Rational University Instruction Guide

Version 1.0

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Instruction Guide

1. Introduction

"The best teacher … is not the one who knows most, but the one who is most capable of reducing knowledge to that simple compound of the obvious and the wonderful." H.L. Mencken

This instruction guide contains a collection of techniques and tips on teaching the Rational Software courseware. This paper forms part of any Instructor Kit provided by Rational University. It describes how an instructor can create a more effective and more enjoyable course both for the participants and himself/herself. This guide provides general teaching techniques. The Rational courseware family consists of methodology and tools courses that are somewhat different in approach. You will notice that some of these techniques are more relevant to the course at hand than others.

Chapter 2 gives general guidance on how to set student expectations for the course. Chapter 3 in particular examines your role as instructor in creating an atmosphere that is conducive for learning. Chapter 4 describes how to use the course materials, taking maximum advantage of the lecture and the lab materials while adding your own personal touches. Chapter 5 discusses various teaching techniques that you can use consistently to effectively deal with teaching problems. Chapter 6 describes typical problematic student and team behavior, and how to counteract and resolve its impact. Finally, Chapter 7 describes some planning issues regarding the preparation of the course and administrative follow-up.

2. Setting Course Expectations

When students signed up for your course, they probably had a rough idea what to expect. Yet often they are still somewhat wary that they—or their manager—have made the right choice. One of the first tasks of the instructors is to inform the students what to expect from this class, and to provide a comfortable and recognizable teaching environment.

2.1 Welcome the Students

Use the first minutes of the class to familiarize your students with the course environment. This entails both the actual physical environment as well as the teaching environment. With respect to the former, point out restrooms, phones, kitchen, cafeteria, and other locations where food is available. Also, at the beginning of the course or prior to lunchtime, point out nearby restaurants. If you are teaching in an environment unfamiliar to you (e.g., on-site), the task is often the reverse—the participants are familiar but you are not. Ask your local contact to point these things out to you, so you feel comfortable with the surroundings.

There are several critical components to the teaching environment. First of all, there is you. Introduce yourself and tell a little bit about yourself, your company, how long you have been teaching, point out prior experience with the product, related experience, and the hi-tech industry in general. Aside from the students getting an understanding of your expertise as an instructor, your degree of (in)formality during these first minutes is also significantly going to affect how the participants gauge and approach you.

The second component of the teaching environment is the participants themselves. Invite the other participants to introduce themselves to you and each other. This is also the perfect occasion to find out how much experience they have with the product, their aimed use of the product in the future, and—if relevant—the operating system they are comfortable with.

The third component of the teaching environment is the structure of the class. Indicate the duration of lectures, when there are labs, and indicate how often (and how long) you intend to take short breaks, when you are breaking for lunch, and when you expect the course to be finished that day.

2.2 Set Overall Objectives with the Class

During the participant introduction, you will have asked each individual what objectives they have for the course. After each individual introduction or when the introduction round is finished, discuss how those fit into the objectives you, the instructor, have for the course. Once you have identified the objectives, they can be used as guidelines to measure the effectiveness of the course all throughout the week. It is important to be detailed in your discussion of the objectives at this point. A clear understanding of how all the days of the course are likely to progress, and the learning goals and why they are important is essential in reducing the amount of stress in the room. This is also a good point in the course to set baseline communication standards. Typically most participants will be familiar with the software development process but regularly there will be people from other industries that might have a different perspective on the development process. Make sure that your vocabulary becomes familiar to all of them.

2.3 Course Must be Tailored to Our Needs

Many customers believe they are unique and any course must be tailored specifically for them. Be careful of this. Many times an instructor can invest a fair bit of time tailoring the course and not receive significant payback for the effort. Often customers don't even realize what is truly discussed in each section and may decide to not cover something that they really do need! A good instructor can adapt as necessary during the class by emphasizing and de-emphasizing certain sections and by working exercises, on the fly, from their application domain. Another approach to handle this is to promise the class a couple hours at the end of the class, if time permits, to focus on their own needs.

In some courses the amount of tailoring can be substantial, in particular in some of the methodology courses where a central problem is being analyzed and solved as the course progresses (such as the OOAD and the RSTW courses). Instructors may opt not to use the problem being delivered with the course, but use the customer's real life problem at hand. There can be a great deal of value in using examples from the customer's application domain, but there are also tradeoffs you will want to consider:

- You must be a very capable consultant in the technique taught. You are starting with a blank sheet of paper, pulling from the class what the problem to be solved is, relating that to the technique being taught, and communicating it back to the class.
- You do not know what direction the exercise will go and may easily stray from the key objectives of the course. You must maintain a steady course and extract a good model from the domain expertise in the room. You do not have a pre-canned answer to fall back on.
- The class inevitably gets mired down too early in unnecessary details; they have a difficult a time abstracting away the "how" from the "what." The instructor must be able to pull them out of the mire and help them to stay focused on the learning objectives.

- If you can make this go well, it invariably is a good exercise because it instigates much more lively discussions, and it gives the class an idea of how to apply the technology in their application domain.

3. Instructor Style

You, the instructor, are possibly the most critical element in the success or failure of the course. There are several roles you play. You are:

- The facilitator and motivator. Student participation is crucial to keep the attendees sharp and to allow you to double check whether they understand what you are talking about.
- The expert. The instructor (presumably) knows more about the product than anybody else in the room, and your knowledge will be sampled heavily, and sometimes even tested.
- The local representative of this product. Your impression will enhance or diminish their opinion of the product because you are being perceived to be part of that product.

3.1 Get the Class Talking

Encourage student participation and look for opportunities for interaction. Good instructors make this look natural, but in reality, encouraging interaction in a class is planned ahead of time. If the class is reluctant to ask questions, the instructor must get the ball rolling. Ask questions on the presented topics. Ask them to share their experiences. Have a few provocative questions in your bag of tricks to initiate questions. If you get no response initially, do not be afraid to ask again in a different manner. If interaction keeps failing, start leading them through the material. Another option would be to give away collateral (e.g., pens, mouse pads, etc.) for participation, or throw candy for right answers. Show excitement/enthusiasm for the topics being presented. This will become easier as you become more and more comfortable with the process and the course material.

3.2 Handling Questions

Take the time to listen to questions before answering. Never ridicule a question, not even in a joking fashion. Make sure that you understand the question fully before answering the question, but be aware that you do not ask for more specificity than the student can give, because this might make him/her look bad in front of the other participants. After all, there is no harm in giving an answer that is broader in scope than the question.

At the same time, do not be afraid to delay answering questions to a more appropriate section of the course. Or, provide a short answer, and then refer to the section where you are going to answer that question in more detail. Prevent endless sidetracking. The instructor needs to maintain focus and control of the class without hindering the exchange of information and the students' discovery process.

There are likely to be times when student questions arise to which you do not know the answer. You obviously do not want to try to bluff your way through a question—that is never a successful approach. The best way to handle these questions is to acknowledge that you do not know the (complete) answer, defer the question, find the answer, and report back to the class. The approach would be as follows:

- Fully explore the question so that you clearly understand what is being asked.

- Make a note of the question, mental or otherwise. Preferably note the question on a flip chart or white board, which tends to fully address the question in the students' minds for that moment and is therefore less likely to be a continuing distraction as you continue with the material.
- Try to find the answer in the manual, try it out on the computer, or have people available (other trainers/experts) whom you can call who will give you answers and/or references to the question.
- Report your findings back to the class.

The value of this approach is that it shows your commitment to the class, builds your credibility, and shows that your organization has the resources you can draw upon for help.

3.3 Good Class Etiquette

A part of good class etiquette that is often not recognized is finding the right level of interaction between you and the participants. You will have to find that narrow range between being considered too formal and too informal. The only way to find this level is by trying to read your participants. When in doubt, err towards the conservative side and act more formally than you might have to.

Your presence as a teacher also includes your physical presence, in particular, clothing style. Instructors should choose their own style (in accordance with possible company guidelines) but in general there are two options:

- Formal attire. In all likelihood you will be better dressed than the participants will. The possible disadvantage might be that you are considered overdressed, and this might negatively affect what participants think of you, in particular as to how knowledgeable they presume you are.
- Just one step above. Be dressed more formally than the participants but do not overdo it. The possible disadvantage you might have is misjudging how formal your participants will be dressed and ending up being underdressed.

4. Course Materials

The course material is the main source of information during class. You will have to find a balance between following the course materials and adding your own contributions to the course.

4.1 Follow the Course Material

Teaching technology and changing the way people think and do work is difficult. During the first few deliveries, you should follow the course material closely; new instructors often need (and should) use the slides as a crutch. After delivering the course several times, you can then start to incorporate subtle variances into the material. Some technical material can be quite complex; see how it works before trying different variations.

Chapter 5 lists teaching variations experienced instructors use. This is provided as seeds for your own ideas; incorporate what fits into your teaching style; do not try to just copy what someone else does. Start simple and build up your own style gradually. You can always expand and customize, as you become more comfortable with the course material and the included concepts.

4.2 Instructor vs. Class Focus

It is easy to fall into the trap of covering the material you as an instructor are very comfortable with and highly interested in, while glossing over other material. The instructor should continuously read the students, understand their issues and concerns and learn their work mode and environment. From this understanding, different sections of the course may be emphasized and de-emphasized. Balance your personal biases with student needs. Remember that the students can only digest so much in an 8-hour day and/or a 40-hour week.

4.3 Provide the Framework

"Here we are and why are we doing this?" asks the bewildered class. The course materials may not provide the "glue" that explains why a certain topic is being covered, i.e., how it fits in to the rest of the course and why it is relevant for their future use of the product back at their jobs. This may be left to the instructor to provide. Understanding, and articulating to the class, how all the course sections fit together and why they are being presented in the order in which they are, is very important if the students are going to be able to apply the concepts on real-life projects. Being able to tie it all together effectively comes from understanding the overall process framework, a definite requirement for all instructors. The instructor needs to understand which of the course concepts are important, which ones to stress for each section. The instructor should give an overall picture of where the class is going. As you progress through the course sections, explain how they fit together. Review and preview sections, and review and reiterate important concepts.

There is a lot of material for students to digest during the course day(s). You are of course familiar with the material but they are not. Do not fall in the trap of assuming that what you are talking about is obvious or simple to understand. Even though you may cover all the planned material, continually reinforce the basics and key concepts. Make sure to repeat the basic concepts of the class until the response you get makes you reasonably confident that the class understands these concepts.

4.4 The Course Material is not Standalone

The course material in and of itself is not sufficient for providing a high quality course. Therefore, an instructor who is simply a slide flipper cannot do a credible job delivering the course to meet the quality of course delivery that Rational expects and students need. A qualified instructor:

- Must be able to fill in areas where the course material is weak.
- Must be able to lead a class through lab exercises.
- Must be able to critique, in class, the answers to lab exercises and discuss student solutions and not just present the book answer.
- Should emphasize his/her experience and include lessons learned, real life examples, "war stories", etc.

4.5 The Lab is Part of the Course too!

A typical course consists of a lecture and a lab component. You are responsible for both components! Be present in the lab while the participants are doing the lab exercises to ask questions and engage in discussion. The lab is often a perfect occasion to discuss topics one or a few students asked about during class, but were too specialized to be relevant to a larger portion of the class. Never assume that the students can figure the lab exercises out on their own as the answers are in the back of the book.

The instructor should be careful not to feed the students the answers. Instead, the instructor should ask what they are doing and why they are doing it and then make suggestions to evolve their thinking, or ask the appropriate questions to help them come up with the answer on their own. Focus on evolving their thinking, not telling them what they should do.

It is also very important that the instructor conveys the purpose of the exercise, what key concepts are being exercised, and the deliverables to be produced as a result of the exercise. Point out examples of, or produce examples of, what is to be produced. The instructor can always refer to slides in the course section for examples of what is to be. Remember that the exercises are where the students learn to apply the concepts they just learned in the associated course presentation. Thus, if you emphasized some key concepts during the course presentation, you want to concentrate on those same concepts in the exercise.

4.6 Review the Material

It is a good idea to have a review at the end of each day. Quiz the students—"What did we learn today?" Have a list of things you wish to re-emphasize. Alternatively, or in addition, review the material each morning. Discuss what they have learned. (Since the beginning of the week in some cases!) Quiz the students and use the opportunity to re-emphasize the points you believe are important. This is a good way to get things kicked off in the morning and get the students interacting and thinking. Or, you may want to do a short/quick review after lunch and after each break or before starting each new section in the material, especially if lunch or a break interrupts a single module.

4.7 Bring Your Own Materials

Bring in copies of relevant and recent articles (if you have copyright permissions) or references to good articles on the technology being taught. In addition, you can create your own documents to highlight and/or summarize portions of the course that you believe deserve more attention than given in the workbook. Alternatively, you can provide this additional information on the whiteboard or orally. Adding your personal touches is much appreciated by the participants and takes away the feeling that they might just as well have read the workbook alone at home. Also, point them to the Rational Web page (www.rational.com)—there are several technical articles and case studies that the students may find helpful.

4.8 Problems with the Course Material

It is all right to have concerns with some of the concepts in the training material. The process/technique/product is not flawless. However, these need to be resolved with the Product Manager of the course (and with yourself, for that matter), prior to the start of the course, not while you are in front of the students. They need to know that you understand, can apply, and actually believe in, the process/techniques you are instructing.

Occasionally, there may be some inconsistencies with the course material. Though the course developers strive to eliminate most of, if not all, of these, it is unrealistic to think they will never occur. Your handling of such problems is key to how the students perceive the quality of the course, as well as the course material. Do not openly criticize the course material. Take note of the students (and your) comments and forward the comments to the Product Manager. Also see the Course Feedback section.

4.9 Demo the Tool?

To demo or not to demo? The course materials do not assume that you will be demoing the product. However, this doesn't mean training cannot be enhanced by a well-timed demo. Do what's best for you and your students. If it is causing a major delay to get equipment set up for a demo, then skip it. If you are having a hard time explaining how the tool functions in a particular situation, then sometimes demonstrating is easier. However, if you don't have any of the setup done it may just take too long. If you are prepared, and it works, go for it. But remember that the course materials tend to take all the allotted time so make sure you have taken that under consideration.

5. Teaching Techniques

"If to do were as easy as to know what were good to do, chapels had been churches, and poor men's cottages princes' palaces. It is a good divine that follows his own instructions; I can easier teach twenty what were good to be done, than be one of the twenty to follow mine own teaching." "The Merchant of Venice", Act II, Scene 1, William Shakespeare

5.1 Cookbook Approach

An effective way to teach a technology is to give the class a simple recipe for what they must do. The class often needs this and sometimes asks for it. While teaching the course material, you can record the steps on an easel page as they are being introduced and taught in the material. The result is, in the midst of the second day, you have an easel page with a set of bullets on it. With this on an easel page hanging in the room, it serves as a good reference throughout the course, a refresher to them regarding what they should be doing during their exercises, as well as a good review form.

Emphasize and re-emphasize that, in reality, the process is rarely as sequential and straightforward as taught in the course. Simply serialize it here to put a stake in the ground and give the students an example to learn from—in reality all this will be meshed together and happening in some fashion concurrently.

5.2 The Parking Lot

According to this metaphor, "You're parking your car here and leaving it for a while but we'll come back to it." While you are going through the chapters, participants will undoubtedly raise issues that you cannot discuss right away. Emphasize what topic you are going to discuss and what you will leave until later, and why. As you are doing this, so you don't loose sight of the items that have been raised, you might want to create a "parking lot" list. On the "parking lot" list, write down all the things you need to discuss but haven't so far.

5.3 Monologue vs. Dialogue

There are two ways of presenting the slides. Either you can discuss them—a monologue—or you can have the students describe the slides with you - the dialogue. You can apply either style independent from whether or not you engage the students by inviting questions. The dialogue style is more interactive and therefore considered more attractive, but it assumes that the participants are at least

somewhat familiar with the content of the slides. For completely new topics you will have to rely mostly on the monologue style. For summaries of earlier topics contained in a later chapter, or in more advanced courses you will have more opportunities to apply the dialogue style.

5.4 Refer Back to Their Everyday Experience

Take time during the course to understand what type of work the class is going to be applying this to. Where possible probe what they are doing and how they imagine they will be able to apply this. Draw upon your experiences on how they can apply this as well. Keep it very focused and pragmatic on how it can help them.

6. Stereotypical Students and Teams

The following sections describe stereotypical students and teams that instructors may find in this course, along with ways of dealing with each type of student. Keep in mind that these descriptions are abstractions. No single person will ever fit the stereotype completely. Be aware never to reduce your participant to a stereotype.

6.1 Ideal Student

The ideal student has several basic characteristics:

- They have been involved in software development for many years. From this real world development experience they have seen what works and what does not work.
- They come to class with the belief there is something for them to learn that will be of benefit to them.
- They try to apply the concepts discussed in class to their past and current experiences. They share their experiences freely with the class.

Of course this type of student is simply perfect. Keep in mind though that the extent to which this student is willing to share his/her views has everything to do with the extent to which you have created an atmosphere that allows this to happen.

6.2 Guru Wannabe

This type of student may come to class prone to pursue some of the more esoteric topics in class and would like to engage the instructor in their debate. Very often, the subjects they bring up are not related to the current material. Most often, these topics and discussions do not add value to the class because they are usually not relevant to the main points being taught. It's simply not mainstream information and the class needs to focus on the fundamental principles, not the esoteric tangents. The following is a list of techniques that can be used to manage this type of student:

- You may flatter the student somewhat by telling them they may have more knowledge than the average student, and that you try to remain pragmatic in class and don't wish to spend much time on questions that veer too far off subject.

- An initial response is to give a minimal answer and "deflect" the question. For example, "I know people trade-off X and Y and we can discuss it more off-line during a break if you would like explore it in more detail."
- You can spend time with them during the break and/or exercise answering their question as best you can.
- You can suggest that if they wish to engage in more debate and gain additional understanding about the topic, that they can post the question to a user mailing list, if such a list exists for your product. This allows them to get more detail from various other knowledgeable people.
- Enlisting specific advice or input (just one or two times) from this type of student will often diminish their need to be heard. Make sure to ask specific well-directed questions so as not to allow them to take off on a tangent. Most students who fall into this category have a need to have there experience recognized, and once that happens will often back off and become your friend.
- Most important…don't be afraid to defer the question to the relevant time in the class, even if that is another class!

6.3 Technology Expert

The technology expert is similar to the guru wannabe but his or her tone tends to be more aggressive. This is a student who already believes that he or she is an expert in the tool being taught. They have read all the documentation, listened to other people's experience with the tool, possibly have even applied it to a significant application. They are often characterized by some self-promotion—when they ask a question, it's more like a long-winded statement of what they know or what they have read—and, at times, by answering in class the questions of other students. Sometimes they will openly disagree with you on a topic. A favorite pastime seems to be inventing questions about the product's behavior under the rarest circumstances. In some cases, this student may not grasp how much they don't know yet. In other cases, the technology expert has been using the tool in many real applications and really does know all the answers:

- Handle this student similar to the Guru Wannabe. Take questions that are tangents off-line. Clearly explain questions on the fundamental concepts to the whole class.
- Try to ignore aggressive and possibly insulting behavior towards you. As an instructor you should never react in a similarly aggressive manner, because you have a special role and are different from the participants. Do address their behavior—if possible off-line—if it starts interfering with the learning process of other participants. Often you will find the other participants supporting you at this time.

6.4 Implementer

"But how does it work?" This student is characterized by continually thinking of how the tool functionality is implemented. The instructor's task is helping the student focus on the objectives of the course. If they are in an introductory course, they should be focusing on how to use the tool, not how the tool does what it does.

6.5 Wall Flower

This student does not cause trouble but also may not be learning anything:

- Don't just let this person slide through—the instructor has the responsibility of trying to engage everyone in the class.
- Make sure that during the exercises this person is actively participating, and try to get participation during the class as well. However, be careful about "forcing" participation (e.g., calling on someone directly to answer a question). In some cultures, this may appear confrontational, or cause embarrassment if they cannot answer the question.

6.6 Sleeper

What should you do with a student that falls asleep? For occasional sleepers, as long as it doesn't hinder the other students, you do not have to take any action. For chronic sleepers, you might want to inquire off-line why they are attending the course to begin with. In that situation the participant often turns out to be a student of the next category.

6.7 Predisposed to Other Technology

This student doesn't believe the technology being taught will bring all the benefits it claims and that there is another way that works just fine (the other way may be the way they have been doing it forever or another new technology). In most cases, they are not attending voluntarily but were forced by their company to attend. At a minimum, the instructor needs to keep this type of student from being disruptive to the class, and ideally the instructor can move the student from being hostile to the technology to just being neutral/accepting of the technology.

6.8 Talker

Some participants have an urgent need to talk. As long as their whispering does not distract you or the other participants, you do not need to take any action. However, when they talk at a level that clearly distracts you and/or others, you will need to address it. There are various approaches, ranging from fairly passive, like waiting and staring at the offender, to making an appropriate joke, to asking them whether they had a question you can help answer. Take an approach that fits your presentation style. Also, try to prevent this situation from arising by inviting student participation at specific times during the lecture. For many people it is simply impossible to sit and listen for 30 minutes straight or longer.

6.9 Absentee Participant

A participant might stay away during significant parts of the course, either for valid or what you consider to be invalid reasons. In principle this does not have to be a problem but the participant might get lost because they missed important topics, and might even disrupt the class by asking questions that were explicitly dealt with earlier. If you find that these questions seem obvious for the other participants, you can decide to either take it off-line or indicate that it was discussed at an earlier point. Whether or not you want to do private tutoring during the break is fully up to your discretion.

The absentee participant might be a member of a lab team, or he might be absent only during the lab portion of the course. If his absence creates conflict, either during his absence or later on during his renewed presence, you may follow this path:

- Talk with the "absentee" member individually, understand what his other priorities are and explain the importance of the lab exercises to understand the course material. This gives him

sufficient information to fully evaluate the impact of what he will miss and then prioritize this with his other activities.

- If redundant questions are asked, have the rest of the participants attempt to answer the question. It is not only often a fun way having handling the situation and reduces the stress created by simply putting someone off, but is an excellent opportunity for review.
- If the student still feels he cannot participate with the exercises—explain that he needs to work with the other member(s) of the team. If he is not going to be available, the other person/people may choose to work alone (and not update the "absentee" on every step of the progress), or may choose to work with another partner. The absentee person should not obstruct the progress of any team.
- You can designate a particular team for the "absentee" person to "proctor," or watch, if he is around for some of the exercises.

6.10 Conflict Team

In a conflict team the people cannot agree on how to do things. Focus them on the fact that there is limited time and that they have to get something done to progress to the next section. Maybe they should just follow the answers in the back of the book. If all else fails, see whether you can reshuffle teams.

6.11 Dictator Team

The ball-hog team has one team member who is overbearing, doing most of the work, thinks he has the right answer, is not encouraging or listening to feedback from the other team members. The instructor can help this team in a couple ways.

- The instructions given should explicitly state that everyone must actively participate in the team exercise.
- While the instructor is working with the team, the instructor can ask questions of the quieter members of the team. Make sure the quiet team member takes the opportunity to answer; focus your attention on this team member instead of on the dominant student.
- Help the team explore alternative ideas. Either you can throw out an idea and get everyone to talk about it, or if the dominant team member is shutting out others' ideas, you can take the time to methodically explore the tradeoffs surrounding the idea instead of letting it just get shut down.

6.12 Fall-Behind Team

The fall-behind team is a team not doing well on the exercises—they're just not quite getting it. Use the grade school teacher philosophy—if you lower your expectations for them, they will work to those lowered expectations. Don't let them off the hook; they will have to finish the module in order to make the next module work. Guide them in getting through the lab, but don't give them the answers. Again, don't let them drag down the class. Refer them to the answers in the back of the book if it's the only way to get them on track.

7. Logistical Issues

The following sections describe the logistics that the instructor needs to consider before showing up to deliver a course, and administrative issues during and after the course.

7.1 Course Material

Make sure the course material is ordered (student notes, books, quick reference cards, instructor's manual, transparencies, etc.), and that you have an electronic copy of the course slides if you are not going to use a soft copy (transparencies). At least a week before the first day of class, make sure that the course material has been received at the training site.

7.2 Room Requirements

Talk with the training coordinator to ensure that a room has been reserved and that the room will be set up properly and have the supplies you need. You should make sure there is a way to project slides (either transparencies and a projector or a PC and a projection device). Make sure that the room is large enough for the number of students that is expected.

7.3 Class Roster

Try to get a class roster a few days before the class. Talk to your point-of-contact to see if you can get a feel for the level of experience of the course attendees, as well as what their roles are within their organization. You may want to call one or two of the students before an on-site class just to talk with them about the course, what you plan to be delivering, what they are expecting, and how it applies to what they are currently working on. It is often valuable to talk with a student or two before you get to class.

7.4 Computer Requirements

Make sure there are sufficient computers in the room for the students to do the exercises. Make sure the computers meet the hardware requirements (memory, disk space, etc.) necessary. Even though a lot of people complain about it, one computer for two users is ideal. It gives them a chance to throw ideas back and forth and explore things they may not have thought of on their own.

7.5 Software Requirements

Make sure they have the correct version of the product installed on the training machines and it is working properly. If relevant, make sure they have sufficient licenses and the correct copy of the lab exercise files installed. Start calling your contact a week before the class to make sure this is done. If they start the night before the class, there will inevitably be problems that will delay your class.

7.6 Taking on Extra Students

Sometimes you will be asked to take on more students than expected. Base your decision on whether the room and computer facilities are sufficient to seat extra people. Do not put more than two people on a computer or overfill your lecture room because this will negatively affect all students in the class. In case of company-internal people, you could opt to allow them to attend the lecture but not allow them in the lab, having them seek other ways to do these lab exercises on their own. Of course, this is never an option for paying customers.

7.7 When and Where

When setting up the class with the training coordinator, there are a few things to remember to ask about:

- What time are the students expecting to start? You will typically want to get on-site an hour early on the first day to ensure everything is set up properly and to deal with any last minute oversights.
- Get directions to the facility.
- Get a contact for once you get on-site, in case you have trouble getting in the facility.
- If you are traveling, ask for a reference to nearby hotels.
- If you need a badge to get into the facility, ask for an unescorted badge to be ready for you.
- Ask what the dress code is for the class—so you can determine if you should be business casual or more formal.

7.8 Sign-Up Sheets, Certificates, Evaluations

Make sure that you take care of administrative issues during the course. Use sign-up sheets to verify who actually attended the course and to generate the names for the course certificates that you hand out at the end of the course. Also, do not forget to ask the participants to fill in evaluation forms. You usually ensure a higher rate of return by pointing out the evaluation forms at the beginning and the end of the course, rather than only at the end of the course.

7.9 Course Feedback

Send all course evaluation forms to the course product manager. See Rational University's home page on the Rational Web site for contact information (www.rational.com). The course product manager is committed to continually improving the quality of this course, so please contact the product manager with any comments, questions, corrections and/or concerns on the course materials. The product manager is also interested in any additional examples, exercises, or any other material that you use or develop to support the existing course material. Over time, such information will be gathered and made available to other instructors.

7.10 Sample Checklist

Below is a handy checklist with items you want to verify prior to starting a class. Do these checks well in advance to allow ample time for the training coordinator to correct the situation.

	Preparation Item
	Start/end times established
	Training room reserved
	Projection equipment reserved (electronic projection device or overhead projector)
	Student course materials ordered
	Instructor course materials ordered, if needed
	Soft-copy of slides available or transparencies ordered
	Hardware available and set up in training room
	Software installed on machines in training room (test to make sure software runs on each machine)
	Easel pads and/or white boards set up in training room
	Misc. materials (e.g., pens, masking tape, etc.) set up in training room
	Catering arranged
	Course materials received at the training site

7.11 Instructor's Post Mortem Form

Use this form when a course is about to be revised, or at any point when you want to provide detailed comments to the product manager.

Instructor Name.
Instructor's Company.
Course Name.
Version.
Customer.
Dates Taught.
Number of Students.
Rational Products used in the course (e.g., RUP, Rose).
Class Evaluation Summary. At minimum, provide the average of each question across all students and the overall average across all students and questions. Include any specific comments from the students that you feel are relevant.
Departures from the standard offering. Attach here any charts you added or additional examples you brought on your own.

Problem Areas. Mention any general problems with logistics, with the materials themselves (e.g., some copies had lessons out of order) or with the course content (e.g., not enough or too much material to cover in the time allotted).
Change Requests. Include typos you found, any errors in the materials, areas you think are weak, areas not adequately covered, additional topics to be covered, things you want deleted. Attach a separate sheet if necessary.
The Best Part. Mention at least one thing that you liked in the course. E.g., the students really liked the third exercise.
General Comments.