to strengthen the cohesion of the overall strategy.

Example 1

WHAT? HOW? WHY?

LESSON TYPE: Informal Lecture.

I PART IB
ORGANIZATIONAL PATTERN: Topical.

STRATEGY:
This lesson will begin with a definition of personal effectiveness to ensure that students start from a common reference point. Once the definition is covered I will discuss the three elements of the time management model: setting priorities, daily planning, and delegation, along with their relationship to personal effectiveness. Beginning with priority systems, I will establish the principle that "Using a Priority System Improves Personal Effectiveness" through lecture, questions, and answers.

Since establishing priorities is the first step one takes in a time management system, it is logical that I begin here. Once priorities are established, planning can begin. With the relationship between priorities and personal effectiveness established, I will next examine how planning daily activities improves personal effectiveness.

Finally, I will discuss how "Delegation Improves Personal Effectiveness." Delegation is the last step in my time management model and therefore, will be reviewed last during today's presentation. I will summarize the three main points in a comprehension-level summary combining my teaching points with the student inputs from the classroom questions to aid in reaching the generalization that "Time Management Techniques Improve Personal Effectiveness."

Example 2

WHAT? I HOW? WHY?

LESSON TYPE: Demonstration-Performance.

I PART IB
ORGANIZATIONAL PATTERN: Sequential.

STRATEGY:
The- lesson on determining cash value will be taught in sequential order to show how each step of the calculation builds on the next. The lesson will start with a brief explanation of present value and cash flows. This explanation will help students understand the benefit of using this method in determining the time value of their money.

Next, a demonstration and explanation of each task step of the process of calculating the present value of an unequal stream of payments to show each student how to extract necessary data from a scenario and obtain the present value of the each amount. This demonstration and explanation step will also teach students how to use the present value table. The instructor will then have the students perform the calculations themselves while he reads the task steps to give the students practice under controlled conditions.

Once the students have completed the task steps, they will practice once more on their own with the last practice occurring under conditions duplicating the final evaluation so that the instructor can be sure each student is ready. The demonstration and explanation of problem, the controlled practice problem and the independently done practice problem should provide enough repetition of the required sequence of steps while providing adequate time for questions to ensure students are learning the procedure. The instructor will then have the students perform the computations without assistance, and then he will grade the results to ensure the students have performed to the required standards.

Example 3

WHAT? I HOW? WHY?

LESSON TYPE: Teaching Interview.

PART IB
ORGANIZATIONAL PATTERN: Topical.

STRATEGY:
The interview will start with lead-off and follow-up questions about the general role and purpose of the Security Assistance Training Program (SATP) to show the main point that the SATP promotes national security. Then a series of lead-off and follow-up questions addressing the particular role the International Officers School (IOS) plays in the training process will demonstrate the other main point; viz., that IOS (also, as a player in the SATP) promotes national security. Students will learn what the SATP is from the point of view of its initial purpose as well as how it operates today. This will be done by use of a practicing expert within the SATP.

The interviewing of the expert is chosen for two reasons: 1) to effectively present the concept of the SATP in an understandable and interesting format with the use of personal experience and real-life examples; and, 2) to foster an affective response on the part of the students by testimony of one who believes in the goals of the SATP. A topical pattern will be used to explain the goals and importance of the SATP as well as the goals and importance of IOS as it contributes to reaching that goal through the use of Air Force training resources.

The interview will proceed from a general explanation and understanding of the role of IOS. This strategy should be more effective in fostering a deeper comprehension of the

importance of the program as well as pointing out the personal relevance of the program to the ordinary Air Force civilian or military member, all of whom are likely to encounter an international military student during their careers. After the formal interview of the guest by the instructor, a question and answer period will be directed by the instructor to further illuminate the topic.

Choosing Support Material. A major factor determining development of the lesson outline is the kind of support material we decide to use, While the organization of ideas forms the basic structure of any lesson, almost all ideas need some form of clarification or proof if the student is to learn.

Most students find it difficult to understand unsupported ideas or assertions. Suppose, for instance, we tell our students that it is important to organize a speech or a lesson according to one of several patterns of presentation. We then tell them that the most common patterns are time, space, cause, problem-solution, pro-con, and topic. Most likely, we will not have provided enough information so that our students can actually use these patterns of organization. We must go on to explain each of these patterns, as has been done in the preceding section of this chapter.

The subject, the method, the ability of students, the size of the class, and similar factors will help determine the amount and kinds of support material we need. We may also want to use visual support.

Verbal support is needed either (1) to clarify or explain our points or (2) to prove our assertions. Definitions, examples, and comparisons are used primarily for clarification support. Their use as proof is limited. Statistics and testimony of experts can be used either for clarification or proof. With lectures and other presentational methods, the instructor actually furnishes the support. With methods involving student interaction, such as the guided discussion, instructors use questions to encourage support materials from the students. Refer to information on how to use questions effectively.

Definitions. Definitions are often needed to clarify or explain the meaning of a term, concept, or principle. But like so many words, the term definition can mean different things and function in different ways.

In some lessons we need to use words that are technical, complex, or strange to our students. With the increasing specialization of Air Force schools in both theoretical and applied subjects, the output of words races ahead of dictionaries. Words such as "emphysema" (medicine), "taxonomy" (education), "detente" (military strategy), or "group-think" (group dynamics) might require literal definitions or restatement in simpler language.

At other times we need to define words that we frequently and loosely employ. Some words simply have different meanings for different people. Words such as "democracy," "equal rights," "security needs," and "loyalty" can often be defined easily. For instance, "disseminate" can be defined very simply as "spread widely." At other times we might seek novel and memorable ways to define our terms. "Pragmatism" might be defined as "a fancy word to mean that the proof of the pudding is in the eating." Sometimes it takes a little longer to define fully what we mean by a certain term. A former POW might define the sacrifice of one prisoner for another:

"When you see an American prisoner giving up his meager ration of fish just so another American who is sick can have a little more to eat, that is sacrifice.

Because when you don't have anything, and you give it up, or you have very little and you give it up, then you're hurting yourself, and that is true sacrifice. That's what I saw in the prison camp."

Definitions should be used to explain the meaning of acronyms, that is, words formed from initials. In the preceding paragraph, with some audiences it might have been necessary to explain that POW stands for prisoner of war. When discussing PME at AU, we might have to explain that PME at AU means professional military education that is taught at Air University. Furthermore, we might go on to mention that PME includes AWC, ACSC, SOS, and SNCOA-that is, the Air War College, the Air Command and Staff College, the Squadron Officer School, and the Senior Noncommissioned Officer Academy.

Finally, at times an entire lesson may be needed to define or otherwise introduce students to a new term, concept, or principle. For example, when talking about the meaning of communication as transaction, it would probably be insufficient simply to say that the transactional approach means to consider the total communication process and the interaction of the various parts of the process on each other. Other forms of support material such as examples and comparisons might be needed to define fully what we mean.

Examples. Any time students ask us to give a "for instance," they are asking for an example to clarify the point we are trying to make. Sometimes the examples we use may be reasonably long. At other times a short example is sufficient, In some cases short examples are similar to definitions. The earlier definition of "sacrifice" given by the former POW might also be considered a short example. The fact that some support materials might be classed either as definitions or examples should not be a major concern to us. As classroom instructors we are more interested in using effective support material than in classifying it.

Often short examples can be clustered together in order to help students gain a more complete understanding of the point. In a lesson on a barrier to effective communication, we might cluster examples *of* spoonerisms: "Is the bean dizzy?" (Is the dean busy?); "I'll have a coff of cuppee" (I'll have a cup of coffee); "A half-wanned fish within us" (A half-formed wish within us).

Comparisons. Description often becomes more graphic when we place an unknown or little understood item beside a similar but better known item. We might want to compare things that are unlike or things that are very much alike.

> Metaphors such as Winston Churchill's "iron curtain" or similes (using the words like or as, such as Robert Burns' "My love is like a red, red rose," or the saying "strong as an ox") are comparisons of things that are unlike in most ways. We often use comparisons of unlike things in lessons. For instance, we might say, "'The flow of knowledge is like the relentless and uncompromising flow of a river after the spring thaw as it imposes on us the requirement that we not only adjust but anticipate the future." Or we might show that being a member of a branch in an Air Force organization is like living in a family where we have intimate contact with each other. We might carry the analogy or comparison further by pointing out that in a unit as in a family, members can protect, help, or irritate one another.

Although analogies which compare things that are unlike serve as an excellent means of clarification, they have limited utility as proof. If we wish to prove an assertion we must compare "like" things. Comparison of the airpower of an adversary with US airpower or a mayor and city council with a base commander and his staff are "like" comparisons. Arguing for a longer orientation session for students in one NCO academy because it has improved academic performance at another would be comparing "like" phenomena-in this case, two NCO academies.

Several questions can be asked about examples used in lessons:

Do they accurately represent the point?
Will students clearly understand their meaning?
Do they fit the content? (Avoid those that may confuse.)
Do humorous ones add rather than distract from the lesson?
Do they come from personal experience or can other examples be personalized in such a way as to seem real?
Can anything be gained from clustering more than 3 or 4 examples? (Usually not.)
Do long ones take too much time? (At times affective or attention-getting value of long examples may justify their use.)
Are they interesting?

The appropriate answers to these questions should be obvious. -

Contrast is a special form of comparison. For instance, showing how Air Force training differs from civilian training or how today's standard of living differs from that of a generation ago clarifies and explains a point by showing contrast or differences.

Obviously, any kind of comparison may be very brief like those given here or they may be quite long. We need to decide what will work best in a given situation. But whether long or short, comparisons are a valuable and generally underused method of verbal support.

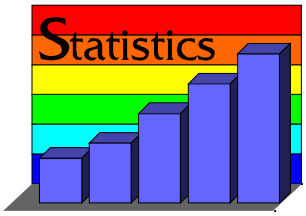
Testimony. Words and thoughts of others become particularly useful when we wish to add strong proof support for assertions or points that we make. None of us is expected to be an expert on all subjects; often we must rely on what others have said. At times we use the testimony of others simply to clarify or explain an idea; often it is intended to provide proof for a claim.

A lesson dealing with managerial effectiveness in an organization may have as one of its main points the importance of effective downward communication. In other words, we want to stress how important it is for supervisors to keep their subordinates informed. We might quote from a recent "Air Force Policy Letter For Commanders," which says, "Commanders and supervisors have an increased responsibility to keep Air Force military and civilian members informed." We might also report the findings from a recent study by the International Association of Business Communicators which show that "face-to-face communication, including group meetings and one-on-one dialogue, proved the most effective means of communicating with employees."

Sometimes, we will use direct quotations as we have done here. At other times we will paraphrase what another has said. Whatever the case, there are two questions we will want to ask about the sources of testimony we plan to use:

(1) Are the sources competent-do they know what they are talking about? And

(2) Can they be trusted-are they free from bias? We might also consider whether the testimony is relevant, clear, and interesting and whether quotations are longer than necessary.



Statistics. Statistics are probably the most misused and misunderstood type of verbal support. When properly collected and wisely used, statistics can help instructors clarify their ideas. Statistics are also the most powerful proof support we can use. Not all figures, however, are statistics; some are simply numbers. Statistics show relationships (largeness or smallness, increases or decreases) or summarize large collections of facts or data. When we choose statistics to use in our lessons, there are some questions we should ask.

Are the statistics recent? Figures concerning the cost of living in 1960 would have limited usefulness for today's family planning its budget. When selecting statistics to use in our lessons, we should be on guard if no date is given or if the statistics are outdated.

Do the statistics indicate what they purport to? A single test score may **not** be a true measure of a student's ability. Comparing the simple number of planes may not indicate the comparative strength of two countries' air forces.

Do the statistics cover a long enough time to be reliable? The results of how one class responded to a new curriculum change would be less meaningful than how three or four classes responded to the change.

If the statistics are drawn from a sample, does the sample accurately represent the group to which we are generalizing? Experimental researchers are generally sensitive to the importance of obtaining a representative sample. Instructors also need to be sensitive to this need.

When statistics report differences, are the differences significant? Minor variations can often be attributed to chance. In other words, if we were to collect our statistics again, the results might differ.

When comparing things, are the same units of measure used to make the comparison? Failure in one course might have a different meaning from failure in another. If more students fail one course than another, we cannot necessarily conclude that the content of one course is more difficult. Perhaps the grading scale rather than the content was more difficult.

Do the statistics come from a reliable source? And is the source clearly indicated? It is more effective to state the source of the information than to say, "recent surveys show."

Are the statistics presented to their best advantage to aid student understanding? Could visual aids be used to present the statistics in graphic or tabular form for easier understanding? Have figures been rounded off where possible? Students are more likely to remember nearly $45,000 than $44,871.24. Is the number of statistics limited so that students are not overwhelmed by them? Could the significance of statistics be made more clear with meaningful comparisons? To say that World War 11 cost the United States 200 billion dollars would be more clearly perceived if the figures were converted to today's dollars or if they were compared to the cost of other wars using a standard measure.

Beginning And Ending The Lesson

So far we have selected the verbal and visual material that best supports our lesson and made necessary changes in the original tentative outline. We are now ready to cast our lesson into a final content outline. Usually before we outline, however, we will want to consider how to begin and end the lesson. If the lesson is not the first in a block of instruction, we may have little to do in the way of beginning or introducing the lesson. If other lessons in the same block of instruction are to follow this lesson, we may not need an extensive conclusion. But especially if the lesson is to stand alone, we need to give some attention toward preparing an introduction and conclusion.

Introduction. The introduction to a lesson should serve several purposes:

to establish a common ground between the instructor and students,
to capture and hold attention,
to outline the lesson and relate it to the overall course,
to point out benefits to the student, and
to lead the student into the lesson content.

While humor may be appropriate, the introduction should be free of irrelevant stories, jokes, or incidents that distract from the lesson objective. It should not contain long or apologetic remarks that are likely to dampen student interest in the lesson. Educators often speak of three necessary elements in the introduction of a lesson:

gain attention, motivate, and provide an overview of lesson material.

Attention. To gain attention, the instructor may relate some incident that focuses on the subject and provides a background for the lesson. Another approach may be to make an unexpected or surprising statement or ask a question that relates the lesson to group needs. A rhetorical question (Have you ever ... ? or Can you imagine ... ?) may be effective. At other times, nothing more than a clear indication that the lesson has begun is sufficient. In all instances, the primary concern is to focus student attention on the subject.

Motivation. The instructor should use the introduction to discuss specific reasons why the students need to learn whatever they are about to learn. In this motivational discussion, the instructor should make a personal appeal to students and reinforce their desire to learn. The appeal may relate the learning to career advancement or to some other need. But in every instance, the instructor should cite a specific application for student learning experiences. In many cases, the need for this lesson as a foundation for future lessons is strong motivation. This motivational appeal should continue throughout the lesson. If a brief mention of needs is made only in the introduction, the instructor is square-filling, not motivating.

Overview. For most instructional methods, the introduction should provide an overview of what is to be covered during the class period. An overview with a clear, concise presentation of the objective and key objective and key ideas serves as a road map for learning. Effective visual aids can be helpful at this point. A clear overview can contribute greatly to a lesson by removing doubts in the minds of the learners about where the lesson is going and how they are going to get there. Students can be told what will be covered or left out and why. They

can be informed about how the ideas have been organized. Research shows that students understand better and retain more when they know what to expect. The purpose of the overview is to prepare students to listen to the body of the lesson.

Conclusion. The conclusion of a lesson may stick with the students longer than anything else said. For this reason, we should give much care to its preparation. But the conclusion is also important in its own right. The conclusion of most lessons should accomplish three things: summarize, remotivate, and provide closure.

Final Summary. Short or interim knowledge-level summaries may be appropriate at various places in a knowledge-level lesson, for example, after each main point has been made. But final knowledge-level summaries come after all main points of the lesson have been made. An effective knowledge-level summary retraces the important elements of the lesson. As the term suggests, a final knowledge-level summary reviews the main points in a concise manner. By reviewing the main points, it can aid students' retention of information and give them a chance to fill in missing information in their notes.

In lessons designed to reach a conclusion (principle), a comprehension-level summary is desired as the final summary. Short or interim comprehension-level summaries may come at the conclusion of main points. But the final comprehension-level summary comes after all main points of the lesson have been made and serves as the first part of the lesson conclusion. The purpose of a comprehension-level summary is to provide logical and consistent reasons which support or lead to the desired conclusion (lesson objective).

The comprehension-level final summary may require several minutes. While containing a brief restatement of significant information, it requires an expansion of key items to establish relationships which lead to a generalization. The generalization is the instructional objective. New support material can be introduced when needed to establish the generalization.

Remotivation. The purpose of the remotivation is to instill in students a desire to retain and use what they have learned. Effective instructors provide motivation throughout the lesson. But the remotivation step is the instructor's last chance to let students know why the information presented in the lesson is so important to the student as an individual. Perhaps it is important because it provides the groundwork for future lessons or because it will help do their jobs more effectively. But whatever the reasons given, they should be ones that appeal directly to the students and show the importance to them of what was learned.

Closure. For many instructors the closure presents the most difficult challenge in planning a lesson. Students need to be released from active participation. In lectures they need to be released from listening. In interactive methods they need to know that it is time for their verbal participation to cease. Sometimes instructors, at a loss as how to close, say, "Well that's about all I have to say," or "I guess I don't have anything else." This type of closure is not very satisfying. There are much more effective ways of closing. Sometimes vocal inflection can signal that the lesson is ending. Quotations, stories, or humorous incidents can also provide effective closure. Sometimes when the lesson is to followed by others in the same block of instruction, we might say something such as, "Next time, then, we will continue with our discussion of... Between now and then if you have any questions" come to my office and I'll see if I can answer them for you.

Preparing The Final Outline.
After we have researched the topic, selected an instructional method, identified the lesson planning format we will use, organized the lesson, chosen our support materials, and decided how to begin and end the lesson, we are ready to prepare our final content outline. We may, in fact, **prepare two versions** of the outline.

One version will be very complete-almost in manuscript form-so we can return to it several weeks or months later when we have to teach the lesson again or when someone else must teach the lesson. Another version will be much briefer perhaps only one page long, or written on cards so we can carry it with us to the classroom and teach from it. This brief outline may be thought of as a keyword outline with key words and phrases to remind us of main points, sub-points, support material we plan to use, questions we might ask, and the things we want to mention in the introduction and conclusion of the lesson.

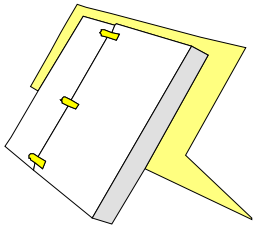
Since this keyword outline is a basic minimum for most of us to take into the classroom with us, the following discussion focuses on its construction. The longer version of the outline will follow the same principles, but much more information will be included in the outline.

Preparing a Keyword Outline
Division. The outline should be divided into three main parts: introduction, body, and conclusion. As discussed previously, the introduction will generally have three subparts: attention, motivation, and overview. The body will have the main points of the lesson as major subdivisions. The conclusion will have three subdivisions: final summary, remotivation, and closure.

Symbol system. To show the relative importance of lesson materials in the body of the lesson, we use a number or letter symbol before each entry. A roman numeral may be used to designate main points, capital letters for sub points, arabic numerals for sub-sub-points, lower case letters for sub-sub-sub-points, and so forth. Some rules of outlining to remember are:

(1) Only one symbol should be used per point or idea,
(2) Subordinate points should be indented, and
(3) The principle of sub points or subordination means that a point follows logically or supports the point above it.

Sample Keyword Outline. Earlier we considered how we might make a tentative outline for a lesson on nonverbal communication. Now let us consider how we might revise that outline to teach from in class. This outline has been prepared to use with the lecture method. The same outline could be revised slightly to use with a guided discussion or teaching interview method by simply replacing references to support material the instructor supplies with questions that would prompt students or an expert to supply appropriate support material.



Summary. A lesson plan is a plan for learning. The complete cycle of lesson planning may include eight steps:

(1) Determine the objective and state in terms of what the students are expected to learn.

(2) Research the topic as defined by the objective. To obtain useful and appropriate subject matter material we would draw first from our own personal knowledge of the subject, then draw on the expertise of others around us, and finally make effective use of a library.

(3) Select the appropriate instructional method with regard to designated student outcomes and acceptable student activities.

(4) Identify a usable lesson planning format. We need to select a format that serves as a checkpoint for well-planned learning experiences and provides a worthwhile teaching aid.

(5) Decide how to organize the lesson. Organization of main points and sub-points is important because it helps instructors and students remember the material. Commonly used patterns of organization are time, space, cause-effect, problem-solution, pro-con, and topical. Strategies for how we organize material with these patterns are also important. Although we may choose one pattern for organizing our main points, we may choose a different pattern for organizing sub-points.

(6) Choosing support material. Students understand supported ideas or assertions better than if support is not given. Definitions, examples, and comparisons are used mainly as clarification support. Statistics and testimony from experts can be used for either clarification or proof.

(7) Beginning and ending the lesson. The beginning or introduction generally has three necessary elements: attention, motivation, and overview of what is to follow. The conclusion has three parts: final summary (or summation in lessons teaching principles), remotivation, and closure, and

(8) Preparing the final outline. We may prepare two versions of the outline. One version will be very complete so the information remains intact if we want to return to it at a later time. A second version will be much briefer so we can teach from it in the classroom.

Sample Final Outline

Non-Verbal Communication

INTRODUCTION

Attention: "Actions speak louder than words." "Dinnerjacket" example

Motivation: Dr. Ray Birdwhistle - 65% of message communicate non-verbally
Importance-jobs, family, church. clubs

Overview: Chart listing main points and first level sub-points
Define "performance"

BODY

I. Know performance factors of nonverbal communication
- A. Upper body-importance capitalized on by F.D.R.
  1. Head
     a. Theory of origin of head gesture.
     b. Cultural differences
  2. Eyes-very important
     a. Show interest in others - example of blind studies
     b. Nonverbal feedback - cultural differences
     c. Increase credibility - Describe U of Mo. studies
  3. Facial Expression
     a. Affect displays - read Charles Darwin quote on expression
     b. Affect recognition - use everyday examples
- B. Middle Body
  1. Arms - demonstrate how we use them
  2. Hands - primary means of gesturing
     a. Compare meanings from different cultures - OK and Victory
     b. Demonstrate use of hands
  3. Torso - Demonstrate shoulder, chest, stomach-belly dancer example
- C. Lower body
  1. Hips - Elvis example
  2. Legs - compare with foundation of building
  3. Feet - show different angles

II. Nonperformance Factors
- A. Objects
  1. Present - clothes, home, office
  2. Past - things we have constructed - example of my former home
- B. Space
  1. Personal
     a. Stress cultural differences - give example of visit to Greece
     b. Space bubble - example of waiting for bus or in line
     c. Acceptable distance - cite statistics by Hall
  2. Constructed - office arrangement, fences, etc.
- C. Time - humorous definition from Esquire -, Wetumpka example

CONCLUSION

Summary: Re-teach main points

Remotivation: Stress importance of non-verbals to each student.