Moodle Teaching Techniques
Creative Ways to Use Moodle for Constructing Online Learning Solutions

William H. Rice IV

Chapter No. 4
"Quiz Solutions"
In this package, you will find:
A Biography of the author of the book
A preview chapter from the book, Chapter NO. 4 "Quiz Solutions"
A synopsis of the book’s content
Information on where to buy this book

About the Author

William Rice is a software training professional who lives, works, and plays in the New York City. His indoor hobbies include writing books and spending way too much time reading sites like slashdot and 43folders. His outdoor hobbies include orienteering, rock climbing, and edible wild plants (a book on that is coming someday)

William is fascinated by the relationship between technology and society; how we create our tools, and how our tools in turn shape us. He is married to an incredible woman who encourages his writing pursuits, and has two amazing sons

He can be reached through his website at http://www.williamrice.com.
Moodle Teaching Techniques:
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It's time for software manuals to evolve. I've been teaching software and writing manuals for about twenty years now, and have found that most software manuals are missing the most important information. While most of these do a good job of telling you how to perform tasks, that is, what buttons to push and menus to choose, they often leave the two most important questions unanswered:

- What effect will doing this have on your audience's experience?
- When would you want to do this?

For example, it would be nice if the manual that came with your word processor told you more than how to create tables and graphs. It would be even better if it also told you what kind of information is most easily understood in a table, as against a graph.

In this book, I hope to take a more evolved approach. I want to share techniques for creating effective learning solutions using Moodle, the world's most popular online learning management system. I'll give you keystroke-and-click directions to create these solutions. I'll also tell you what effect they'll have on your students' experience, and how to make best use of these solutions. You can let me know if I've succeeded (or not) by sending comments to us at feedback@packtpub.com, making sure that you have mentioned the book title in the subject of your message.

What This Book Covers

Chapter 1: Introduction, explains the approach the book will take for creating learning solutions, and briefly describes the educational principles and practices upon which the techniques are based

Chapter 2: Forum Solutions, offers you solutions for managing your forums. The first two sections focus on making the best use of forums. The last two sections of this chapter, focus on managing your forums

Chapter 3: Chat Solutions, gives you a key to making the best use of Moodle's—or any LMS's—chat function, in a way that takes advantage of its unique strengths, instead of trying to make it act like a face-to-face meeting. In this chapter, we explore the questions “What is chat good for?” and “How can I achieve success in an online chat?” Considering the fact that Moodle's chat functions are similar to most other chat software, the answers to these questions apply to more than just Moodle

Chapter 4: Quiz Solutions, tells you that a quiz can be more than just a test. At its best, a quiz can also become a learning experience. Moodle offers features that help you to accomplish that. This chapter gives you five ways to use Moodle quizzes for more than testing

For More Information:  
Chapter 5: Lesson Solutions, tells you that a Moodle lesson can be a powerful combination of instruction and assessment. Lessons offer the flexibility of a web page, the interactivity of a quiz, and branching capabilities.

Chapter 6: Wiki Solutions, tells you that a wiki is a powerful tool for collaboration, and it does enable students to participate in a group activity from anywhere at any time. However, a wiki can also be a powerful tool for individualized learning. This principle is called "differential learning", which means that the learning experience should be customized for each student, depending on his/her learning ability. With individual wikis, you can differentiate the learning experience for your student.

Chapter 7: Glossary Solutions, tells you that glossaries are not just special-purpose, online dictionaries, but can also be an enjoyable, collaborative activity for your class, and a teaching tool.

Chapter 8: The Choice Activity, tells you that a choice activity is the simplest type of activities. You can use a choice to: take a quick poll, ask students to choose sides in a debate, confirm the students' understanding of an agreement, and gather consent.

Chapter 9: Course Solution, focuses on making your course easier to navigate. The goal of all these solutions is to reduce the time and effort your students spend in figuring out what to do next, so they can get on with the learning. Sometimes, just slightly reducing the effort that students make on navigating through your course, requires a great effort on your part. But, anything you do to help your students navigate easily through your course is worth the effort. The result is less time spent wondering what to do next, and more time spent on the course content.

Chapter 10: Workshop Solution, tells you that it is one of the most complex and powerful, of activities. This chapter takes you through the process of creating a full-featured workshop. It focuses on helping you to make decisions that create the kind of workshop experience you want for your students.
A quiz can be more than just a test. At its best, a quiz can also become a learning experience. Moodle offers features that help you to accomplish that. This chapter gives you different ways of using Moodle quizzes for more than just testing.

### Distribute Quizzes Over Time

Distributed practice is when a student practices a skill or knowledge during many sessions that are short in length and distributed over time. For example, if you're teaching a language course, you might practice every day for one week on a list of vocabulary words. That would be distributed practice. But even more effective would be repeating that practice once a week for the next few weeks.

### Advantages and Limitations of Distributed Practice

Students who use distributed practice learn more material, and remember the material longer, than students who cram because:

- It's easier for students to maintain motivation and focus for short spans of time rather than for an all-night study session.
- Short practice sessions prevent mental and physical tiredness. Fatigue interferes with memory and reasoning, and reduces the ability to focus.

Research indicates that we continue to learn and process information that we study, after the study period has ended. If our brains were ovens, you could say we continue to "bake" the knowledge for a while even after the heat has been shut off. The more practice sessions we engage in, the more times we experience this effect.

For More Information:

Quiz Solutions

Several factors affect how well, distributed practice works:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Effect on Distributed Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of the practice session</td>
<td>The shorter the better. It should be just long enough to cover the material, but not long enough to fatigue the student.</td>
</tr>
<tr>
<td>Time between practice sessions</td>
<td>Research shows that at first, the time between sessions should be short enough so that students don't forget the material between practice sessions. As the students gain proficiency and confidence with the material, the time between sessions can be increased. There are no hard-and-fast rules. As a teacher, you must use your judgment and monitor the students' performance, adjusting the time between sessions as needed.</td>
</tr>
<tr>
<td>Time period over which practice sessions are distributed</td>
<td>The longer the better. Keep returning to the material until the students master it. Students might demonstrate mastery by performing well on the quizzes you give them, or by using the material in an activity like writing a paper or participating in a forum.</td>
</tr>
</tbody>
</table>

With all this talk of the advantages of distributed practice, there are some situations where massed practice (a long study or work session) is better. For example, when you're writing a paper you often reach a point where you are accomplishing several things at once. You are writing a section now, you have your next few points in mind, you have recalled the next few pieces of information that you need to use, and you know where the piece that you are working on fits into the overall organization of the paper. At that point, you do not want to be interrupted. Writers, programmers, artists, and people who do creative work know that sometimes the best way to be productive is to exert a sustained and uninterrupted effort. For each learning situation, you must consider, which would give better results; distributed practice or sustained effort.

Opening and Closing Quizzes at Predetermined Times

The Editing Quiz window contains settings that enable you to determine when a quiz becomes available and unavailable to students:

Open the quiz:
- [ ] 1
- [ ] January
- [ ] 2010
- [ ] 17
- [ ] 45

Close the quiz:
- [ ] 3
- [ ] January
- [ ] 2010
- [ ] 17
- [ ] 45

For More Information:
Remember that the show/hide setting determines if a student can see an item in the course or not. So, even when a quiz is closed, students could see it listed in the course. The following table examines how the setting can be used.

<table>
<thead>
<tr>
<th>Whether the quiz is open or closed, if the course developer has set it to show...</th>
<th>Whether the quiz is open or closed, if the course developer has set it to hidden...</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="closed_quiz_icon.png" alt="Closed Quiz" /></td>
<td><img src="closed_quiz_icon.png" alt="Closed Quiz" /></td>
</tr>
</tbody>
</table>

The student will see the quiz listed on the course's home page...

The student will not see the quiz listed on the course's home page...

If a student selects a closed quiz, (s)he sees the quiz's description and a message stating when the quiz will open (or when it closed):

---

**Incorrect: 1**

**Correct: 1**

---

Moodle Solutions ▶ QuizSolutions ▶ Quizzes ▶ Closed Quiz

Closed Quiz

This quiz exists only to show what a closed quiz appears like to the student. Check back in 2010 if you'd like to take the quiz!

Grading method: Highest grade

The quiz will not be available until: Friday, 1 January 2010, 05:45 PM

---

**Indicating that a Quiz is Closed**

If you're going to close a quiz until a given date, will you allow the student to stumble into the quiz and discover that it is closed until a given date? Or will you indicate to the student that the quiz is closed? You have several options.

---

For More Information:

Quiz Solutions

In the previous figure, you can see that Moodle tells the student, **The quiz will not be available until: Friday, 1 January 2010, 05:45 PM.** However, that information is not very prominent. Consider using the first line of the quiz’s description to explain that the quiz is closed until the open date, so it’s the first thing the student reads after selecting the quiz:

![End-of-unit Quiz](#)

This quiz covers the material in Unit 1 of the syllabus. It will open on January 1 and close January 3. You can take the quiz anytime during those 3 days.

Grading method: Highest grade

The quiz will not be available until: Friday, 1 January 2010, 12:00 AM

You can use a label on the course's home page to indicate that the quiz is closed, like this:

![The quiz below will open when we finish this topic, on January 1, 2010.](#)

You can also hide the quiz until it's time for the student to take it.

Use Quizzes for Frequent Self Assessment

Self assessment is the ability of a student to observe, analyze, and judge his or her performance based on criteria that you supply. At its best, self assessment also means that the student can determine how to improve his or her performance. Supplying the students with quizzes that they can take at their own, fulfills the first part of that goal. Using feedback during the quizzes helps fulfill the second. Self assessments are typically not graded. The goal of a self assessment is usually not to achieve a grade, but to practice for a graded activity.
Adding self assessment to your course has several advantages for you and the students. First, self assessments are a chance for students to become more actively involved in their learning. Second, students learn to identify their errors as they make the errors, assuming the self assessment quiz provides immediate feedback. For more about using immediate feedback in a quiz, see Immediate Feedback Makes a Quiz a Learning Tool, later in this chapter. This feedback during self assessment reduces the errors students make "when it counts", that is, when they are being graded. Third, self assessments build the students' confidence, and makes them more independent learners, and as a teacher, your workload is reduced by self assessment quizzes that provide feedback, because they reduce the need for you to provide feedback yourself. You can also improve your relationship with your students by showing confidence in their ability to work independently.

Exclude Self Assessment Quizzes from the Gradebook
Moodle gives you a Gradebook for each course. The scores for graded activities, such as quizzes and workshops, automatically appear in the Gradebook. You want a self assessment quiz to display a grade to the student so that (s)he knows how well (s)he did, but, you don't want that quiz grade to be included in the calculation for the student's course grade. Moodle enables you to exclude selected activities from a course's Gradebook.

To exclude the grade for a self assessment quiz from the Gradebook, do the following:

1. From the Administration block, select Grades. The first time that a teacher, administrator, or course creator visits a course's Gradebook, the Gradebook displays in its simplest mode:

![Gradebook Simple Mode](image)

For More Information:
Quiz Solutions

2. To exclude a quiz from the grade calculations, you need to view the Gradebook in advanced mode. Select the Set Preferences tab. Under this tab, select Use Advanced Features, as shown in the following screenshot:

3. Several new tabs appear. Select Grade Exceptions, shown in the following screenshot:

4. This page can be tricky. It looks like you should select the activity from the middle column, and then select either Exclude from Grading or Include in Grading for that item. However, that isn't how this page works. Instead, select the activity from the middle column and then select all of the students whose grade for this activity you want to exclude from the Gradebook. Refer to the following screenshot:
5. And then, select **Exclude from Grading**. This excludes that activity from the selected students' overall grade:

<table>
<thead>
<tr>
<th>Grade Exceptions</th>
<th>Included in Grading</th>
<th>Grade Items</th>
<th>Excluded from Grading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Closed Quiz (0)</td>
<td>Student1 Moodle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self Assessment Quiz (3)</td>
<td>Student2 Moodle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Student3 Moodle</td>
</tr>
</tbody>
</table>

However, note that for the other activity in this course, the Closed Quiz, all of the students' grades will still be included in the Gradebook:

<table>
<thead>
<tr>
<th>Grade Exceptions</th>
<th>Included in Grading</th>
<th>Grade Items</th>
<th>Excluded from Grading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Closed Quiz (0)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self Assessment Quiz (3)</td>
<td></td>
</tr>
</tbody>
</table>

When using this method to exclude self-assessment quizzes from the Gradebook, remember that if a student joins your course late, you'll need to return to the **Grade Exceptions** page and exclude that student's self-assessment quiz grades from the Gradebook.

### Making Quiz—A Learning Tool

In an online environment, immediate error correction almost always takes the form of feedback provided by the learning system. The feedback is a response to a student's answer to a quiz question.

### Questions Must be Specific

Immediate feedback is one of the strengths of an e-learning system. One of the weaknesses of an online environment is that the teacher can't ask why the student picked an incorrect answer. The teacher cannot immediately ask the student to discover exactly what information (s)he is missing. For example, this quiz question asks about two items:

In what order should you add the chemicals, and when should they be heated?
If a student gets this question wrong in an online quiz, should the feedback correct the student's knowledge of:

The order in which, chemicals are to be added? or, When to heat them?

There's no way you could know. Break this question into two more specific questions, and then you can design appropriate error correction for each question:

1. In what order should you add the chemicals?
2. The mixture should be heated after which chemical is added?

Online quiz questions must be very specific for immediate error correction to work online. There must be no doubt what item of knowledge is being measured. As feedback is a response to a quiz question, the questions and remedial information must be carefully matched. The quiz question must be specific enough to measure with certainty, what piece of information the student is missing.

**Adding Feedback to Quiz Questions**

Moodle enables you to create several different kinds of feedback for a quiz. You can create feedback for:

- The entire quiz, which changes with the student's score. This is called **Overall Feedback**, and uses a feature called **Grade Boundary**.
- A **question**, no matter what the student's score on that question. All students receive the same feedback. This is called **General Feedback**, which every question can have.

The type of feedback that you can create for a question, varies with the type of question.

**Feedback for a Multiple Choice Question**

In a multiple choice question, you can create feedback for correct, partially correct, or incorrect response. If a response has a value of 100%, it is considered completely correct and the student receives all of the points for that question. However, a response can have a value of less than 100%. For example, if a question has two correct responses, you could give each response a value of 50%. In this case, each response is partially correct. The student needs to choose both responses to receive the full point value for the question. Any question with a percentage value between 0 and 100 is considered partially correct.

A response can also have a negative percentage value. Any response with a percentage value of less than zero is considered an incorrect response.
Choosing a response with a value of 100% will display the feedback under **Feedback for any correct answer**. Choosing any response with a point value between 0 and 100% displays the feedback under **Feedback for any partially correct answer**. Choosing any response with a zero or negative percentage displays the feedback under **Feedback for any incorrect answer**. Each response can display its own feedback. This type of feedback is called **Response Feedback**, or just **Feedback**.

The screenshot below shows **Overall Feedback** with **Grade Boundaries**. Students who score 90—100% on the quiz receive the first feedback, **You're a geography wizard...** Students who score 80—89.99% receive the second feedback, **Very good!...**

<table>
<thead>
<tr>
<th>Overall feedback</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade boundary:</td>
<td>100%</td>
</tr>
<tr>
<td>Feedback:</td>
<td>You're a geography wizard! Try the Advanced Geography Trivia quiz.</td>
</tr>
<tr>
<td>Grade boundary:</td>
<td>90</td>
</tr>
<tr>
<td>Feedback:</td>
<td>Very good! Try the Intermediate Geography Trivia quiz.</td>
</tr>
<tr>
<td>Grade boundary:</td>
<td>80</td>
</tr>
<tr>
<td>Feedback:</td>
<td>Not bad. Try another Geography Trivia quiz and see how you do.</td>
</tr>
<tr>
<td>Grade boundary:</td>
<td>70</td>
</tr>
<tr>
<td>Feedback:</td>
<td>You're not ready to move up to the next level. Keep trying!</td>
</tr>
<tr>
<td>Grade boundary:</td>
<td>0%</td>
</tr>
</tbody>
</table>

The screenshot below shows a multiple-choice question that uses several kinds of feedback. You’re seeing this question from the course creator's point of view, not the student's. First, you can see **General Feedback**: **The truth is, most New Yorkers have never even thought about the "missing Fourth Avenue" issue.** After the question is scored, every student sees this feedback, no matter what the student's score.

Below that, you can see that **Choice 1** through **Choice 4** contain feedback for each response. This feedback is customized to the response. For example, if a student selects **Sixth Avenue** the feedback is **Nope, that name is taken. Sixth is also known as the "Avenue of the Americas"**.

Near the bottom of the page, under **Feedback for any incorrect answer**, you can see the feedback the system gives if the student selects one of the incorrect responses. In this case, we use the feedback to tell the student what the correct response is.
Quiz Solutions

There is no feedback under any correct answer or partially correct answer. Those options are useful when you have multiple responses that are correct, or responses that are partially correct. In this case, only one response is correct and all other responses are incorrect.

For More Information:
Feedback for a Numeric Question

The next screenshot shows feedback for a question with a numeric answer. Note that the General Feedback explains how the question is solved. This feedback is displayed to everyone after answering the question, even those who answered correctly. You might think that if the student answered correctly, they don't need this explanation. However, if the student guessed or used a different method than that given in the General Feedback, explaining the solution can help the student learn from the question.

![Screenshot of a numeric question with feedback](image-url)
**Quiz Solutions**

In a numeric answer question, the student types in a number for the answer. This means the student could enter, literally any number. It would be impossible to create customized feedback for every possible answer, because the possibilities are infinite. However, you can create customized feedback for a reasonable number of answers. In this question, I've created responses for the most likely incorrect answers. After I've given this test to the first group of students, I'll need to review their responses for the most frequent incorrect answers. If there are any that I haven't covered, I'll need to add them to the feedback for this question.

<table>
<thead>
<tr>
<th>Answer 1:</th>
<th>26</th>
<th>Accepted error</th>
<th>± Grade: 100 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback:</td>
<td>Correct.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Answer 2:</th>
<th>-180</th>
<th>Accepted error</th>
<th>± Grade: None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback:</td>
<td>It looks like you transposed the two numbers. In the equation, you substituted 2 for &quot;a&quot; and 6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Answer 3:</th>
<th>30</th>
<th>Accepted error</th>
<th>± Grade: None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback:</td>
<td>It appears that instead of calculating b cubed, you calculated b times 3.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Answer 4: | | Accepted error | ± Grade: None |
|----------|----------------|---------------|
| Feedback: | No, that answer is incorrect. |

In the previous screenshot, note that each response has customized feedback. **Answer 1** is correct. **Answer 2** would be the result of switching the two numbers while trying to solve the problem. As this is a likely error, I've included feedback just for that answer, explaining the error the student made. **Answer 3** is the result of interpreting $b^3$ as "b times 3" instead of "b cubed." This is also a likely error, so I've included feedback for that answer. **Answer 4** is a wildcard, and applies if the student submitted any answer other than the three above.
Reinforce Expertise with Timed Quizzes

Timed quizzes are an example of teaching, using a strategy called **time trials**. Time trials can be used to:

- **Measure** a student's competence at the beginning of a learning unit.
- **Build** a student's confidence with the knowledge or skill.
- **Test** a student's mastery at the end of a learning unit.

*Chapter 1* has a section that explains the theory behind time trials in more detail. In general, you should use time trials to build mastery of existing skills and knowledge, and not to build new knowledge. Time trials are a confidence-building technique.

When a student selects a timed quiz, the system displays the time limit for the quiz. You might also want to state the time limit in the quiz's description, as shown in the following screen shot:

---

**Timed Math Quiz**

This quiz consists of three math problems. You have three (3) minutes to complete the test.

Grading method: Highest grade

Time limit: 3 mins

Open the quiz: Monday, 9 April 2007, 10:00 PM

Attempt quiz now

---
Quiz Solutions

When the student selects **Attempt quiz now**, the student is reminded that the quiz has a time limit:

![Quiz dialogue box]

Grading method: Highest grade
Time limit: 3 mins
Open the quiz: Monday, 9 April 2007, 10:00 PM

After the student selects **OK**, the quiz displays a timer that appears in a separate floating window, as shown in the following screenshot:  

![Timed Math Quiz]

1. Marks: If $@$ is defined for all positive numbers $a$ and $b$ by $a@b = 3ab - b^2$, then $6@2 = $

   Answer: 

---

For More Information:
Adding a time limit to a quiz is a matter of changing one setting on the Editing Quiz page, as highlighted in the following screenshot:

![Editing Quiz page](image)

**Host a Proctored, Timed Test from a Secure Location**

Moodle enables you to restrict the location from which a quiz can be accessed. This is especially useful for a proctored quiz, where you want to be sure that only people in a certain room are able to access the quiz.

This is done with the **Require network address** setting as shown:

![Require network address](image)

Only computers that are located at this specified network address can access the quiz.

**Different Kinds of Network Addresses**

You can specify different kinds of network addresses. Each is explained as follows:

**Full IP Addresses**

This is the simplest option. Every computer connected directly to the Internet has a unique identifier, called its IP address. Please note the use of the phrase "directly connected", is deliberate and I'll explain it further. A full IP address specifies a single computer, router, printer, or other device on the Internet.

---

For More Information:

An IP address is specified by writing four numbers, separated by decimal points, like this: 255.255.255.255. Each number can be from 0 to 255. There are a limited number of IP addresses for the Internet. Don't worry, we haven't run out of them yet, and there is a plan for adding more IP addresses.

When you log on to your internet service provider (ISP) from home, your ISP usually gives you an IP address for the time that you are logged on. When you log off, your ISP "takes back" the IP address so someone else can use it. When you log on again, you're given a new one. So, when one of your students accesses the Internet from their homes, (s)he will probably have a different IP address every time. This is important, if you want to restrict a quiz to specific IP addresses. Your students won't be able to access that quiz from their homes. They will need to be physically present at the computers that have the IP addresses you specify.

Often, one IP address serves many computers. Again, think of your home computer. If you have DSL or a cable modem, you probably have a router that enables you to connect several computers to that one modem. In this case, your modem has an IP address. The router enables all of your devices—the computer in your home office, the laptop your kids are using in the living room, the printer you've connected to your router—to share that one IP address. In a similar way, your school or company may have only one IP address that gets shared among many computers. In some modern lecture halls, you will find several wireless access points that students can connect to with their laptops. Usually, each access point will have a unique IP address. In that case, all of the laptops using the access point will share the access point's IP address. The next time you're in a lecture hall, look up at the ceiling; if you see several antennas, each with an IP address written on it, those are the wireless routers.

If you want to use the **Require network address** setting to limit access to a certain room, ask your network administrator if every computer in that room has a unique IP address, or if they share an IP address. If each computer in a room has a unique IP address, you will need to enter the range of IP addresses into this field.

To restrict access to a quiz to one IP address, enter it into the **Require network address** field, like this:

```
Require network address: 64.14.68.15
```

To restrict access to a range of IP addresses, enter them like this:

```
Require network address: 64.14.68.15-20
```
In this example, the range covers all the IP addresses from 64.14.68.15 through 64.14.68.20.

**Partial IP Addresses and Private Networks**

In the previous section, I explained that a single router will have a unique IP address, and that the router will share its Internet connection with the computers connected to it. So the router will have a public IP address, like 64.14.68.15. But what about the computers "behind" that router? What IP address will the computers that share the router's Internet connection have?

The area behind a router is considered a **private network**, or **subnet**. The computers on the private network are not connected directly to the Internet; they go through the router. As they're not connected directly to the Internet, they don't need an IP address that is unique to the Internet. Each computer on a private network needs an IP address that is unique within its network, but not unique to the external network. The computers behind a router—the computers on a private network—use the following ranges of IP addresses:

- 10.0.0.0 through 10.255.255.255
- 169.254.0.0 through 169.254.255.255
- 172.16.0.0 through 172.31.255.255
- 192.168.0.0 through 192.168.255.255

If the computers at your school or company have IP addresses that fall within one of these ranges, then your institution is using a private network. For example, if the computers in the room where you want to administer a test have IP addresses from 198.168.0.143 through 198.168.0.162, then those 20 computers are on a private network, and they access the Internet through a router. You can restrict access to just those computers by entering **198.168.0.143-162** into the **Require network address** field.

The diagram on the next page shows two private networks connected to the Internet. Each network sits behind one router, and uses the same range of private IP addresses. The routers have unique IP addresses, but the subnets use the same range of IP addresses.

If the computers in your institution are on a private network, or subnet, entering something like **192.168** or **172.16** into the **Require network address** field will grant access only to those computers on your subnet. If you want to grant access only to computers in a certain room, so that you can proctor the quiz, then find out the IP addresses of the computers in that room and enter the IP address range into the field.
How to Determine a Computer's IP Address

The easiest way to determine a computer's IP address is to ask your network administrator. But if you must do it yourself, here are basic instructions.

Both networks use the same range of private IP addresses, 192.168.0.1 through 192.168.0.3. That enables us to re-use these IP addresses, so that we don't run out of unique, public IP addresses. In this example, just two public IP addresses are handling six computers. Now imagine how many public IP addresses we save when a company with thousands of computers uses just one public IP address.
On Microsoft Windows

From the Start menu, select Run...

1. In the resulting dialog box, enter cmd and then click the OK button. A DOS window will appear, like this:

2. If the computer uses Windows 95, 98, or ME, type winipcfg and press Enter. If the computer uses Windows NT, 2000, or XP, type ipconfig and press Enter.

3. The IP Address is one of the first pieces of information displayed:

4. To close the window, type exit and press Enter.
Quiz Solutions

On a Macintosh

- **OS X 10.3 or 10.4**
  1. From the Apple menu, select **Location** and then **Network Preferences**... .
  2. In the Network Preference window, next to **Show**, select **Network Status**. Your IP address will be listed.

- **OS X 10.2**
  1. From the Apple menu, select **Location** and then **Network Preferences**... .
  2. In the Network Preference window, next to **Show**, select the method that you use to connect to the Internet. For example, you might be connected via **Built-in Ethernet**, **Internal Modem**, or **Airport**.
  3. After selecting your connection method, click the **TCP/IP** tab. Your IP address will be listed.

- **OS X 10.1 and earlier**
  1. From the Apple menu, select **System Preferences**... .
  2. In the System Preferences window, click the **Sharing** icon. If you don’t see this icon, click **Show All** to make it display, and then click **Sharing**. Your computer’s IP address will display at the bottom of the window.

- **Mac OS 9**
  1. From the Apple menu, select **Control Panels**. A submenu displays.
  2. Select **TCP/IP**. In the TCP/IP window, your IP address is listed.

On a Linux Computer

1. Open a command shell. You might need to refer to your Linux help files or manual to learn how to do this. On most Linux PCs, you can open a command shell with one or two clicks.

2. At the command prompt, type `ifconfig eth0` and press `Enter`. That's a zero, not the letter O, in `eth0`.

3. The system will display the settings for all of the network hardware in your computer. Look for the line that begins with **inet addr**: Your IP address will be listed immediately after that.
Summary

In this chapter, you saw how to use Moodle's Quiz module to create self-assessment and learning experiences. Some of the features we explored are:

- Opening and closing quizzes at predetermined times.
- Scoring quizzes without including them in the students' final grade.
- Feedback for quizzes, questions, and individual responses to questions.
- Timed quizzes.
- Restricting access to a quiz, based on the student's location.

There are other features that you can use to make a quiz a good learning experience. For example, you can use the settings for Attempts allowed and Each attempt builds on the last to enable students to try a quiz several times. After each attempt, the student can retain the correct answers and work at the wrong answers. You can use Adaptive mode to create questions that allow multiple attempts immediately after the student has entered an answer, and that change their feedback according to the student's answer. I encourage you to explore these and other features. With the right approach, perhaps we can change things enough so the words test and quiz no longer scare so many students, but are something that they look forward to.
Where to buy this book

You can buy Moodle Teaching Techniques from the Packt Publishing website:

Free shipping to the US, UK, Europe, Australia, New Zealand and India.

Alternatively, you can buy the book from Amazon, BN.com, Computer Manuals and most internet book retailers.