8

Chapter 8 – Identifying Motivational Problems

Forethought

A fundamental premise of this book is that one can employ a systematic motivational design process to predictably improve the motivational appeal of instruction.

What are the implications of this regarding creativity, spontaneity, and innovation? Does "systematic motivational design" imply that the process is mechanistic, like an assembly diagram for a barbeque grill? Does it mean that the person doing motivational design

Figure 8.1. Is Motivational Design Mechanistic?

becomes robotic (Figure 8.1)? And, to put it another way, is it possible to follow a systematic process and also be creative?

What do you think? You will find my perspective on this in this chapter.

Introduction: Beginning the Design Process

Earlier in this book (Chapter 3) the twin questions of how to determine how many and what types motivational strategies to use were raised. An issue regarding the implications of these questions was whether motivational design could even be approached systematically or whether it is more of a creative and intuitive activity. This process, which will be reviewed briefly as an introduction to this chapter, is neither mechanistic nor creative. The process simply represents a set of activities joined in a systems perspective as to how to identify motivational problems and goals and then

how to develop learning environments that will stimulate and sustain learner motivation. Mechanism versus creativity results from ways in which people apply the process and the particular problems they are trying to solve.

The complete process has ten steps which have been implemented in many different cultures and schools at all levels from kindergarten through adult continuing education and training. Also, there is a simplified approach (Chapter 11) that does not require completion of all ten steps, but it does require an understanding of the full process.

As illustrated in Table 8.1 which maps the *motivational design process* next to the *instructional design process*, you will begin by recording information about your course (Step 1). This will include a brief

Table 8.1. Summary of Motivational Design in Relation to Instructional Design.

Generic Design	Motivational Design Steps	Instructional Design Steps
Analyze	1. Obtain course information 2. Obtain audience information 3. Analyze audience 4. Analyze existing materials	• Identifying problem for which instruction is the appropriate solution • Identifying instructional goals • Identifying entry behaviors, characteristics • Conducting instructional analysis
Design	5. List objectives and assessments 6. List potential tactics 7. Select and design tactics 8. Integrate with instruction	• Writing performance objectives • Developing criterion-referenced tests • Developing instructional strategy
Develop	9. Select and develop materials	• Developing and selecting instruction
Pilot Test	10. Evaluate and revise	• Designing and conducting formative evaluation • Designing and conducting summative evaluation • Revising instruction

description of the instructional event that you wish to motivationally enhance and the learning goals. Then, you will record information about the students in your target audience (Step 2), and based on this information, you will do an audience motivational analysis (Step 3) to determine where there might be motivational deficiencies versus satisfactory levels of motivation.

These results tell you what areas of motivation will require special attention as you prepare your lesson plans. This motivational analysis compliments the instructional design analysis of audience capabilities based on their abilities and prerequisite knowledge requirements.

Following the audience analysis, you will analyze the current status of your course materials (Step 4) to determine the ways in which they are satisfactory and the areas in which they will require motivational improvements. This is analogous to the instructional analysis that describes the knowledge and skills to be included in instruction. Based on these analyses, you will prepare objectives for your motivational design plans and you will indicate how you will know if these objectives have been accomplished. In other words, you will identify the assessments you will use to verify that your motivational objectives have been achieved (Step 5). In contrast to instructional design objectives which describe expected leaner outcomes, these objectives define your motivational goals.

The next three steps of the process (Steps 6, 7, and 8) constitute the design activities. The first of these steps consists of preparing a preliminary listing of motivational tactics (Step 6) that might help you succeed in accomplishing your motivational objectives. You will engage in brainstorming, either on your own or in a group, to identify as many tactics as you can in each of the four areas (attention, relevance, confidence, and satisfaction) and in relation to the beginning, middle, and end of the instructional period. This leads to the final selection of tactics (Step 7) where you will apply several analytical criteria to your brainstormed list to select the ones that you will actually use. After you finish this final selection step, you are ready for the final design step which is to integrate your motivational tactics (Step 8) into your lesson plan, or instructional strategy plan. These design steps differ from instructional design in ways other than just their purpose.

The final two steps can be completed jointly with the last two phases of instructional design (Table 8.1), or they can be done independently if you are preparing motivational enhancements for an existing course. In Step 9, you will develop the motivational tactics by selecting existing materials, developing new materials, or modifying the instructional strategies to include motivational elements. Then, in the final step, you will pilot test them by trying them out, formatively evaluating them, and revising them if necessary (Step 10).

These steps represent the complete systematic process that one might follow. It can be used in a formal manner with documentation of each step, or it can be used as a general heuristic guide to thinking and planning. In formal design settings, where decisions might be reviewed, personnel assigned to the tasks might change, or modifications might be made to the instruction, it can be helpful to have documentation that explains what happened at each step. But, if you are following the process for your own course, then you might require only a few notes which will serve as reminders when you prepare to offer this course in the future. The important thing is the process represented by these steps, not the specific questions in the worksheets. As you use these worksheets, I expect that you will modify them to fit your situation. In the remainder of this chapter, each step is introduced and a detailed description of the worksheet is provided.

In summary, what are the implications of this process? Does it seem to be excessively structured with negative effects on creativity, spontaneity, and innovation in the process of teaching, as was asked in the Forethought? Some people do, in fact, resist systematic design processes because they believe formalized processes will inhibit their freedom and creativity. And, who knows, maybe it will for some people. However, that is because of their personal style and not because of the design process itself. The design process consists of guidelines that help you make best use of your time in trying to accomplish a goal. As was quoted in Chapter 3, "design is a process of making dreams come true" (Koberg & Bagnall, 1976). When Don Koberg and Jim Bagnall first began publishing *The Universal Traveler: A Soft Systems Guide to Creativity, Problem-Solving, & the Process of Reaching Goals*, they were on the faculty of the School of Architecture and Environmental Design at a California University. One of the distinctive characteristics of this book which has been through numerous editions is that the authors describe many attributes that make one a creative user of the design process. These include qualities such as awareness of life and everything around you, enthusiasm, self-control, a positive attitude, and the ability to overcome fear. Fear, they maintain, is the biggest enemy of creativity and design. Fear causes you to become narrow and safe in your approach to problem solving and generating solution ideas to develop and test. You must not abandon an idea that you feel excited about even if others do not agree with you. To be an effective designer, you must be willing to try out new things, make adjustments when things do not go as planned, and to find ways to be enthusiastic about the process that you are undertaking! As you begin to work on your motivational design project, you must become enthusiastic about it. If not, then the results of your project are not going to inspire you or anyone else. Conversely, if you are enthusiastic, then there is a high probability that you will generate some creative ideas that are appealing to your audience! This attitude applies to instructional design and motivational challenges just as it does to every other field in which design plays a role!

Step 1: Obtain Course Information

Overview

The selection and development of motivational tactics that are appropriate for a given course depend on many factors that include, but are not limited to, characteristics of the learners and their goals. Motivational tactics require time and expense to develop and they take time to implement. If they take too much time, they can actually detract from the learning objectives and course content. When this happens, the motivational tactics become demotivational. To ensure that the motivational tactics are appropriate for the situation, it is necessary to collect background information about the course that is to be offered and about the audience.

Step 1 focuses on several characteristics of the course and how it will be delivered. As illustrated in Worksheet 1 (Table 8.2) there are four

Table 8.2. Motivational Design Worksheet 1.

OBTAIN COURSE INFORMATION
Title of Instructional Unit (Course, Module, Lesson, etc.):
Description of Content and Conditions
1. What is the purpose (major goal or objective) of this unit?
2. Provide a brief description of the content (actual or expected) of this unit.
3. Will you teach this unit more than once this year and will you teach it in subsequent years?
4. How much time is there to revise or create this unit of instruction?
Curriculum Rationale
1. What curriculum need or requirement is supposed to be met by this unit of instruction?
2. What are the benefits to the students?
Context
1. How does this course relate to other courses taken before or after this one?
2. What delivery system (method of presenting the instruction) will be used (e.g. classroom presentation and discussion, lecture-lab, self-paced print, etc.)?
Instructor Information
1. How much subject matter expertise do you or the other teachers of this course have?
2. What kinds of teaching strategies are you or the other teachers familiar and comfortable with?
3. What kinds of teaching strategies would be unfamiliar to, or rejected by you or the other teachers?

parts to this step: (1) course description, (2) rationale for the course, (3) context, and 4) instructor information. The course description asks for an overview of the course and its purpose, how many times and how frequently it will be taught, and how much time you have to work on lesson planning and design before having to teach the material. This helps you decide how much effort to put into designing motivational tactics. Describing the rationale for the course and its context (relationship to other courses and method of delivery) helps with the design of motivational tactics that are relevant to the purpose of the course.

The characteristics of the instructors should be taken into consideration when designing and developing course materials for an instructor-led setting even though this is not typically done by instructional developers or curriculum specialists. This applies to both the instructional tactics and the motivational tactics that are used. Ultimately, the personal style, knowledge, and experience of the instructor have strong influences on the course and on the tactics that will be successful. Instructors may require training in how to adapt and use tactics such as games and role-plays before they will use them. If you can obtain answers to the four questions in this section during the first phase of your work, you will be more effective in selecting tactics and designing materials that will be comfortable for the instructors to use.

If you are a teacher who is applying this process to your own instruction, then you will be more likely to consider these elements. Just keep in mind that there is not one best way to teach or to motivate students. The best approach is to understand your own personality and preferences and to develop methods and a style that are comfortable for you.

An important principle in regard to these worksheets is "adapt and apply." Each worksheet has an overall purpose and you should feel free to modify them based on your audience, the nature of your project, and the degree of design and development that will be required. After you have applied the process once or twice, you will become comfortable with making revisions to the questions and customizing the worksheets in other ways that meet your needs. However, it is strongly recommended that you not skip steps. Each step serves an important function in the overall process. Even if it takes only a few minutes to consider any of the steps, your thoughts and documentation pertaining to that step will contribute to a stronger more effective outcome!

Instructions for Worksheet 1: Obtain Course Information

This worksheet (Table 8.2) and the second one (Table 8.5) are designed to help you get background information about the setting and the audience that will help you analyze the motivational characteristics of the audience and to prepare for selecting effective motivational strategies. Some of the information is very general and does not have a direct one-to-

one relationship with a particular motivational decision, but it definitely helps you understand the general motivational framework which will be useful in doing the audience motivational analysis (Worksheet 3). In designing motivational strategies, this general information will help you choose appropriate analogies, learner activities, and other aspects of motivational design.

Description of Content and Conditions

1. Try to state the overall purpose or objective of the unit in one or two sentences. This will serve as a reference point when deciding whether or not to include motivational strategies and tactics that are listed for consideration during the design steps.

2. Writing a brief summary of the content also provides a reference point for identifying and selecting motivational tactics, and it also helps you list and focus on the most essential parts of the unit.

3. Some motivational tactics can be implemented quickly and easily, but others, such as case studies or experiential learning activities, take much longer. By giving some thought to how many times this course will be taught, you will be better able to decide how much effort to put into motivational tactics. For example, if you or others are going to teach this unit several times and for more than one year, it is worthwhile to develop motivational tactics that require more design and development time.

4. Teachers and trainers often say they do not have enough time to think about motivational activities. In fact, they often say they don't even have enough time to think about good learning activities. This question asks you to indicate just how much time you do have. In Step 7, you will apply several practical criteria to the selection of motivational tactics. Time will be one of them.

Curriculum Rationale

1. Units of instruction are developed and delivered for many reasons ranging from prescribed curriculum requirements to individual educational plans for children with special needs. If a given unit of instruction is a prescribed element of a curriculum, there is sometimes a rationale based on the philosophy or the curriculum or the structure of the subject matter. It will help your own motivation to teach the material as well as the students' motivation to learn it if you know and accept the curriculum rationale for the content.

2. If a student should ask, in regard to this unit that you are developing, "Why should I study this?" how would you answer him? Can you think of something more meaningful than to say, "It's required?" In other words, what benefits are there, if any, for the students to learn this material? Sometimes there are clear benefits to the students. For example, students in a college preparatory program

of study will clearly benefit from learning the content and test-taking skills to help them do well on competitive exams. For students who are not in a college preparatory program, it will be more difficult to think of specific benefits for some of the academic material they are required to learn. Sometimes it is difficult to identify the benefits to students because you may have been wondering about that yourself; that is, some of the units that we, as teachers, have the most difficulty teaching are the ones for which we, ourselves, do not see a real benefit. Try to identify specific benefits in this section. It will help you focus on certain aspects of learner motivation in the motivational design process. However, if you cannot think of specific and meaningful benefits, do not worry about it at this time. As you proceed through the motivational design process, there will be other places where you can address this problem.

Context

1. What is the relationship of this unit of instruction to other parts of the course or curriculum? Does it build on previous content or skills? Think about related topics, not just the specific prerequisites or next steps within the defined content and skill area. For example, if you are working on a history course that covers Egypt, consider whether the students have read about Egypt or neighboring areas in other courses such as social studies or geography. Also, consider how and when they might encounter this content or topic again in the future. This will help you later when it is time to develop motivational tactics to make the instruction relevant to students' interests and experiences.

    Another type of contextual relationship to consider is the connection to skill development. Are there skills to be learned in the present unit that build on past skills or contribute to future requirements? For example, if students in your unit of instruction have to analyze historical documents to look for the presence of certain themes or metaphors that helped define a culture at a particular time, such as the concept of balance and harmony in ancient Greece, have they done assignments in other classes that require similar skills? Or, might they have to do so in a future course? For example, in literature classes, have they had to, or will they have to, analyze a literary work in terms of major themes or metaphors and write a paper that explains and supports their observations? If you can make these kinds of connections, it will help you add motivational value to the lesson.

2. Delivery system refers to the primary way in which instruction is delivered to the students. Common delivery systems are instructor-led classroom instruction, self-paced print instruction, computer-based instruction, and web-based instruction. Delivery systems

should not be confused with media selection. Within any delivery system, you can choose what type of media to include. For example, in a classroom, you might use a variety of media such as posters, videos, a white board, or Power Point slides. But different delivery systems have implications for motivational design based on their overall characteristics. For example, a teacher who is experienced and attentive to the dynamics in a classroom will be able to sense the need for changes in motivational tactics and respond accordingly. But, in computer-based instruction, you have to anticipate the motivational requirements of learners in advance and design the appropriate tactics into the instructional materials. The computer cannot respond to changes in motivation as flexibly and expertly as an experienced teacher can.

Instructor Information (This Section Applies to Instructor-Facilitated Courses)

Although typically not done, the characteristics of the instructors should be taken into consideration when designing and developing the course materials for an instructor-led setting. This applies both to the instructional strategies and to the motivational strategies that are used. Ultimately, the personal style, knowledge, and experience of the instructor have a strong influence on the course. If you can obtain answers to the questions in this section during the first phase of your work, you will be more effective in selecting and designing materials that will be comfortable for the instructors to use.

1. The level of subject matter expertise can be important when trying to make a unit of instruction more motivating. Teachers with a high level of knowledge and experience are usually better able to think of a variety of possible motivational tactics. But, sometimes, their familiarity with the subject matter limits their ability to see it in new and novel ways that might appeal to the background and interests of the students. Similarly, teachers who are teaching out of their primary content area will sometimes be able to bring new ideas and perspectives to the topic. In your own preparation, consider the degree to which you might need to find ways of looking at your subject matter with ''new eyes'' to make it more motivating. A variety of good tactics for opening your perspective and getting new ideas are contained in a generalized design book called *The Universal Traveler* (Koberg & Bagnall, 1976). The actual exercise of creating motivation ideas will occur later (Step 6). The only requirement here is to consider the level of your expertise and other members of your team if more than one person is working on this.

2. Try to list the various teaching strategies that you have used. For example, has most of your experience been in the form of

explanatory lectures followed by examples and exercises for the students? Have you, or other teachers who might be working on this project, used strategies such as discovery learning, inquiry teaching, simulations, games, or case studies? Include as many as you can.

3. Finally, list any teaching strategies you or others are uncomfortable with, or that you have heard about but never tried. This information in this section also helps prepare you to select and develop motivational tactics that will be acceptable to you and other teachers who might be involved. There is no point developing a creative role-play exercise if the teacher is not confident and comfortable using such a strategy.

Sample Worksheets

Two sets of sample worksheets are included here and throughout the description of this process. Both of these are based on actual situations and while they provide good, concrete illustrations of how the worksheets can be used in two very different situations, I have not tried to modify them to the point of making them "perfect." Overall, they are fine, but sometimes there are parts that could be improved. I will point this out in the appropriate places. If you are using this book as a text, you could build exercises around these worksheets by having your students critique them and suggest improvements. One of the reasons I left some of the problematic areas the way they are is because they represent characteristic problems I have encountered among the students in my motivational design course. It is helpful to the students to see the examples of what not to do as well as positive examples.

The first sample (Table 8.3) is from a course that was being developed and motivationally enhanced for a training course in a corporation. This example is based on a project in an actual company and was originally reported in a class assignment by Julie Jenkins, one of my graduate students. However, I have modified numerous aspects of the situation and the contents of the worksheets for this sample. The revisions do not detract from the authenticity of the example, but they do provide better illustrations of various aspects of the requirements for each step.

The second example (Table 8.4) is based on work that was done by Gail Hicks in a special program for gifted and talented students in an elementary school in New Jersey. Her situation diverged from a typical classroom or online course because she met with the children infrequently. This program was designed to help them learn inquiry skills and it extended throughout the semester, and there were numerous motivational issues to consider. She followed the ARCS systematic design process, but many parts of these structured worksheets were completed by me retroactively. Even though some parts exceeded the level of detail that she required, they were effective in providing a basis for documenting her project.

Table 8.3. Worksheet 1 Course Information Example: Corporate Training Environment.

Corporate Example: Worksheet 1:
Course Information

Course Title

ESE is Easy (ESE = enterprise support environment)

Course Description

Course Description

The lesson under survey is part of an interactive computer-based training course for Digital Magic's[1] Systems Integration Process Group. This four-hour technology-based training (TBT) was designed to teach Digital Magic's Systems Integration personnel how to use the Enterprise Support Environment (ESE) application to plan, manage, and archive projects using the Systems Integration Process (SI-Pro).

Purpose of Course

The course objectives, as outlined in the DDD, state that upon completion of the course, learners will be able to use ESE to

1. load enterprise models or enterprise templates,
2. adopt work products,
3. tailor the Work Breakdown Structure (WBS),
4. manage the Statement of Work (SOW),
5. manage a project plan, and
6. archive enterprise materials.

New or Existing?

The course under analysis currently is in the final stage of testing and is about to be released to the client for mass reproduction. Since this is a new Digital Magic application, this is the first course ever created for ESE.

Logistical Considerations

The course will be taught several times during the next two months. The frequency of modifications is dependent upon the client, however, negotiations are underway for a modified version of the ESE TBT to teach the next version of the application. Apparently, the next release of the application will contain the same features as the current version, but in addition, it will contain estimation features for project cycle time and project costs. The client has indicated the new TBT should include instructions for the new functions, but they would like any revisions we see fit incorporated as well.

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[1] A fictitious company name.

Table 8.3 (continued)

Time Allotted for Revisions
The new version of ESE is due to be released very soon. Since negotiations are underway for the new, revised TBT, we can most likely expect approximately 6–8 weeks to implement course revisions.

Rationale

Rationale for the Course
This course is being taught to provide specific training for Digital Magic personnel who are part of the SI-Pro Competency. ESE has been designed to support the needs of these personnel (project managers and process exponents), so the ESE course had been created to teach how to use this very valuable tool.

Rationale for Course Revisions
Since the *ESE is Easy* TBT is the first course ever created to teach this new tool, it was quite difficult for the instructional designer and project team members to construct the course in the time allotted by consultants. The effectiveness of the instructional design is uncertain, for the course has not been evaluated. In addition, revisions to motivational strategies are definitely required because the initial time constraints prevented the ID from being able to spend time implementing detailed principles of motivation.

Setting

Context
ESE is an interactive, computer-based training course for ABCC personnel who are involved with project management. The course is being delivered via CDROM and has been designed using this delivery vehicle so employees can complete the course in the comforts of their own home, at the office, etc. The course is setup so that users may navigate through the course at an individual pace. The course not only allows the learner to backtrack, but actually prompts them to do so at specific points throughout the course. This course is not related to any other courses currently at Digital Magic.

Delivery System
The course will be delivered either at the work site or at the ABCC employees' homes via CDROM.

Instructor Information
[Not Applicable]

Transition

All of the information you have recorded helps establish a frame of reference for the analysis and design steps that will follow. Also, when you have motivational design projects to undertake for other courses or for your current one at a future time, this kind of documentation will help you remember the

Table 8.4. Worksheet 1 Example: Elementary School Gifted and Talented Class.

Elementary School Example: Worksheet 1
Course (Unit) Information

Unit Title[2]: Independent Study Project

Unit Description

1. Brief description of this unit[3]:
   The instructional need to be addressed in this unit is the development of an independent project. The emphasis of the course is upon the expansion of independence, the introduction of the concepts and skills necessary for self-directed learning, problem-solving skills, communications, effectively using time, and the completion of an independent project. The target population for the unit is identified intellectually and academically talented and gifted 5th and 6th grade students.

2. Purpose (major goal or objective) of this unit?
   The thrust of the unit is to develop critical and creative higher level thinking skills, and to use these skills to creatively solve a problem, to develop greater facility in planning activities to research and to share a completed project with others.

3. Is this a new or existing unit? (Check One) Existing unit __X__ New unit _____
   This is a standard assignment for this target population.

4. What are the logistical considerations of this unit? Will it be
   a. taught one time or many? Taught annually.
   b. modified frequently or infrequently? Updated annually.
   c. taught frequently or at widely spaced intervals? It will be taught every year.

5. How much time is there to revise or create this unit before it will be taught? Three months.

Rationale for the Unit

6. What need or requirement is supposed to be met by this unit?
   One goal is to design the unit to promote student feelings of responsibility and persistence (in other words, a perceived sense

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[2] **Note change in level of reference from course to unit.**
[3] Note modification to question.

Table 8.4 (continued)

of personal causation) during the entire process. The students must also be called upon to use problem-solving techniques in the development of an original independent project. The project will also help students learn to develop original and/or unusual ideas, especially as solutions to problems (U.S.O.E. definition of gifted and talented children). The students will then be able to draw upon these skills and use their potential to the fullest to realize their contributions to self and society (Wenonah School's talented and gifted policy philosophy).

7. What are the perceived motivational or instructional problems? The problem associated with the unit is the motivation of the students. Although in a talented and gifted program such as ours the initial motivation of students is not usually a problem, the difficulty frequently occurs in maintaining a high level of motivation throughout the entire time period. The students work individually and independently on their projects.

specific circumstances of this situation and the reasons why various motivational design decisions were made. The benefits of your work on this project will transfer to other projects. In the next section, we will take a close look at the characteristics of the audience, or students, for this unit of instruction.

Step 2: Obtain Audience Information

Overview

The information in this step (see Worksheet 2, Table 8.5), together with the preceding one, provides the foundation for the audience analysis to be conducted in Step 3. This step focuses on several factors that have a strong bearing on the initial motivation of students and how they are likely to respond to the content and instructional strategies of the course. For example, the existing reputation of the course, the extent to which the students have similar or divergent values, and the method of selecting or assigning students to courses help you anticipate the entry-level motivation of students. This information is extremely useful when designing the motivational tactics to use at the very beginning of a course.

Instructions for Worksheet 2: Obtain Audience Information

1. From one perspective, classes are always heterogeneous; that is, there will always be differences among the students based on their unique personalities and interests. However, in some classes

Table 8.5. Motivational Design Worksheet 2.

OBTAIN AUDIENCE INFORMATION
1. How well do the learners in this class know each other, if at all? Are they a reasonably homogenous group, or are there distinct subgroups?
2. What are the learners' overall motivational attitudes toward school?
3. What do you expect the students' general attitudes toward this unit of instruction to be? Is this an elective or a required unit? Do you expect them to regard this unit of instruction as being useful or of little personal value? Do you expect them to believe that it will be difficult or easy, boring or interesting?
4. What kinds of teaching strategies are the students accustomed to (e.g., lecture followed by exercises, collaborative groups, case studies, role plays, self-instructional printed materials, computer-based instruction, etc.)? Do you expect them to have any strong likes or dislikes with respect to various teaching strategies?

the learners will be generally homogenous with respect to their overall socioeconomic level, their values regarding school, and their attitudes toward the future. In other classes, there will be distinct subgroups based on differences in these same variables. Briefly describe the extent to which you believe your class to be generally homogeneous or to have distinct subgroups. This will have a direct effect on how you conduct your audience analysis in the next step.

2. Do the students in your class have an overall positive attitude toward school and its importance in their lives? Are there differences among subgroups in your class with regard to their attitudes toward school? Take note of these attitudes in your response to this question.

3. What do you think their attitude will be toward the subject matter of the unit of instruction that you are preparing in this design process? Will they regard it as being useful or not particularly useful? Do you expect them to regard it as an interesting subject, or basically somewhat boring? Describe any aspects of their attitude toward this subject that you can.

4. Finally, think about the teaching strategies that are familiar to these students and their attitudes toward the strategies with which they are familiar. Reflection on this issue will help you choose strategies that might be most motivating to these students.

Sample Worksheets

The corporate example (Table 8.6) illustrates a fairly common situation in training and also in educational institutions because this is a required course which means that the participants are what is commonly called a "captive audience." However, as indicated in the worksheet, not all of the participants are expected to have a negative attitude!

Table 8.6. Worksheet 2 Audience Information Example: Corporate Training Environment.

Corporate Example: Worksheet 2:
Audience Information

Questions Related to Audience Information

Who are the learners?
The target audience consists of project managers and process supervisors within the SI-Pro Competency Group. Both project managers and process supervisors have full authorization in ESE, and they are considered SI-Pro experts.

Do the learners know each other?
The target audience is dispersed across many locations, but many of them network with each other. However, this course is being offered to individuals as self-directed study, so they will not be interacting in a real or virtual classroom.

What are the learners' motivational attitudes?
Most of the learners have negative attitudes toward training. The negative attitude toward training is most likely a result of one of three factors: (1) the ESE training course is required, not voluntary or (2) previous self-directed, technology-based training courses were a negative experience for the learner, or (3) previous face-to-face training courses were a negative experience.

What are the learners' general attitudes toward this course?
Attitudes toward the course vary, but are predominantly negative. Most employees view training as boring or unnecessary. They would rather learn how to use the tool by their own means.

Do the learners have any strong likes or dislikes with respect to various types of delivery systems and teaching strategies?
However, some of the learners have never experienced technology-based training and are eager to participate in the new course. Other employees are reluctant to use the TBT or experience any type of training.

Even though the age level and organizational settings are extremely differ-
ent, the elementary school example (Table 8.7) is a dramatically different

Table 8.7. Worksheet 2 Audience Information Example: Elementary School
Gifted and Talented Class.

Elementary School Example: Worksheet 2
Audience Information

1. Who is the target population for this unit?[4]
   Fifth and 6th graders in the academically talented and gifted
   program in an elementary school in the Northeastern United States.

2. What are the learners' motivational attitudes toward school, and
   their morale within their school?[5]
   These students generally enjoy school because they are able to be
   highly successful and their school supports them with good resources.

3. How well do the learners know each other, if at all? For example, will
   they know each other and have experience working together?[6]
   By the time this unit begins, all of the students who are participating
   will know each other as a result of being in the same special class, at
   least at the level of recognizing each other. Some of them will be
   friends and acquaintances. Some of them will have known each
   other from being together in previous grades.

4. What are students' general attitudes toward this unit? Did they volunteer
   or were they assigned? Do they think it is useful or unnecessary? Do they
   think it will be difficult or easy, boring, or interesting?
   This is a requirement of all students in this program. Based on an
   interview conducted by the special project teacher, the students
   believe that it is challenging, but that they can do it. They get enthused
   about having an opportunity to pursue something of their own interest,
   but they do not think the project is very useful to them for their future.

5. Do the learners have any strong likes or dislikes with respect to
   various types of delivery systems and teaching strategies?
   At this grade level, most of them like variety and get bored quickly
   with lectures, unless the lecture is a "special talk" on a topic of
   interest. The idea of an independent project appeals to them.

---

[4] Note change in the question compared to the corporate example.

[5] Again, note changes in this question to make it more appropriate for a
school setting compared to the previous example.

[6] And, once again, the question was modified.

situation from the corporate one. Like the corporate example, this is a required course but the children are eager to participate. It is a novel experience compared to their normal routine and it even has an air of eliteness about it. But, as indicated in the worksheet, there are several motivational challenges confronting the teacher!

Transition

These first two worksheets contain your descriptions and reflections on the background information that you were able to acquire about the course and the students. This information has prepared you for the next step, which is a formal analysis of the audience, and for Step 4 in which you will do a motivational analysis of any course materials that currently exist for the unit of instruction that you are motivationally enhancing.

Step 3: Analyze Audience

Overview

Audience analysis is a critical step in the motivational design process. It requires decisions that will have a direct influence on defining your motivational objectives and selecting or creating tactics. The purpose of this step is to estimate what the motivational profile is for the whole class or for selected subgroups or individuals in the class.

One of the challenges in solving motivational problems is that the initial motivation of the learners can be too high as well as too low. If it is too low, their achievement will be low because they have little desire to succeed and they will not exert enough effort. If their motivation level is too high, then the quality of their performance decreases because of excessive stress that causes them to "freeze up;" that is, not be able to remember information or engage in ineffective problem-solving tactics.

The goal of motivational design is to identify and use motivational tactics that help keep learners in a happy medium between the two extremes. By analyzing the audience to determine specifically what types of motivational problems exist, it is possible to select tactics that solve these specific problems. This also helps avoid problems that can result from having too few or too many motivational tactics. It helps instructors rely on a rational method of motivational design instead of depending totally on past experience or trial-and-error methods.

These conditions can be represented in a graphic format (Figure 8.2) as previously illustrated in Chapter 3. The baseline is divided into three sections representing motivational levels that are too low, acceptable, and too high. The vertical axis represents performance or achievement. As illustrated by the plotted curve, which has the appearance of an upside-down letter *U*, performance is at a maximum when the motivation levels are
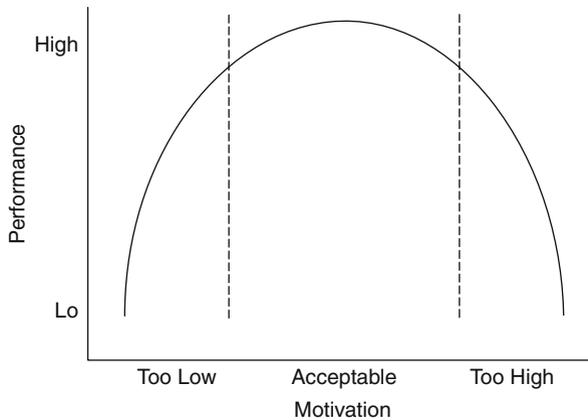
Figure 8.2. Curvilinear Dynamics of Learner Motivation.

acceptable, and it decreases when motivation levels are too low or too high. This is not, strictly speaking, a mathematical model, because the methods of measuring motivational levels are not sufficiently precise or stable to provide a basis for creating rigorous mathematical models that encompass all the dimensions of motivation. However, it is a useful method for graphically portraying the concepts and conditions of motivation and performance, and it becomes useful when recording the results of your audience analysis in Task 3 of this section (see Worksheet 3, Table 8.8).

This process of audience analysis assumes that you have studied the preceding chapters that explain the concepts, tactics, and subcategories representing each of the four major categories (Attention, Relevance, Confidence, and Satisfaction). Keep in mind as you do this analysis that you are trying to predict what the initial motivational characteristics of the audience will be when they begin the unit of instruction that you are motivationally enhancing. Consequently, in the audience analysis, each ARCS category is described in terms that reflect this focus on prediction. The information in Worksheets 1 and 2 is to be used as background on which to base your estimates of the *audience motivational profile*.

Instructions for Worksheet 3: Audience Analysis

1. In the audience analysis (Worksheet 3, Table 8.8), you will build a learner profile that incorporates each of the four ARCS dimensions. The first step is to determine whether there will be a dominant profile for the entire group, or whether there are distinct subgroups. If there are distinct subgroups, then you will develop a separate profile for each. You can record all of your results on this worksheet by labeling each subgroup as you describe it, or use separate copies of this worksheet for each one. Keep in mind that even if you divide the large group

Table 8.8. Motivational Design Worksheet 3.

ANALYZE AUDIENCE

1. Does this analysis pertain to the whole class or one subgroup (use separate forms or identify with a label as indicated in instructions)?

2. Based on the information in Worksheets 1 and 2, how do you characterize the audience on each of the following dimensions (describe each and use the graph to portray the results)?

>   Attention Readiness:
>   Perceived Relevance:
>   Felt Confidence:
>   Satisfaction Potential:

1. Graph of audience analysis. Use this graph to portray the results of your audience analysis. Draw additional graphs as necessary for additional subgroups or for individuals.

Audience Analysis

4. How would you characterize the major versus the minor problems?

5. Does the major cause appear to be modifiable? If not, which other conditions might be influenced to improve overall motivation?

6. Is there anything else that should be considered in the audience analysis?

into subgroups there will still be variations in motivation among the individuals in each subgroup. The purpose of this analysis is to identify the major characteristics of each group or subgroup.

2.   Describe the audience's motivational profile to provide a basis for identifying motivational tactics to use. If the audience's motivation is too low or too high, then you will design motivational tactics to bring it into the acceptable range. If the audience's motivation is already acceptable, then you will use only as many motivational tactics as necessary to sustain learner motivation.

Student motivation can be too high or too low in each of the four major areas of motivational variables. Explanations and examples of each will help prepare you to determine the motivational profile of your audience.

Attention Readiness: Refers to the degree to which the audience will be likely to respond with curiosity and attention to the instructional material. At one extreme, the audience is likely to be under-stimulated (bored) and not likely to pay attention, or over-stimulated (hyperactive) and unable to keep their attention on any one stimulus.

If students are in your course because they have elected to study this subject, or if you expect that they will be alert and open-minded about the content of your course because of their intrinsic interest in the subject, then they will probably be in the acceptable range of attention readiness. However, we can sometimes predict that a certain type of subject matter will be viewed as uninteresting and boring by a given group of students even though the material might be relevant and important to know. For example, students in a physical education class frequently have to listen to instruction on the rules of a sport before they are allowed to play it. Typically, they are bored by this instruction because all they want to do is get on the playing field and start the game. In contrast, assume that it is the first day of class for a student who is interested in science. If, when the student goes into the classroom, the counters are filled with interesting experimental apparatus and the walls are covered with colorful posters of scientific illustrations and information, the student is likely to be hyper-active. The student will be trying to look at everything and will have a strong desire to walk around the room for a closer look and to touch the various items. This student will be excessively high on the attention dimension of motivation and it will be necessary for the teacher to calm him down before he will be ready to listen attentively to the lesson.

Perceived Relevance: Refers to whether the audience is likely to perceive any personal benefit from the course with respect to motive or goal attainment. At one extreme the audience will be indifferent or even hostile if they perceive no relevance. At the other extreme, perceived relevance may be so high due to the importance of this course to their future goal attainment (e.g. graduation, promotion, job retention, scho-larship) that they have high anxiety due to feelings of jeopardy.

For example, students frequently do not perceive the relevance of academic subjects. The students might accept the necessity of studying a subject because it is a required link to a future goal, which is one component of relevance, but they might not see how the subject has any meaningful importance in their lives. Consequently, they would be expected to be in the "low" category for relevance. In contrast, a student might be enrolled in a course that either has or is perceived to have a vital link to the student's future. The student might be so nervous about the consequences of not doing well in the course that his or her

performance will be less than possible due to excessive stress. In this case, the motivation level is clearly too high for relevance. If the students believe that the subject matter is important for the present or future in their lives, and that it has some personal relevance in their lives, then they are in the acceptable range for this category.

Felt Confidence: Refers to how likely the audience is to feel a comfortable sense of challenge in the course. If they feel too unconfident, they will experience feelings of helplessness. The students often experience it as "I can't do this no matter how hard I try". But, if the students are overconfident they will be arrogant and likely to overlook the gap between what they actually know and what the course is teaching.

It is not uncommon for students to develop helpless attitudes toward specific subjects. For example, some students might believe that they have a writing problem, that it is excessively difficult to write good essays or technical reports. Other students might have math anxiety because of fears they have developed toward this subject. If you suspect that such an attitude exists among some of the students toward your subject, then you would mark them low on confidence. In contrast, some students believe that they know more than they do. If you are going to teach subject matter that the students have previously studied, even though they studied it at a more elementary level, then you may have problems with the students being overconfident. Keep in mind that if the students believe that they already know the material, and they do, in fact, know it, then they are not overconfident. In that case, they are appropriately confident. If their overall expectation is that they can learn the material with a reasonable amount of effort, then they are in the acceptable range of motivation for this category.

Satisfaction Potential: Refers to the audience's preconceived ideas about how they will feel about the outcomes of the course. At one extreme, the reluctant learners may have a feeling of "sour grapes." It is the feeling that "No matter how well I succeed in this course, I'm still not going to like it." At the other extreme, they may be expecting too much from the course, a feeling of panacea as if the course were going to solve all their problems or help them achieve total mastery of the given skill.

It is quite possible that students' satisfaction potential can be too low even though they know the material is relevant and they are confident they can learn it. This sometimes happens in required courses. The students might have a bad attitude simply as a result of not having a choice, and not being intrinsically interested in the material. If this were the case, then the group would be in the low range for this category. The opposite condition exists when students' expectations are too high. For example, when students first get the opportunity to study a foreign language, they might be enthusiastic because they expect that within a short time they will be able to have pen pals and

converse in the new language. This will not be possible at the end of a first unit of instruction in a new language, so the students will be disappointed with what they have learned even though they might have done quite well in regard to the realistic goals of the course. If you believe that students' expectations exceed what is realistic, then their satisfaction potential is too high. The acceptable range of motivation is when the students have realistic expectations and expect to have a satisfying feeling of accomplishment if they succeed.

3. Graph the results of the analysis. It can be helpful to portray the results of the analysis in a graphical format. Even though the graph is not, strictly speaking, a quantitatively based plotting of coordinates, it provides an illustration of results that can be comprehended at a glance and provides a handy reference in subsequent steps of the motivational design process.

To graph the audience profiles, refer to your verbal descriptions in the previous task. If the motivational level of the audience for a given component of motivation is at the maximum level of acceptability, then move your pencil across the horizontal axis of the diagram (Figure 8.2) until you reach the midpoint. Then move your pencil up until you reach the inverted U curve and write the initial at the top of the *U*-curve, as illustrated by the **A** and **S** in Figure 8.2. This indicates that you expect motivation to be at the optimal level, and by referring to the vertical axis of the diagram, that performance will be at a maximum to the extent that it is influenced by motivation.

If you believe the audience's motivation is in the acceptable range, but not optimal, then place the initial for the given motivational dimension at an appropriate point on the curve. Similarly, if you believe the motivational level to be too low or too high, put the initial at an appropriate point on the curve to indicate your estimate of the magnitude of the motivational problem. Initials placed near the extreme left or right will indicate a severe problem.

There are two other factors to consider when graphing your results.

- If there is a high degree of variation in the audience on one of the characteristics, represent it by a line instead of a point on the graph (see **C** in Figure 8.3). The example in Figure 8.3 illustrates that the majority of the students are in the acceptable range of confidence, but there are also some who are too low and some who are too high.

- If a characteristic is multidimensional for a given group, then represent it as two different points or lines on the graph, and subscript each to differentiate them. For example, relevance could be too high in a situation such as a remedial class where the students have to earn a higher grade than is normal for them in
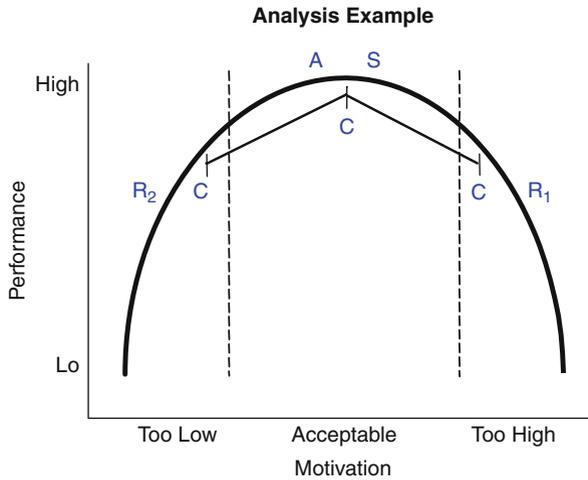
Analysis Example

Figure 8.3. Sample Audience Analysis Graph.

order to both pass the class and raise their grade point average sufficiently to graduate. This makes the course highly relevant to their future and introduces an excessively high sense of relevance (R_1) because of their fears of what will happen if they do not achieve the higher grade. However, if these remedial students do not perceive the course to have any useful benefit in their lives, or do not find it interesting based on their past experience or current interests, their sense of personal relevance will be excessively low (R_2). Keep in mind that each of the four major categories of the ARCS model has subcategories, and an audience's motivation can be different for one subcategory than it is for another. When this is the case, use subscripts for each subcategory and provide an explanation of what each subscripted initial refers to.

4. For this item, record any *root* causes of the problem that you can identify. There may be several motivational problems resulting primarily from a single cause. For example, relevance might be too high due to fear of not graduating by not passing a course. This leads to high anxiety and could lead to lowered confidence among students who tend to withdraw instead of being energized by threats, and could also lead to hyperactive levels of attention (eyes darting around trying to see everything, unable to focus attention on specific items). Consequently, all of these motivational problems exist, but most are pushed to extremes by a debilitatingly high level of relevance due to the fear of not graduating.

5. Describe where motivational strategies can have the most effect. It may not be possible to do anything about the major problem, but the overall motivational climate can, perhaps, be improved to achieve a

more satisfactory level of motivation to learn. For example, you as a course developer or instructor cannot change the relevance issue in the preceding example; that is, the reality of a possible failure to graduate. But you can work on improving the other motivational conditions to counteract the effects of excessive stress. For example, you might be able to bolster confidence by incorporating a higher than normal number of motivational and instructional design strategies that help the students obtain concrete success experiences at frequent intervals. You might not be able to help everyone because it is possible that some people will not have the motivation or talent to succeed, but the goal is to help them maximize their own potential capabilities through careful design. Similarly, you may be able to help them improve their attention by removing distracters, adding more attention-focusing cues, and removing other environmental stressors.

> **Do not**, at this point, attempt to define the solutions (although it is perfectly appropriate to make notes of anything that occurs to you). The goal is to identify the areas in which you can have an effect on student motivation.

6. If you have any other information or observations regarding the audience that do not fit into the preceding sections, record them here. Always jot down any thoughts that occur to you about the audience and potential motivational tactics. These notes can be very helpful later when you get to the design steps.

Sample Worksheets

The corporate sample worksheet for Audience Analysis contains a good level of detail in describing the various motivational conditions of the audience. It is important to make your descriptions reasonably detailed. For example, if you simply say, "The audience will find the material to be boring," it does not reveal an understanding of why they might find it to be boring based on past experiences, boring content versus boring delivery, a lack of interest on the part of the learners rather than problems with the instruction itself, and so forth. Having a more in-depth analysis is tremendously helpful in identifying problems and generating motivational strategies.

Notice in this sample that the author states that the analysis will pertain to the entire group rather than specifying different subgroups. As you read the content for each part of the analysis, do you agree with this, or does it appear that there might be two subgroups that could be discussed separately? If so, the appropriate thing to do would be to have separate discussions and graphs for each subgroup Table 8.9.

The elementary school example also puts everyone into one group, and it seems to be appropriate in this case. Certainly there will be individual differences in motivation which the teacher can manage on a one-to-one

Table 8.9. Worksheet 3 Audience Analysis Example: Corporate Training Environment.

Corporate Example: Worksheet 3:
Audience Analysis

Target Audience

The following analysis is an estimated motivational profile for the entire target audience of project managers and process exponents.

Attention Readiness

Many of the learners' (see A1 on the graph) will most likely expect this course to be boring, because many of them have taken technology-based training in the past that was boring. They will expect it to have good production qualities in keeping with their company's overall image, but they will also expect the contents to be presented in a technical and linear manner. Also, the attitude of many is that they would rather just be given the tool to learn on their own, so they might have a tendency to not pay close attention to contents as they go through the lessons. However, there is also a group of newer employees who have positive expectations of technology (A2) and will be curious about this mode of training as well as being interested in the content.

Perceived Relevance

The learners' perceived relevance of the course will be high with respect to the relevance of the content to their job requirements (R1). However, the more experienced employees will expect the instruction itself to have a moderate to low level of relevance (R2). That is, in their experience, there is often a big gap between the way the material is taught and the way they actually have to apply it on the job.
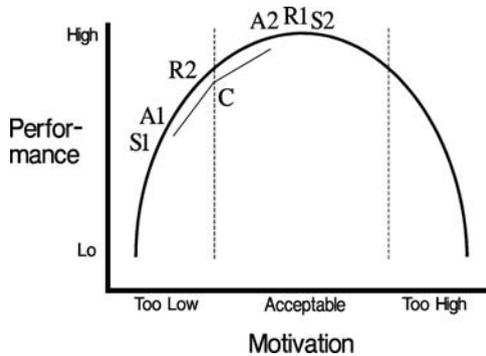
Felt Confidence

The amount of confidence will vary depending on the learner's knowledge of the Systems Integration Process and the learner's computer navigation skills, but it will be moderate to low. Any project managers or process exponents who are not confident in their knowledge of the SI-Pro may be apprehensive about trying to learn ESE which is the new application to be used for managing SI-Pro projects. In addition, ESE serves as a single interface to four databases. Learners with a strong knowledge of computers and the SI-Pro will be more confident then learners with average knowledge. Similarly, the delivery mode for the course is new for some students and was not a successful mode for some of the others. Consequently, they may not feel sure they will be able to successfully complete a TBT course.

Satisfaction Potential

For many of the learners, there will be two attitudes in regard to satisfaction potential. On the one hand (S1), it will initially be moderate to low because of their attitudes about this training; that is, they would rather learn the tool on their own instead of having to work through a formal training package. However (S2), they will be pleased if they find that they do successfully learn this application because they know they will have to use it on the job. This second, more positive attitude, will be reflected in a more positive overall satisfaction expectation on the part of the newer employees who will expect to benefit from the training and to have a good experience (S2).

Graph of Audience Analysis

Characteristics of Major vs. Minor Problems

Some of the major problems include the learners' low attention readiness levels because they do not care about the training or feel it will be boring, and a low felt confidence because of fearfulness of a technology-based training course without any assistance from a live instructor.

Minor problems include low expected relevance of the way the material will be taught and a low satisfaction potential among some learners because of negative attitudes about this type of training and the time it will take to complete it.

Modification of Major Cause

Solutions to the attention readiness and relevance problems can be solved together by having interactive activities early in the training that are highly relevant and engaging. Confidence problems can also be solved by using instructional design tactics such as frequent exercises in which the challenge level is not too high and providing informative feedback. It will also help to use a sequencing strategy in which some interesting applications of the tool are taught early in the training. Solving these motivational problems will most likely remove any problems with satisfaction potential.

basis, but there are several issues that are characteristic for this age group with this type of task, especially with the extended deadlines and infrequent meetings. Notice also how the instructor identifies motivational character-istics of the group at the beginning of the process and also how they will change over time. In this case, the instructor had experience in teaching this course which gave her a basis for predicting the problems. The reason she wanted to learn about the ARCS model and apply it was not because of a lack of knowledge of the problems but because of a desire for guidance in solving them. But, even though she thought she knew the problems, by doing the systematic analysis represented in this worksheet she was able to refine her understanding and be more specific Table 8.10.

Table 8.10. Worksheet 3 Audience Analysis Example: Elementary School Gifted and Talented Class.

Elementary School Example: Worksheet 3
Audience Analysis

1. Does this analysis pertain to the whole class or one subgroup (use separate forms or identify with a label as indicated in instructions)? *A*, *R*, *C*, and *S* are being applied to the whole target population, because even though there are individual differences, there are some problems and characteristics that apply in a general way to just about everyone. These conclusions are based on interviews conducted with samples of students and their teachers.

2. Based on the information in Worksheets 1 and 2, how do you characterize the audience on each of the following dimensions (describe each and use the graph to portray the results)?
     Attention Readiness: Initially high. Students will be anxious to select a topic and will have many ideas on how they want to implement it into a project.
     Perceived Relevance: Low to moderate. The audience seemed to feel the only relevance was to complete an assigned task. They could not perceive a use in the future.
     Felt Confidence: High, but not excessively high. Those students who were satisfied with their independent project for this year had a high degree of confidence, and even those students who were not satisfied with the work they did this year seemed to have genuine confidence in their own abilities to do a good job in the future.
     Satisfaction Potential: Varied. Most students who finish the project successfully feel a sense of accomplishment at having succeeded at a task that required so much personal management and persistence (S_2). But, students who are not highly self-regulated tend to do a lot of last minute work and are usually disappointed with the results (S_3).

Over-motivation may be a problem because students will have so many ideas they may think they can accomplish more than is practical or possible. If their goals are too high, they may reach a level of frustration (S_1). Some of the students seem to display intrinsic satisfaction with the idea of completing the independent project (S_2), but others seemed to need an external motivator (S_3).

Graph of Audience Analysis
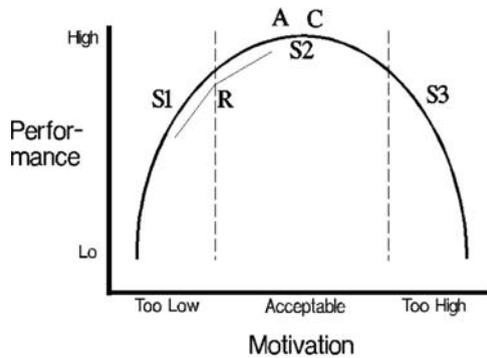
3. How would you characterize the major versus the minor problems?
   The major problem is to sustain their motivation over time. They are enthused at the beginning, but the necessity to maintain their independent effort over time becomes a challenge. They tend to lose interest which affects attention, and they do not see the relevance as being particularly high to their overall lives or future goals.

4. Does the major cause appear to be modifiable? If not, which other conditions might be influenced to improve overall motivation?
   Yes, the major causes are modifiable. Some direct interventions to help sustain attention and build relevance should be helpful. Also, some efforts to incorporate satisfaction tactics at key points during the project should also help.

5. Is there anything else that should be considered in the audience analysis?
   One more item is realistic goal setting. Sometimes the students want to do more than they can possibly accomplish. The special project instructor needs to help them set interesting but realistic goals.

Transition

Just as a chain needs all of its links, all of the steps in the motivational design process are important. However, the audience analysis step is, in some ways, the single most important one. It provides the foundation for all subsequent decisions. Another reason for its importance pertains to the variable nature of personal motivation. Motivational strategies that are successful at one point in time might not be effective at a later time. This can result from overuse, from changes in the lesson content, interference from outside the classroom, or any of many other causes. Therefore, it is helpful to continuously monitor learner motivation. The use of Worksheet 3 in this section has been in a context of trying to predict what the motivational profile of learners will be. After you actually have experience with them, you can use this same audience analysis process to monitor their motivational profile and to modify your teaching approaches. It is relatively easy for a teacher to do this, but it is not possible in most self-instructional settings because decisions about learner motivation have to be made when the materials are being written. This means that the "front-end" analysis of motivation is especially important. Some efforts have been made (Astleitner & Keller, 1995; Song and Keller, 2001), particularly in computer-based instruction, to more or less continuously monitor student motivation and to have the computer automatically select motivational tactics to match the learner's motivational state. For example, if a learner indicates at some point in a lesson that his or her confidence level is low, the computer would respond by introducing some tactics designed to improve confidence. Song and Keller's (2001) work on a prototype of such motivationally adaptive instruction in computer-based instruction was successful. However, this is an area that is wide open for active research.

Step 4: Analyze Existing Materials

Overview

The instructional materials you are currently using, or are considering for adoption, will have motivational features that may be relevant to the motivational needs of your audience. But, on the other hand, the current materials may have deficiencies that will be demotivational. These deficiencies can be of two types. First, the materials might have an absence of needed motivational tactics. If the materials are perceived by the students to be boring or irrelevant, then you will need to determine what type of tactics to add and where to add them. Second, they may contain either too many motivational elements or inappropriate activities, such as games or cartoons that are not suitable for your audience. In situations where the students are highly motivated to learn the content or to become prepared to take a test in as little time as possible, they will be annoyed by features such as games or simulations that are included only for motivational purposes but are not critical to learning the content. The purpose of this step is for you to analyze your current instructional material, which could be a unit, a module, an entire course, or whatever segment of instruction you wish to motivationally enhance, to identify their motivational strengths and deficiencies.

By examining the current materials to determine what motivational tactics currently exist in the course and where it does not have needed motivational tactics, you will make a list of the problems to be solved in the design steps of this process (Worksheet 4, Table 8.11). When reviewing the course, you would consider the characteristics of your audience as recorded in the previous worksheets.

Table 8.11. Motivational Design Worksheet 4.

ANALYZE EXISTING MATERIALS

Use this worksheet to record your analysis of an existing course or set of course materials or of a course you are evaluating in consideration for adopting. If you are using a checklist of some type, you may wish to attach the results of that analysis as supporting information, or substitute those results in their existing format in place of this worksheet.

11. Attention Getting and Sustaining Features
- Positive Features
- Problematic Areas

12. Relevance Generating Features
- Positive Features
- Problematic Areas

13. Confidence Generating Features
- Positive Features
- Problematic Areas

14. Satisfaction Generating Features
- Positive Features
- Problematic Areas

15. General Comments

Instructions for Worksheet 4 – Analyze Existing Materials

When you review existing course materials to evaluate their motivational properties, there are three questions to consider:

1. Are there motivational tactics in these materials that are *appropriate* for my audience?
2. Are there motivational tactics in these materials that are *inappropriate* for my audience?
3. Are there *deficiencies* in motivational tactics; that is, is there a lack of tactics in areas that were identified in the audience analysis, or areas needed to sustain motivation?

All of these questions depend on the motivational characteristics of the audience. Therefore, it is necessary to refer to the information in Worksheets 2

(Obtain Audience Information) and 3 (Analyze Audience) while reviewing the materials. A tactic that might be perfect for one audience could be unacceptable to a different audience. For example, a group of high achievers in mathematics might enjoy a competitive game in which people work in teams to solve math problems and get rewards based on speed and accuracy. But, in a class of students who are challenged by mathematics, this type of game could add to their feelings of helplessness and increase their fear of failure. This would make them too low on confidence and too high on relevance, which would put them into a dysfunctionally high level of stress.

To conduct this analysis, it is helpful to use a checklist of motivational tactics such as the "Motivational Tactics Checklist" or one of the others included in Chapter 11. Such lists can help you identify the features of the instruction that are motivational in addition to, or instead of, being primarily instructional in nature.

While reviewing the materials, you can record your observations on Worksheet 4 (Table 8.11). For each of the four categories of motivation, list the positive features and problems. Remember that problems can be of two types. The first type consists of deficiencies, which refers to areas in the materials where motivational enhancements are required to meet the needs of the audience. In these instances, describe the type of deficiency that exists. Later, in the design phase, you will list specific tactics that might be used to solve the problem. If you happen to think of specific tactics that might solve the problem, then go ahead and make note of them. You don't want to take the risk of losing a potentially valuable idea! Use this worksheet if you are reviewing an existing course or set of course materials, or for evaluating courses that you are considering purchasing. Consider each of the four categories with its subordinate categories of characteristics and process questions (see ARCS Model publications) in conducting your review.

The second type of problem consists of what we might call motivational excesses. This refers to the presence of motivational tactics that are inappropriate for the audience. It can result from having too many tactics whose primary purpose is motivational when the audience is already highly motivated, or by having inappropriate types of tactics. In your review, make note of these problems and indicate whether a given tactic should be removed or revised.

Notice that there is a final section that includes general comments. You may very well have observations about the overall motivational appeal of these materials that are not confined to one of the four categories. Record those comments in this final section or on a separate page.

CONSIDER THE AUDIENCE

The purpose of this analysis is to determine how motivating this course will be for its intended audience. Consequently, you should consider the results of Worksheets 2, and 3 when conducting this analysis.

Sample Worksheets

The analysis of the current state of the corporate course is quite detailed. Clearly, it is a well-designed course that probably was expensive to design and develop. However, in spite of this, there are numerous problems regarding its motivational appeal. The deficiencies that are identified here will be valuable input into the design steps that occur later! Overall, this is a very good example of this worksheet (Table 8.12).

The elementary school course is instructor-led and does not have the elaborate set of materials that support the corporate computer-based course. In the elementary course, the materials were designed to guide the students in the specific skills and tasks required to be successful and the author of this

Table 8.12. Worksheet 4 Current Materials Analysis Example: Corporate Training Environment.

Corporate Example: Worksheet 4:
Current Materials Analysis

Attention Getting and Sustaining Features

Positive Features
- **Course title:** The course title, *ESE is Easy*, is a simple but impressionable theme repeated throughout.
- **Use of graphics:** Custom-made graphics are used in the introductory module, demonstrating the functions and processes of ESE. In addition, simulation screens support instruction throughout the TBT, providing the learner with a visual representation of content as they proceed through the course.
- **Use of audio:** The course narrator is an experienced professional who maintains learner attention by way of changing his tone, etc.
- **Variations in formatting:** Each module is represented by a designated color, while each type of page has its own format (i.e., introductory, text with graphic, simulation, multiple choice, etc.)

Deficiencies or Problematic Areas
- **Course sequence:** Since ESE will be used during various phases of a project, the course is designed so that the learners will step through each module as if they are using ESE to perform tasks during a project. This is positive from a job application perspective, but it is a somewhat boring, linear approach. Early lessons do not create curiosity about what the results will be.
- **Use of scenarios for curiosity:** There is nothing at the beginning or during the lesson to engage the learner in some curiosity arousing scenarios.

Table 8.12 (continued)

- **Lack of variation:** Even though the production qualities are good, they lack innovative variation to sustain attention.

Relevance Generating Features

Positive Features
- **Introductory scenario:** The course begins with a brief scenario depicting a project manager who is stressed out because of a plethora of work and an inadequate means to complete project management tasks. Once the project manager says, "There has got to be a better way," the narrator jumps in with a pitch about ESE and how it can be used to complete such tasks.
- **Introductory module:** The first module provides the learner with a brief introduction to ESE functions and describes how the tool can be used to complete various tasks during a project's life cycle.
- **Module introductions:** At the beginning of each module, the learner sees the model depicted in the SI-Pro Project Playbook. Each module correlates to a phase in the project.

Deficiencies or Problematic Areas
- **Module lessons:** Although each module begins with a model and narration which relates ESE functions to the SI-Pro Project Playbook, the modules do not maintain this relevance throughout. Once the correlation is made, it is not mentioned again during instruction, and the connection is lost.
- **Job relevant scenarios and cases:** The instruction explains how ESE is used in relation to SI-Pro, but it lacks "real world" scenarios and cases to provide job relevant problem-solving activities.

Confidence Building Features

Positive Features
- **Slow and steady pace:** The narrator presents the material at a slow, but steady, pace. He pronounces words perfectly, so the material is easy to follow.
- **User controls navigation:** Users are given control over how quickly or slowly they want to proceed through the course by the navigation bar located at the bottom of the screen. Users may go back to unclear events, pause to take notes, or do virtually anything required to complete the course with ease.

Deficiencies or Problematic Areas
- **New delivery mode:** For many of the learners, technology-based training is a new vehicle for instruction. These learners, especially those who are also unsure of their computer skills, may feel uncomfortable or uneasy about being forced to complete training via CDROM.

Table 8.12 (continued)

- **Unclear description of expectations:** The introductory module gives a general description of the course objectives; however, the learner is left astray during the remainder of the course.
- **Lack of navigation directions:** The introductory module neglects to inform the learner of how to use the navigation bar. For those first-time users of TBTs, this could be quite distressing.

Satisfaction Producing Features

Positive Features

- **Checkpoint questions:** After each segment of instruction, or approximately every 10–15 events, the learner is presented with a couple of checkpoint questions before moving on to new material. This allows the learner to review the material just presented, in small segments, while it is still "fresh" in their thoughts.

Deficiencies or Problematic Areas

- **Ambiguous criteria for practice exercises:** The real key to learning how to use the ESE tool is by using it in practice exercises. The TBT does have practice exercises, but it does not provide clear criteria for successful completion of them. Once the learners step through each module's exercise, they have no way of checking to see if they truly completed the step correctly.

worksheet does a good job of describing them (Table 8.13). The deficiencies occur, for the most part, in regard to a lack of adequate activities and management strategies to maintain the interest of the students and to help them cope with procrastination which is difficult to avoid when there is so much time between meetings and assignment deadlines.

Table 8.13. Worksheet 4 Current Materials Analysis Example: Elementary School Gifted and Talented Class.

Elementary School Example: Worksheet 4
Current Materials Analysis

NOTE: There are very few materials associated directly with this unit. This is because most of the required skills have been taught previously in other units of work pertaining to learning and inquiry. The primary document for this unit is a welcoming letter that explains the

Table 8.13 (continued)

purpose of the project, the meeting schedule, and an overview of the timeline. The students also receive
- a timeline listing what assignments and meetings will occur each month,
- a document on which to record their topic and primary resources,
- an independent project contract to fill out,
- and a form on which to write their project outline (research sources, materials needed, and steps to complete the project).

The project facilitator may have handed supplemental materials out in previous years, but there is no mention of them in the documentation for this project.

1. Attention Getting and Sustaining Features
   a. Positive Features
      - The project overview and instructions are in the form of a letter to the students, which gives it a little more interest than a typical "technical" document.
      - The students receive a "tailor made" folder for their independent study project. It has interesting tidbits of information on it and places to record information that might be useful.
      - The theme for the year is presented to stimulate interest.
   b. Deficiencies or Problematic Areas
      - The documents are typed in capital letters and have no visual appeal.
      - There is little, apart from mentioning the year's theme, at the beginning to stimulate curiosity.

2. Relevance Generating Features
   a. Positive Features
      - Students are allowed to choose their own topics within the framework of the overall theme of the year.
   b. Deficiencies or Problematic Areas
      - The theme for the previous year was "The World in Crisis." It has the potential for giving students an opportunity to select personally relevant topics, but the theme itself is somewhat abstract and remote from the lives of children of these ages.

The students are not shown or encouraged to think about the relevance of the inquiry skills they are learning. It would be easy to relate this to the current emphasis in organizations on knowledge workers, knowledge acquisition, knowledge management, and digital literacy.

3. Confidence Building Features
   a. Positive Features
      - The unit handouts describe the objectives and all the due dates for various assignments and meetings.

Table 8.13 (continued)

- The unit builds on skills that the students have previously mastered.
- Students are allowed to work with a partner.
- Students get feedback on each assignment that they turn in.
- Students are encouraged to "take risks." Each student is told that if the project does not work out, he or she can "write about your attempts, what went wrong, and other approaches you might have tried."

b. Deficiencies or Problematic Areas
- Students are working "in the dark." They do not have examples of previous students' projects to examine.
- They do not get progress consultation and coaching from the project facilitator while they are working on specific assignments.

4. Satisfaction Producing Features
  a. Positive Features
- Students are told how the projects will be graded.
  b. Deficiencies or Problematic Areas
- Students are not given any examples or testimonies to illustrate the good feelings they might expect to experience when they finish the project.

5. General Comments (Include comments that pertain to the overall unit or documents.)
None

Summary

When you have finished this worksheet you will have a document which, when combined with the audience analysis, will help you create motivational objectives in the next step that is focused on the specific motivational needs of your audience. This document will greatly simplify the design process because you will know exactly where in the instructional materials to focus your motivational tactics and for what purposes.