EXERCISE 8.1

Preparing a Self-Instructional Module*

Instructions: The purpose of this exercise is to guide you through the process of preparing a self-instructional module for use in your own teaching. This exercise continues for several pages; it is important that you follow it step-by-step, beginning with the following boxed-in "cover page."

Self-Instructional Module Number: 1
Instructor's Name: Professor Richard D. Kellough
School: California State University, Sacramento
Course: Methods of Teaching
Intended Students: Students in Teacher Preparation
Topic: How to Write a Self-Instructional Module
Estimated Working Time: Ten hours

For the challenge of today's classroom . . .

The Self-Instructional Module
You are about to embark upon creating and writing a perfect lesson plan. The result of your hard work will be an instructional module in which you will take a lot of pride. More important, you will have learned a technique of teaching that ensures learning takes place. For what more could you ask?
Let us get to the essence of what this self-instructional module (SIM) is: This SIM is about how to write a SIM. The general objective is to guide you gently through the process of preparing and writing your first SIM. Let's begin the experience with background about the history of the SIM.

**A History**

Research evidence indicates that student achievement in learning is related to time and to the *quality of attention* being given to the learning task. You knew that already! In 1968, Benjamin Bloom developed a concept of individualized instruction called mastery learning, based on the idea that students need sufficient time on task to master content before moving on to new content. Did you know that? ______. (Please read along with a pencil, and fill in the blanks as you go.)

Although Bloom is usually given credit for the concept of mastery learning, the idea did not originate with him. He reinforced and made popular a model developed earlier by John Carroll. In 1968, Fred Keller developed a similar model called the Keller Plan, or the Personalized System of Instruction (PSI). The PSI quickly became a popular teaching technique in the community and four-year colleges. In about 1972, enter Johnson and Johnson (not of the Band-Aid family, but Rita and Stuart Johnson), who developed their model of mastery learning and called it the Self-Instructional Package (SIP). Since 1972, I (Richard D. Kellough) have been developing my version, the Self-Instructional Module, which you are now experiencing. As you will learn, frequent comprehension checks and corrective instructions are important to the effectiveness of the SIM.

One other thing. There are several devices available to individualize instruction, but the SIM has the flexibility to be adaptable for use at all grade levels, from kindergarten through college. I believe the following to be the reasons for the popularity of this strategy:

- The SIM allows the teacher to create an experience that ensures learning. Creating makes you feel good; when your students learn, you feel good—two reasons for the SIM's popularity.
- The SIM is truly individualized, because it is a package written for an individual student, with that student in mind as it is being written.
- Although it takes time to prepare, the SIM requires little financial expenditure, a fact important to today's teacher.
- Once you have prepared your first SIM, it is possible that you will see that you have begun a series. Subsequent packages are easier to do, and you may see the value in having a series available.
- With today's emphasis on the *basics*, the SIM is particularly helpful for use in remediation.
- When you finish your SIM, you will have collected the content that could be used for a computer program.
- With today's large and mixed-ability classes, teachers need help! Here is time- and cost-effective help!
- With emphasis today on competency-based instruction, the SIM makes sense.

How are we doing so far? _________________ Are your interests and curiosity aroused?

________ Do you have questions? ________ If so, write them down, then continue.

Questions: ____________________________________________________________
__________________________________________________________
_________________________________________________________________
_________________________________________________________________
What Is the Self-Instructional Module and Why Use It?

The SIM is a learning package designed for an individual student; it is self-instructional (i.e., if you, the teacher, drop dead—heaven forbid—the student can continue to learn), and it requires about 15 to 50 minutes of learning time. The final package can be recorded on tape, video, or computer disc, or it can be written in booklet form, or it can exist in any combination of these.

Here are ways that teachers have found the SIM to be useful:

- As an enrichment activity for an accelerated student.
- As a strategy for make-up for a student who has been absent.
- As a strategy for a student in need of remediation.
- As a strategy for introducing basic information to an entire class, freeing the teacher to work with individual students, making the act of teaching more time-efficient, a particularly significant value of the SIM.
- As a learning experience especially coordinated with manipulatives, perhaps in connection with a science experiment, library work, a computer, a tape recording, a videotape, a videodisc, or hands-on materials for an activity, or any combination of these.

One other point before we stop and check your comprehension: The single most important characteristic of the SIM is that it uses small, sequential steps followed by immediate and corrective feedback to the learner. In that respect, the SIM resembles programmed instruction.

Stop the action!

Let's check your learning with the review questions and instructions that follow.

<table>
<thead>
<tr>
<th>Comprehension Check 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer the following three questions, then check your responses by reviewing Feedback Check 1. If you answer all three questions correctly, continue the package; otherwise, back up and review.</td>
</tr>
</tbody>
</table>

1. How would you define a SIM? ____________________________________________

2. What is the single most important characteristic of the SIM? ________________

3. What is one way that the SIM could be used in your own teaching, a way that currently stands out in your thinking? ____________________________________________
Feedback Check 1

1. Although we will continue development of the definition, at this point it should resemble this: The SIM is an individualization of learning—teaching strategy that teaches toward mastery learning of one relatively small bit of content by building upon small, sequential steps and providing corrective feedback throughout.
2. Referring to the small, sequential steps, followed by immediate and corrective feedback.
3. Your answer is probably related to one of those listed earlier but it could differ.

How Does the SIM Differ from Other Kinds of Learning Packages?

Another characteristic of the SIM is the amount of learning contained in one package. Each SIM is designed to teach a relatively small amount of material, but to do it well. This is a major difference in the SIM from other types of learning activity packages.

And, in case you have been wondering about what the SIM can be designed to teach, I want to emphasize that it can be designed:

- For any topic,
- At any grade level,
- In any discipline,
  - For cognitive understanding,
  - For psychomotor development, and
  - For affective learning.

That probably brings to your mind all sorts of thoughts and questions. Hold them for a moment, and let’s do another comprehension check.

STOP

Stop the action and check your learning.

Comprehension Check 2

Answer the following two questions, then check your responses in the feedback box that follows.

1. How does the SIM differ from other self-contained learning packages?
2. Although teachers frequently emphasize learning that falls within the cognitive domain, is it possible for the SIM to be written to include learning in the psychomotor and affective domains? Yes or no? 

Feedback Check 2

1. Length of learning time is shorter for the SIM, and it is written with an individual student in mind. It is written to teach one thing well, to one student.
2. The SIM can be written for any domain, although evaluation is trickier for the affective and for the highest-level psychomotor.

Perhaps we should now say a word about what we mean when we use the expression teach one thing well—that is, to explain what is meant by mastery learning. Theoretically, if the package is being used by an individual student, performance level expectation is 100 percent. In reality, performance level will most likely be between 85 and 95 percent, particularly if you are using the SIM for a group of students rather than an individual. That 5–15 percent difference allows for human errors that can occur in writing and in reading.

Now that you have learned what the SIM is—and how this learning strategy differs from other learning activity packages—it is time to concentrate on development of your SIM. Please continue.

SIM Development

How Do I Develop a SIM?

As with any good lesson plan, it takes time to develop an effective SIM. Indeed, preparation of your first SIM will test your imagination and writing skills! Nevertheless, it will be time well spent; you will be proud of your product. It is important that you continue following this package, step-by-step; do not skip parts, or I will assume no responsibility for your final product! Understand?

Development of your SIM emphasizes the importance of

- Writing the learning objectives clearly, precisely, and in behavioral terms.
- Planning the learning activities in small, sequential steps.
- Providing frequent practice and learning comprehension checks.
- Providing immediate feedback, corrective instruction, and assurance to the learner.
- Preparing evaluative questions that measure against the learning objectives.

As you embark on preparing what may be the perfect lesson plan, keep in mind the following two points:

1. Prepare your first SIM so that it will take no more than

   30 minutes for middle school students
   50 to 60 minutes for high school students
2. Use a *conversational tone* in your writing. Write in the first person, as though you are talking directly to the student for whom it is intended. For example, when speaking of the learning objectives, use *You will be able to* rather than *The student will be able to*. Keep in mind that you are communicating with one person rather than with an entire class (even though you may be preparing your package for entire class use). It helps to pretend that you are in a one-on-one situation tutoring the student at the writing board.

*STOP*

Stop the action, and again check your learning.

---

**Comprehension Check 3**

Answer the following two questions, then check your responses in Feedback Check 3.

1. What maximum learning-time duration is recommended? 

2. What major item of importance has been recommended for you to keep in mind as you write your SIM?

---

**Feedback Check 3**

1. Approximately 30 to 60 minutes, depending upon the grade and achievement level.
2. Write in the first person, as if you are speaking directly with the student.

Now that we have emphasized the *length of learning time* and the *personalization of your writing*, here are other important reminders.

1. Make your SIM attractive and stimulating. Consider using cartoons, puns, graphics, scratch-and-sniff stickers, and interesting manipulatives. Use your creative imagination! Use both cerebral hemispheres!

*Add sketches, diagrams, modules, pictures, magazine clippings, humor, and a conversational tone, as students appreciate a departure from the usual textbooks and worksheets.*
2. Use colleagues as resource persons, brainstorming ideas as you proceed through each step of package production.

During production, use your best cooperative learning skills.

3. The package should not be read (or heard) like a lecture. It must involve small, sequential steps with frequent practice and corrective feedback instruction (as modeled in this package).

... and with the course material broken down into small, self-instructional units, students can move through at individual rates.

4. The package should contain a variety of activities, preferably involving all four learning modalities—visual, auditory, tactile, and kinesthetic.
5. Vary margins, indentations, and fonts

so the final package does not have the usual textbook or worksheet appearance with which students are so familiar. Build into your package the "Hawthorne Effect."

Note about the cosmetics of your SIM: My own prejudice about the SIM is that it should be spread out more than the usual textbook page or worksheet. Use double-spaced lines, varied margins, and so on. Make cosmetic improvements after finishing your final draft. Write, review, sleep on it, write more, revise, add that final touch. This package that you are using has been "toned down" and modified for practical inclusion in this textbook.

6. Your SIM does not have to fit the common 8 1/2" × 11" size. You are encouraged to be creative in the design of your SIM's shape, size, and format.

7. Like all lesson plans, the SIM is subject to revision and improvement after use. Write, review, sleep on it, write more, revise, test, revise...
Perhaps before proceeding, it would be useful to review the preceding points. Remember, too, the well-written package will ensure learning. Your first SIM will take several hours to produce, but it will be worth it!

Proceed with the steps that follow.

![Diagram of steps]

### STEPS FOR DEVELOPING YOUR SIM

**Instructions:** It is important that you proceed through the following package development step-by-step.

One thing you will notice is that immediately after writing your learning objectives you prepare the evaluative test items; both steps precede the preparation of the learning activities. That is not the usual order followed by a teacher when preparing lessons, but it does help to ensure that test items match objectives. Now, here we go! Step-by-step, please.

---

**Note:** From here on, write on separate paper for draft planning.

---

**Step 1. Prepare the cover page.** It should include the following items:

- Instructor’s name (that is you)
- School (yours)
  - Class or intended students (whom it’s for)
  - Topic (specific but not wordy)
  - Estimated working time

For a sample, refer to the beginning of this package. You can vary the design of the cover page according to your needs.
Step 2. Prepare the instructional objectives. For now, these should be written in specific behavioral terms. Later, when writing these into your package introduction, you can phrase them in more general terms.

Recommended is the inclusion of at least one attitudinal (affective) objective, such as “Upon completion of this package, you will tell me your feelings about this kind of learning.”

Step 3. Comprehension Check 4

Share with your colleagues what you have accomplished (with steps 1 and 2) to solicit their valuable feedback and input.

Step 4. Depending on feedback (from step 3), modify items 1 and 2, if necessary. For example, after listing the learning instructions, you may find that you really have more than one package in preparation, and within the list of objectives you may find a natural cut-off between packages 1 and 2. You may discover that you have a series of modules begun.

Step 5. Prepare the pretest. If the learner does well on the pretest, there may be no need for the student to continue the package. Some packages (like this one) may not include a pretest, though most will. And if this is your first SIM writing experience, I think you should include a pretest.

Suggestion: The pretest need not be as long as the posttest but should include a limited sample of questions to determine whether the student already knows the material and need not continue with the package. A pretest also serves to set the student mentally for the SIM.

Step 6. Prepare the posttest. The pretest and posttest could be identical, but usually the pretest is shorter. It is important that both pretest and posttest items actually test against the objectives (of step 2). Try to keep the items objective (e.g., multiple-choice type), avoiding as much as possible the use of subjective test items (e.g., essay type), but do include at least one item measuring an affective objective (see boxed item in step 2).

Important reminder: If your package is well written, the student should achieve 85–100 percent on the posttest.

Step 7. Comprehension Check 5

Share with colleagues your pretest and posttest items (providing a copy of your objectives) for suggested improvement changes before continuing to the next step.
Use the following space to write notes to yourself about ideas you are having and regarding any materials you may need to complete your package.

Dear Self—

Good work so far! Before continuing, take a break.

It is time to stop working for a while . . . . . . and go play!

Step 8. Okay, enough play, it is time to prepare the text of your SIM. This is the "meat" of your package, what goes between the pretest and the posttest. It is the INSTRUCTION. Reminder: For the SIM to be self-instructional, the learner should be able to work through the package with little or no help from you.
An important ingredient in your package is the directions. The package should be self-directed and self-paced. Therefore, each step of the package should be clear to the learner, making you, the instructor, literally unnecessary. *Everything needed by the learner to complete the package should be provided with the package.*

Use small, sequential steps with frequent practice cycles, followed by comprehension checks and corrective feedback. Make it fun and interesting with a variety of activities for the student, activities that provide for learning in several ways, from writing to reading, from viewing a videotape to drawing, from listening to a tape recording to doing a hands-on activity. And be certain the activities correlate with the learning objectives. The learning cycles should lead to satisfaction of the stated objectives, and the posttest items *must* measure against those objectives.

**Step 9. Comprehension Check 6**

*Test your package.* Try it out on your colleagues as they look for content errors, spelling and grammar errors, clarity, as well as offer suggestions for improvement. Duplicate and use the SIM Assessment Form provided at the end of this exercise.

*Stop the Action!*

Congratulations on the development of your first SIM! However, two additional steps need your consideration.

**Step 10. Revise if necessary.** Make appropriate changes to your SIM as a result of the feedback from your colleagues. Then you are ready to give your SIM its first real test—try it out on the student for whom it is intended.

**Step 11. Further revisions.** This comes later, after you have used it with the student for whom it was originally intended. Like any other well-prepared lesson or unit plan, it should always be subject to revision and to improvement, never “set in concrete.”
SIM ASSESSMENT FORM

1. Module identification
   Author: ________________________________
   ______________________________________
   ______________________________________
   Title of SIM: __________________________
   ______________________________________
   ______________________________________

2. Module Objectives: Do they tell the student
   a. What the student will be able to do?
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   b. How the student will demonstrate this new knowledge or skill?
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   Is there a clear statement (overview or introduction) of the importance, telling the learner what will be learned by completing the module?
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________

3. Pretest
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
4. Activities (practice cycles)
   Are small, sequential steps used?

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

   Are there frequent practice cycles, with comprehension checks and corrective feedback to the learner?

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

5. Posttest: Does it test against the objectives?

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

6. Is there clarity and continuity of expression?

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

7. Is the module informative, attractive, and enjoyable?

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

8. Additional comments useful to the author of this module:

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________