This is the thirty-fifth in a set of teacher guides to the Entrepreneurial Training modules and accompanies CE 031 098. The purpose of the module is to give students some idea of what it is like to own and operate a plumbing business. Following an overview are general notes on use of the module. Suggested steps for module use contain suggestions on introducing the module, a brief discussion of the nine units, responses to learning activities, suggestions for summarizing the module, and responses to the quiz. The units are Planning a Plumbing Business; Choosing a Location; Getting Money to Start; Being in Charge; Organizing the Work; Setting Prices; Advertising and Selling; Keeping Financial Records; and Keeping Your Business Successful. Each unit contains a case study; responses to individual activities; responses to discussion questions; and a group activity. Suggested readings for the teacher and a list of goals and objectives complete the module. (CT)
GETTING DOWN TO BUSINESS

Plumbing Business

Module 35

Teacher Guide
The information reported herein was obtained pursuant to Contract No. 300-79-0535, Office of Vocational and Adult Education, U.S. Education Department. Contractors undertaking such projects under government sponsorship are encouraged to document information according to their observation and professional judgment. Consequently, information, points of view, or opinions stated do not necessarily represent official Education Department position or policy.
GETTING DOWN TO BUSINESS

Plumbing Business

Barbara Sanderson

May 1981

Developed at the American Institutes for Research
under support from the
Office of Vocational and Adult Education
U.S. Education Department
The purpose of these Getting Down to Business modules is to provide high school students in vocational classes with an introduction to the career option of small business ownership and to the management skills necessary for successful operation of a small business. Developed under contract to the Office of Vocational and Adult Education, U.S. Department of Education, the materials are designed to acquaint a variety of vocational students with entrepreneurship opportunities and to help reduce the high failure rate of small businesses.

As the students become familiar with the rewards and demands of small business ownership, they will be able to make more informed decisions regarding their own interest in this career possibility. It is hoped that, as a result of using these materials, some students will enter small business ownership more prepared for its challenges. Others will decide that entrepreneurship is not well suited to their abilities and interests, and they will pursue other career paths. Both decisions are valid. The materials will encourage students to choose what is best for them.

These Getting Down to Business modules are designed to be inserted into ongoing high school vocational programs in the seven vocational disciplines—Agriculture, Distributive Education, Occupational Home Economics, Business and Office, Trades and Industry, Technical, and Health. They will serve as a brief supplement to the technical instruction of vocational courses, which prepare students well for being competent employees but which generally do not equip them with skills related to small business ownership. The modules are self-contained and require a minimum of outside training and preparation on the part of instructors. Needed outside resources include only those types of materials available to all students, such as telephone directories, newspapers, and city maps. No special texts or reference materials are required. For further optional reading by instructors, additional references are listed at the end of the Teacher Guide. An annotated Resource Guide describing especially valuable entrepreneurship-related materials is also available.

The purpose of this module is to give students some idea of what it is like to own and operate a plumbing business. Students will have an opportunity to make the same decisions that the owner of a small plumbing business makes. While the module is not a complete "how-to" manual, the individual activities will provide your class with the chance to do many of the planning and daily activities that small business owners do.

Today, owners of small businesses face a multitude of problems—some minor, some that threaten their very existence. These problems reflect the constant changes that our society is going through—economic, cultural, and technical. While this module cannot hope to address itself to all of them, the discussion questions at the end of each unit are designed to give your class the opportunity to discuss them and develop, on a hypothetical basis, solutions for themselves.
OVERVIEW

The purpose of these Getting Down to Business modules is to provide high school students in vocational classes with an introduction to the career option of small-business ownership and to the management skills necessary for successful operation of a small business. Developed under contract to the Office of Vocational and Adult Education, U.S. Department of Education, the materials are designed to acquaint a variety of vocational students with entrepreneurship opportunities and to help reduce the high failure rate of small businesses.

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You may want to present this module after completing Module 1, Getting Down to Business: What's It All About? Module 1 is a 16-hour program covering a more in-depth approach to owning any small business. The terms introduced in Module 1 are used in this module with a restatement of their definitions. Also, the forms used are the same, with some minor changes to fit a plumbing business specifically. Module 1 provides an introduction to owning a small business in addition to some skills and activities that, due to their general nature, are not covered in this module.

Content Organization

Each unit of the module contains the following:

1. **Divider Page**—a page listing the unit's goal and objectives.

2. **Case Study**—an account of a plumbing business owner for a more intimate view of owning this type of business.

3. **Text**—three to four pages outlining business management principles introduced in the case study.

4. **Learning Activities**—three separate sections, including:
   a. **Individual Activities**—finding information given in the text or applying information in the text to new situations.
   b. **Discussion Questions**—considering broad issues introduced in the text; several different points of view may be justifiable.
   c. **Group Activity**—taking part in a more creative and action-oriented activity; some activities may focus on values clarification.

General Notes on Use of the Module

**Instructional Time:**
- Each unit = 1 class period; total class periods = 9
- Total instructional time = 10 class periods

The case study and text are central to the program's content and are based on the instructional objectives appearing in the last section of this Guide. Learning activities are also linked to these objectives. You will probably not have time, however, to introduce all the learning activities in each unit. Instead, you will want to select those that appear most related to course objectives, are most interesting to and appropriate for your students, and are best suited to your particular classroom setting. Certain learning activities may require extra classroom time and may be used as supplementary activities if desired.

Before presenting the module to the class, you should review both the Student and Teacher Guides and formulate your own personal instructional approach. Depending on the nature of your classroom setting and the students' abilities, you may want to present the case study and text by instructional means that do not rely on students' reading—for example,
through a lecture/question-answer format. Case studies and certain learning activities may be presented as skits or role-playing situations.

No particular section of the module is designated as homework, but you may wish to assign certain portions of the module to be completed out of class. You may want students to read the case study and text in preparation for discussion in the next class period, or you may want them to review the material at home after the class discussion. You may also prefer that students read the material in class. Similarly, individual activities may be completed in class or for homework. Discussion questions and group activities are specially intended for classroom use, although some outside preparation by students may also be needed (for example, in the case of visiting a small business and interviewing the owner).

Methods that enhance student interest in the material and that emphasize student participation should be used as much as possible. Do not seek to cover material exhaustively, but view the course as a brief introduction to entrepreneurship skills. (Assume that students will obtain more job training and business experience before launching an entrepreneurial career.)

The quiz may be used as a formal evaluation of student learning or as a self-assessment tool for students. Answers to learning activities and the quiz are provided in a later section of this guide.
SUGGESTED STEPS FOR MODULE USE

Introduction (15 minutes, or integrate within first hour of Unit 1)

I. In introducing this module, you will want to find out what students already know about the plumbing business. Points to cover include:

- Discuss the need for plumbing services in your local area. Ask students, What services are needed? Who needs them?

- Ask students if they have had plumbers come to their home or apartment to do repair work. Have students describe what the plumbers did.

- Ask students if they know of anyone who operates his or her own plumbing business. Have the students describe what the owner does.

II. Discuss small businesses briefly. Over 90% of all businesses in the United States are small businesses. In this module we will be dealing with very small businesses, meaning a self-employed owner working alone or with one to four employees. Often small businesses are owned and run by members of a family.

III. Discuss the purposes of the module:

- To increase students' awareness of small business ownership as a career option.

- To acquaint students with the skills and personal qualities plumbing business owners need to succeed.

- To acquaint students with the kind of work small business owners do in addition to using their vocational skills.

- To expose students to the advantages and disadvantages of small business ownership.

IV. Emphasize that if students think they lack management aptitudes, some abilities can be developed. If students "turn on" to the idea of small business ownership, they can work at acquiring abilities they don't have.

Also, students who work through this module will have gained valuable insights into how and why business decisions are made. Even if they later choose careers as employees, they will be better equipped to help the business succeed because of their understanding.
Unit 1 - Planning a Plumbing Business (1 class, period)

I. Case Study: Walt Powell is starting a small plumbing business.

Text: Services, Customers, and Competition
      Personal Qualities
      How to Compete Successfully
      Legal Requirements

II. Responses to Individual Activities

1. Typical services will include: new construction; remodeling; cleaning drains and lines; servicing septic tanks; repairing sinks, toilets, tubs, showers, disposals, water heaters, and dishwashers; selling parts.

2. Customers: residential property owners, apartment managers, commercial/industrial property owners or managers.

3. Special services, specialties, or strengths might include: 24-hour service; radio dispatched trucks; no extra charge for overtime; electric sewer and drain cleaning; copper re-pipe work; underground water pipes; etc.

4. All five qualities are desirable. Emphasize that if they do not have these qualities, they can do things to develop them.

5. Check if the list of requirements is clear.

III. Responses to Discussion Questions

1. Point out that what is an advantage for one person may be a disadvantage for someone else. For example, one person may like making a lot of decisions, while someone else would not.

   Possible advantages: may make more money, not having a boss, more control over the work, the challenge, etc.

   Possible disadvantages: risk of losing money, too much work, too many decisions and worries

2. The list of users will depend on your particular area. Examples include: homes, apartments, mobile homes, schools, churches, stores, restaurants, office buildings, factories, building contractors, etc.

3. Walt Powell does have a good background for starting a business. He has skills of the trade and also has an interest in and some knowledge of business. Additional sources of information might include a trade association, business classes, a
friend who runs a business, a lawyer, an accountant, a banker, the Small Business Administration, teachers, etc.

IV. Group Activity

The purpose of this activity is to prepare students for a class visit by someone who operates a small plumbing business. The visit can be made at any time while the students are working on this module. The visit would be of most benefit toward the end of the module, when the students have been exposed to most of the issues involved. A good time would be at the end of the module as a final wrap-up activity.

Unit 2 - Choosing a Location (1 class period)

I. Case Study: Walt decides what area to serve and considers what his competition is. He also sets up an office in his home.

Text:

Customers

Competition

Balance Between Customers and Competition

Personal Considerations

Selecting a Specific Location

II. Responses to Individual Activities:

1. They should list both customers and competition. Specific responses may include: population of the area; number of competing businesses; services offered by other businesses; personal preference—want to work there; personal preference—family or friends; expected growth of town; income of the area; age of houses; amount of new construction; prosperity of industry in the area

2. A large firm might have a larger ad, offer more services, or have more than one location listed. A smaller business may have a plain listing or have only a person's name listed.

3. Reasons could include: an industrial area, near similar businesses, near customers, close to major roads, low rent, etc.

4. Have students find the locations on the map.

5. Reasonable price for your area. Desirable features might include: shop, small offices, garage doors, near the freeway, etc.
III. Responses to Discussion Questions

1. Students should include need, such as age of houses, and economic level. They should also consider available services. For example, if new construction is slow, there may be a lot of competition for available jobs and lower prices.

2. There is no "right" answer. The medium-sized town seems to have more of a need, particularly in new construction, but it also has more competition. Point out that there are advantages and disadvantages to different situations, and sometimes it is not clear what the best choice is.

3. The first choice is at a cheaper rate and has more space, but the total rent per month is higher. There is no office, and the low rate may reflect other undesirable features.

   The second choice has a lower monthly rent and has an office. The rate is higher, which may reflect desirable features. It is smaller than the contractor wanted but adequate for his immediate needs.

   The contractor could visit the places and get more information on the condition of the buildings, appropriateness of the space, and convenience of the location. He could also find other listings to compare these with.

   Point out that in business, you often must make choices in which you have to weigh the advantages and disadvantages and there is no clear "best" choice.

IV. Group Activity

   For repair work, important factors would include age of the houses, number of houses in the area, and income level in the area.

   For new construction, important factors would include growth trends, prosperity of local industry, local regulations on construction, and general economic conditions.

Unit 3 - Getting Money to Start (1 class period)

I. Case Study: Walt started out on a small budget. He used his own savings and borrowed money from his father. He also borrowed money from a bank to pay for his truck.

Text: Information to Get a Business Loan
   Personal Background Information
   Business Description
   Financial Information
II. Responses to Individual Activities

1. a. personal background information
   b. description of the business
   c. financial information

2. The student should include at least one sentence on each of the following:
   a. Walt's experience of 10 years as a plumber
   b. Walt will provide new construction plumbing for homes in Easton, a growing area
   c. Walt will need $25,000 in the first three months. He has $15,000 and wants to borrow $10,000 for a truck.

3. The list could include: salaries, benefits, rent, utilities, equipment, tools, parts, supplies, trucks, gas, maintenance, advertising, licenses, insurance, office equipment, office supplies, answering service, interest, taxes, etc.

4. Walt probably should go ahead and start his business. One would expect Walt to spend more than he collects in the first three months due to start-up expenses. Students should mention start-up and ongoing expenses in their answer.

5. Total Starting Expenses $44,000
   Total Money on Hand $34,000
   Total Loan Money Needed $10,000

III. Responses to Discussion Questions

1. Advantages of starting low: less risk, can see if there is enough business, can try to keep things on a small scale, keep expenses low, etc.

2. Conditions on the loan might include interest, time to pay back, and some collateral.

3. Reasons for more inventory may include: he learned what he needed, he needed more parts and lost time on the job going to get them, he had more money, he would be able to service customers better, etc.

IV. Group Activity

The role playing should be done in a supportive atmosphere in small groups of five to seven students. Do not have students comment on other students' "performance." Rather, have only the students who participated share how they felt playing the role. Then ask for other students to play the roles to demonstrate how the role might be played differently.

With regards to what to wear, the banker will be wearing a suit. It isn't necessary for the loan applicant to wear a suit,
but clean, neat clothes will certainly give a more favorable impression than dirty work clothes.

Unit 5 - Being in Charge (1 class period)

I. Case Study: Walt hires a helper. Although he has his doubts, Walt hires a woman for the job.

Text: Tasks
Choosing Workers
Keeping People Happy

II. Responses to Individual Activities

1. c
2. a
3. a
4. b

2. Students should report their findings to you. Try to determine if the students increased their knowledge of basic union procedures and requirements.

3. Students should bring in job listings.

4. b, possibly c, not a.

5. Three of these: good pay and benefits, clear policies, clear directions, appropriate training, good personal relations.

III. Responses to Discussion Questions

1. Legally you cannot discriminate against someone because of his or her sex. The decision should be made on the basis of how well the person does the work. Some of the other employees and customers may like it, others may not like it, and still others will not care.

2. Advantages of supervising might include: more pay, more responsibility, interesting work, more decision making, etc. Disadvantages might include: have to tell other people what to do, not as much fun, responsible if something goes wrong, etc.

3. The second ad is more specific about the type of experience required and the desired skill level.

IV. Group Activity

This can be a very valuable activity but may already be part of the curriculum.
Unit 5 - Organizing the Work (1 class period)

I. Case Study: Walt learns how to schedule his jobs and coordinate with other workers.

Text: The Work Order
Contracts
Scheduling
Time Planning

II. Responses to Individual Activities

1. Five of these: name of the plumber, name of the customer, services to be provided, when they will be done, how much it will cost, how it will be paid for

2.

<table>
<thead>
<tr>
<th>Person Doing Work</th>
<th>Description of Work</th>
<th>Materials</th>
<th>Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harris</td>
<td>Repaired drain in kitchen sink</td>
<td>$20.00</td>
<td>$35.00</td>
</tr>
</tbody>
</table>

| TOTAL MATERIALS | $20.00 |
| TOTAL LABOR | 35.00 |
| TAX (5% on materials) | 1.00 |
| Total Cost | $56.00 |

3. A work schedule would include: the name of the plumber, the date, the work order number, and/or the job description.

WORK SCHEDULE

Date: Tuesday, March 4

<table>
<thead>
<tr>
<th>Employee</th>
<th>Description of Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>James</td>
<td>Work Orders #81, #76, and #82</td>
</tr>
</tbody>
</table>

4. At least three copies—one to keep at the office, a completed one to leave with the customer, and a completed one to bring back to the office. You will probably want a fourth copy, depending on how records are kept.

III. Responses to Discussion Questions

1. This can be an excellent way for students to see different ways of recording information.
2. The worker might not write it down and might forget or misinterpret the job order. The customer may say something different from what you said, and there would be no work order to check with. In general the work order reduces the chances of misinterpretation and confusion.

3. The best order would be b, a, c, d. Students can defend other choices also.

IV. Group Activity

Typical tasks might include: schedule work, return telephone messages, answer telephone calls, supervise work, prepare an estimate, order parts, review financial records, etc.

Students can learn from the process of trying to rank these activities about how to plan time more effectively. Stress the importance of planning and organizing work, and the need to make trade-offs. Also point out that sometimes the owner can delegate some tasks.

Unit 6 - Setting Prices (1 class period)

I. Case Study: Walt gets more experience at preparing estimates. At first he bids low to attract business.

Text: Acceptable to Customers
In Line with the Competition
Components of Price
Establishing a Price

II. Responses to Individual Activities

1. Assess adequacy of the information.

2. Responses should include profit. Other responses can include salaries, benefits, equipment, office expenses, rent, taxes, etc.

3. The best answer is $100, which gives 15% profit. $85 would not provide any profit, and $125 is too high—you would probably be undercut by the competition.

4. $1,000 would give Frak $100, or 10% profit

III. Responses to Discussion Questions

1. Make the point that different businesses have different strategies. Some emphasize quality and charge higher prices, while others may stress low prices and count on doing a large volume of business. Ultimately, the success of the strategy depends on what customers do.
2. Stress the point that what seems cheaper in the short run may end up to be more expensive in the long run. However, the home owner may only be able to afford the less expensive, lower-quality tub. The home owner could ask company B to make another bid based on the unit suggested by company A and would have a better cost comparison.

3. The restaurant job is probably most desirable, although the plumber would need to check on the complexity of the job. It might not be worth the time to make a bid for the home owner, as it may take an hour or more just to do the estimate. The commercial job would require many hours to prepare an estimate, and it is unlikely his offer would be accepted, although the size of the job makes it attractive and the plumber may want to get experience on learning how to bid larger jobs.

IV. Group Activity

The customer may prefer a fixed rate so he or she will know how much it costs and can compare rates. The employee would probably prefer actual time spent so he or she wouldn't feel as much time pressure. The owner would also probably prefer a flexible rate, although a standard rate may be a better strategy for getting business, be useful in planning, and be more profitable if the workers are efficient.

Unit 7 - Advertising and Selling (1 class period)

I. Case Study: Walt advertises his business primarily by talking to people in the building trades.

Text: Customer Needs
Advertising and Promotion
Selling and Customer Relations

II. Responses to Individual Activities

1. Five of these: telephone book, tell friends, contact contractors, talk to other plumbers, newspaper, mailings, brochures

2. Students should have listed the subcategories in your area under plumbing and the names of businesses that specialize in unplugging drains, home repairs, and remodeling or construction.

3. Students should bring in plumber ads from the classified section of the newspaper. Post these ads, along with any display ads the students located.

4. Reasons for selecting a name may include: comes early in the alphabet, describes the service, is personalized, etc.
III. Responses to Discussion Questions

1. Home repair work - Yellow Pages
   New construction - contacts with contractors
   Remodeling - newspaper, Yellow Pages

2. Students should be aware of how all contacts with the customer are part of selling the service.

3. There is no "correct" answer. Issues to be considered include what size ad his competitors have, how important he thinks the Yellow Pages are, and alternative uses of the money.

IV. Group Activity

Students should prepare an ad and share it with the group. Perhaps you can post the ads on a bulletin board in the class.

Unit 8 - Keeping Financial Records (1 class period)

I. Case Study: Walt learns to set up a financial recordkeeping system so he will have the information he needs to make business decisions.

Text: Importance of Financial Records
   Customer Billing
   Daily Cash Sheet

II. Responses to Individual Activities

1. Four of these:
   - To make business decisions and plans
   - To keep track of revenues
   - To keep track of expenses
   - To prepare taxes and other business reports
   - To see what each job costs
   - To compare actual costs with estimates
   - To anticipate cash shortages
   - To determine profits

2. CUSTOMER ACCOUNT FORM

<table>
<thead>
<tr>
<th>Date</th>
<th>Description of Sale</th>
<th>Amount Charged</th>
<th>Payment Received</th>
<th>Balance Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/15</td>
<td>Unplugged drain</td>
<td>$30.00</td>
<td>$30.00</td>
<td>$30.00</td>
</tr>
<tr>
<td>1/25</td>
<td>Check received</td>
<td></td>
<td>$30.00</td>
<td></td>
</tr>
<tr>
<td>3/4</td>
<td>Repair garbage disposal</td>
<td>$35.00</td>
<td></td>
<td>$35.00</td>
</tr>
<tr>
<td>4/4</td>
<td>Replace garbage disposal</td>
<td>$126.00</td>
<td></td>
<td>$161.00</td>
</tr>
</tbody>
</table>

Customer: Allen Wong
3. DAILY CASH SHEET

<table>
<thead>
<tr>
<th>Cash Receipts</th>
<th>Cash Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Sales</td>
<td>Salaries $1,500.00</td>
</tr>
<tr>
<td>Collection on credit sales $550.00</td>
<td>Building Expenses</td>
</tr>
<tr>
<td></td>
<td>Equipment &amp; Furniture</td>
</tr>
<tr>
<td></td>
<td>Inventory or Supplies</td>
</tr>
<tr>
<td></td>
<td>Advertising 100.00</td>
</tr>
<tr>
<td></td>
<td>Other 85.00</td>
</tr>
<tr>
<td>TOTAL CASH RECEIPTS $550.00</td>
<td>TOTAL CASH PAYMENTS $1,685.00</td>
</tr>
</tbody>
</table>

4. A progress billing is having the customer pay the bill in parts as work is completed.

5. Depends on your local area--adult education classes, community college, college, self-study, correspondence class, or a special seminar.

III. Responses to Discussion Questions

1. It is not generally the best use of the owner's time to keep all the records if the owner has more than two employees. It would depend on the amount of recordkeeping needed, how much it would cost to hire someone to do it, and how the owner wants to spend his or her time.

2. Cash—small jobs, not sure customers will pay, have transactions in cash as much as possible so don't need to bill. Credit—good customer, may not get the job otherwise, so employees don't need to collect the money, because your competition gives credit.

3. Students should discuss the issue of how to collect bills while still being on good terms with the customer. In this case, Fred should probably call the restaurant and make an agreement as to when the restaurant owner can pay the bill. He probably won't do any more work for the restaurant until the bill is paid.

IV. Group Activity

Decisions in which financial information would be helpful include:

- To expand—buy a new van, hire a new employee, etc.
- To contract—lay off an employee, etc.
- How much salary the owner can take
- If there is enough cash for expenses
- If a bank loan is needed
- If there is more cash than needed and it can be invested elsewhere
- How to figure costs on an estimate
How much to charge for which services
What hourly rate to charge

Unit 9 - Keeping Your Business Successful (1 class period)

I. Case Study: Walt's business changed as a reflection of changes in the level of new construction work in his area. He found he preferred a small operation and didn't want to expand.

Text: Profit and Personal Satisfaction
Profit/Loss Statement
How to Increase Profits

II. Responses to Individual Activities

1. Expense Ratio = Expenses
Revenues

Profit Ratio = Net Profit
Revenues

The expense and profit ratios provide a way to compare the business' success over years or other periods of time and a way to compare its success to that of other businesses.

2. Net Profit = $54,000
Expense Ratio = 14%
Profit Ratio = 27%

Year 5 was the best so far. He had a higher profit ratio and higher net profit.

3. Reasons can include: more competition, customers don't like the service, prices are too high, new construction is slow, economic conditions, not enough advertising, etc.

4. Ways to increase revenues can include: raise prices, do more business, be more efficient providing different services, emphasize more profitable services, etc.

5. Ways to reduce costs include: keep less inventory, put off buying new equipment, be more efficient, pay lower rent, do less advertising, better supervision, etc.

III. Responses to Discussion Questions

1. Students should discuss how much the owner should be rewarded for what he or she does and the risks he or she takes. Any answer can be defended.
2. Issues here might include personal preferences, type of customer you deal with, profitability, amount of coordination required, stability of work; competition, etc.

3. Students should discuss how appealing being a small business owner is to them personally.

IV. Group Activity

This activity gives students an opportunity to imagine how they would set up a small business.

Summary (30 minutes)

If desired, the Quiz may be given prior to summarizing the module and doing wrap-up activities.

Emphasize major points of the module such as:

- Being a small business owner is not appropriate for everyone.
- A business owner takes a risk; he or she may make money, but he or she may also lose money.
- To be successful in a small business, you must be able to sell your service.
- A small business owner should know about business matters and should like managing.
- Planning and organization are important.

Remind students that their participation in this module was intended as an awareness activity so they could consider entrepreneurship as a career option. Their introduction to the skills required for successful small business management has been brief. They should not feel that they are now prepared to go out, obtain a loan, and begin their own business. More training and experience are necessary. You can suggest at least these ways of obtaining that experience: one way is to work in the business area in which they would eventually want to have their own venture; another is to go to school (community colleges are starting to offer AA degrees in entrepreneurship).

This is a good time to get feedback from the students as to how they would rate their experience with the module. Could they identify with the characters portrayed in the case studies? How do they feel about the learning activities?

If possible, use a final wrap-up activity to help students apply what they have learned in the module. Possible ideas include the following:

- Have students discuss or write about how they see themselves owning a plumbing service now that they know more about it. If time runs short, students could do this on their own time as a means of self-assessment.
Use one or more of the Group Activities that were not done earlier. (The first one, in Unit 1, "Visit to Class By the Owner of a Plumbing Business," might be particularly appropriate.) Feel free to combine, expand, and adapt the activities so that students can consider a more complete picture of running a plumbing service.

**Quiz (30 minutes)**

The quiz may be used as an assessment instrument or as an optional study tool for students. If you wish to use the quiz for study purposes, duplicate and distribute the answer key to students. In this case, student achievement may be assessed by evaluating the quality of students' participation in module activities.

**Quiz Answer Key**

1. d

2. Select from these:
   - works well with people
   - organized
   - interested in business
   - can solve problems
   - willing to work long hours

3. Select from these:
   - plan carefully what services to provide and where
   - offer special services
   - establish a good business image

4. d

5. supply, competition, other suppliers
   - need, demand, customers

6. c

7. a. personal background
   b. information on the business
   c. financial information

8. Total Starting Expenses $15,000
   Total Money on Hand $10,000
   Total Loan Money Needed $5,000

9. a

10. c
11. Three of these:
   - good pay and benefits
   - clear policies
   - clear directions
   - appropriate training
   - good personal relations

12. Total Materials $600
    Total Labor   108
    Tax (6%)       36
    Total Cost    $744

13. c
14. b
15. d
16. name and telephone number
17. $50.00
18. Total Cash Receipts: $650.00
    Total Cash Payments: $700.00

19. Net Profit = $15,000
    Profit Ratio = 15%
    Expense Ratio = 25%

20. a. increase revenue or sales
     b. decrease expenses or costs
21. Responses can include: lower prices, advertise, improve quality, provide a different service


GOALS AND OBJECTIVES

Goal 1: To help you plan your plumbing business.

Objective 1: Describe the services, customers, and competition of a plumbing business.

Objective 2: List three helpful personal qualities an owner of a plumbing business might have.

Objective 3: List three ways to help your business compete successfully.

Objective 4: List one or more special legal requirements for running a plumbing business.

Goal 2: To help you choose a location for your business.

Objective 1: List three things to think about in deciding on a service area for your business.

Objective 2: Pick the best location for a plumbing business from three choices and explain your choice.

Goal 3: To help you plan how to get money to start your business.

Objective 1: Write a business description for a plumbing business.

Objective 2: Fill out a form showing how much money you need to borrow to start your plumbing business.
Goal 4: To help you select and manage the people with whom you work.

Objective 1: Decide how to divide the work of your service among several employees.

Objective 2: Pick the best person for a specific job in your company.

Objective 3: List three ways to keep your people happy.

Goal 5: To help you organize the work of your plumbing business.

Objective 1: List what needs to be done for one of your customers on a work order form.

Objective 2: Given several tasks to do on a particular day, write a work schedule for yourself or an employee.

Goal 6: To help you set prices for your plumbing business.

Objective 1: Given things to consider about the price of a service, select the best price.

Goal 7: To help you learn ways to advertise and sell the services of a plumbing business.

Objective 1: Choose the best way to advertise your plumbing business for a specific purpose.

Objective 2: Design a printed ad for your plumbing business.
Goal 8: To help you learn to keep financial records for your plumbing business.

Objective 1: Given information about the services performed for a customer, fill out a customer account form.

Objective 2: Given information about income and expenses on a single day, fill out a daily cash sheet.

Goal 9: To help you learn how to stay successful in operating a small business.

Objective 1: Given some information about a business' income and expenses, figure out the net profit (before taxes), profit ratio, and expense ratio.

Objective 2: Given a decline in profits, state one way to increase profits.

Objective 3: Given a specific problem of low sales, suggest a way to change your business to increase sales.