

# **Be Brief. Be Bright. Be Gone. Design Document Computer-Based Instruction**

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*Distribute to all BBG ID team members and to Client  
Related documents: BBG Project Plan, BBG book*

*Changes to the BBG project scope and to training information outlined in this design document must be requested in writing to Project Manager (PM) and approved by PM and Client.*

## **Course Goals**

The “Be Brief Be Bright Be Gone” training package offers the Pros and cons of a career in pharmaceutical sales. Lesson content includes surviving the training process, organizing your office, car, and time, providing an overview of your key customers—physicians and hospitals, selling skills and basic etiquette, Profiling of “standard” and “30-second” sales calls, using sales aids, dealing with managed care, and jump-starting a pharmaceutical sales career.

## **Learner Characteristics**

See Appendix A for Learner Analysis information excerpted from the “Be Brief. Be Bright. Be Gone” Project Plan.

## **Description of Instructional Materials**

The CBI is designed for an approximately 2 hour implementation. Students participating in this CBI will work independently. The delivery method for content will be computer-based (either via an intranet or CD-Rom). Students are required to read the text prior to beginning work in the computer-based module, which will allow for a more condensed presentation of content material.

## **Performance Objectives**

Upon completion of the course, the learner will be able to:

1. Summarize “need to know” job basics for getting started with the company
2. Organize his/her home office, car, and time to ensure maximum productivity from day one
3. Describe customers and their basic needs regarding pharmaceutical product information.
4. Identify the basic selling skills required for healthcare sales professionals
5. Demonstrate essential communication skills required for pharmaceutical sales success
6. Outline the general steps of a sales call
7. Explain how sales aids and support materials contribute to successful sales presentations

## **Training Package**

- The complete training package will include the actual CBI to be delivered via the internet, intranet, or CD-Rom (at the discretion of the client), detailed directions explaining exactly how to access the CBI, and a copy of the Be Brief. Be Good. Be Gone text with a personalized greeting from the client’s

CEO. In addition a pre-workshop worksheet will be provided to get the newly hired representative thinking about the content.

## **Instructional Strategies**

### **Instructional Systems Design**

This training was designed using an instructional systems design (ISD) approach which provides a clear, systematic approach to the design of instruction. ISD is used to solve performance problems. This process provided us with a clear, systematic approach to the design of instruction. Since the instructor-led workshop has already been analyzed and designed, the learner information will be the same for this CBI. The content gathered during the analysis and design phases will directly inform the content being delivered in this CBI. After the first two phases are completed the third phase is called development. In this section learner activities are listed, a delivery system is selected (in this case computer based), the instruction is developed, synthesized, and validated. The fourth stage, entitled implementation, is when the training is actually delivered. Finally phase five is where evaluation takes place to ensure that the training was successful.

Conceptual and rule-based topics have been identified, requiring specific sequencing, presentation of material, guidance, and performance expectations. Conceptual material (e.g. selling skills) will be presented using recall of prior knowledge, providing examples and non-examples, learner support and guidance, and the classification of examples by students. Material identified as rules will be presented by using recall of prior conceptual knowledge, demonstrations, learner support and guidance, and the application of knowledge through role-playing.

### **Sequencing of Instruction**

The instructional material will be chunked into five separate modules in an attempt to place related content near each other. These modules will be delivered in the following order: Getting Started, Getting Organized, Meet Your Customers, Selling Basics, and The Sales Call.

### **A Cognitive Theory for Multimedia Learning**

Richard Mayer, an educational psychologist, has one theory and one model which will provide the underpinning for this CBI. His theory is called: "A Cognitive Theory of Multimedia Learning" and states that humans contain separate information processing channels for visually represented materials and auditorily-represented material. Following this assumption, when information is presented to the eyes (pictures, animations, etc.) humans begin by processing that information in the visual channel. When information is presented to the ears (narration, sound effects, etc.) that information is processed in the auditory channel.

To help interpret and apply his theory of multimedia learning, Mayer has developed a number of principles which help guide practitioners in the field of instructional design. The following chart lists these principles and includes a brief description and rationale. The chart below is a section which describes how these principles are applied to this CBI.

<b>Mayer's Principles of Multimedia Learning</b>	
<b>The Multimedia Principle</b>	Using text and graphics instead of text alone greatly increases learning. Multimedia presentations encourage the learner to engage in active learning by helping them to visualize the material.
<b>The Contiguity Principle</b>	Place corresponding text and graphics near each other. By integrating corresponding graphics with text, the learner does not have to search to find the relationship, thus allowing the learner to focus on understanding the material.
<b>The Modality Principle</b>	Words delivered in narration as opposed to text have been shown to greatly improve learning. This is true because our brains have only two channels (visual and auditory), text and visuals are both processed by the visual channel, so using only text and graphics can easily overload our cognitive capacities. Using narration combined with graphics greatly reduces the cognitive load on the brain because each channel is only processing one type of information.
<b>The Redundancy Principle</b>	Graphics explained by audio alone rather than graphics explained by audio and redundant onscreen text gets better learning results. Many people believe incorrectly that by duplicating text and narration they are addressing both visual and auditory learners when they are in fact increasing cognitive load.
<b>The Coherence Principle</b>	Adding interesting material can hurt learning. Adding interesting but unnecessary material can detract from the learning process in several ways: <ul style="list-style-type: none"> <li>• <b>direction:</b> emphasizing extraneous information often causes the learner to focus their limited attention on that information instead of relevant information</li> <li>• <b>disruption:</b> by preventing the learner from building appropriate links among pieces of relevant material because pieces of irrelevant material are in the way</li> <li>• <b>seduction:</b> by priming inappropriate existing knowledge that is used for organizing the incoming material</li> </ul>
<b>The Personalization Principle</b>	Text and narration written in a conversational style greatly improves learning because it encourages the learner to become more engaged with the computer.

### **Multimedia Principle**

Throughout this CBI graphics will be integrated into the text as much as possible. For instance, instead of simply describing the organizational structure of a typical pharmaceutical company, this CBI will convey this information with the assistance of a interactive, flash-based graphic which better facilitates learning through Mayer's Multimedia Principle.

### **Contiguity Principle**

In this CBI graphics and text will appear on the same screen with no scrolling to see one or the other. To this end necessary feedback will appear on the same screen in which the exercise occurs and directions will be placed on the same page as the application page where the directions are to be followed.

## **Modality Principle**

This CBI will utilize voice over narration with graphics to help reduce cognitive load. Instead of using text to describe the organizational structure graphic, voice over narration will be used instead of text to better facilitate learning and prevent cognitive overload.

## **Redundancy Principle**

Throughout this CBI the narration will be used to augment (not repeat) any text which may appear on screen.

## **Coherence Principle**

Background music will be limited to the opening and closing screens and all graphics and video will be relevant to the course objectives. Text and narration will be kept brief and limited to relevant content.

## **Personalization Principle**

Text and narration will be written in the first and second person constructions in a conversant, informal style.

## **Designing Instruction for Constructivist Learning**

Mayer's model is called: "Designing Instruction for Constructivist Learning." This model is meant to foster learning of information presented to the learners through the SOI model. The "S" or "selecting" information is the process of learners actively trying to focus on the important material, which they are studying. "O" or "organizing" information is when the learners coordinate the information to understand it. "I" or "integrating" is when learners integrate the new information in with their current knowledge and transfer the new knowledge into long-term memory for application in future situations. The SOI theory was developed to describe how learners are believed to process newly learned information. The students have the time to think about the new information so it can be processed and they take an active role in the selection, organizing and integration of the new information. Therefore, students must learn the information in order to complete the goals of the lesson. This model describes the steps a learner must take to retain information and achieve the desired learning outcome.

There are a number of ways in which these five steps will inform the delivery of content in the CBI.

**It is important to make it easy for the learner to select the most important information with little effort.**

This will be accomplished in this CBI through the use of:

- effective screen design
- various font sizes
- the bolding of font
- text which slowly reveals itself just in time
- clearly stated course objectives
- text and image color and transparency
- arrows
- voice over narration

**It is very difficult for working memory to hold even small amounts of information and process effectively at the same time. The burden often imposed on working memory in the form of information that must be held plus information that must be processed is called cognitive load.**

This CBI will attempt to reduce the cognitive load by:

- minimizing irrelevant visuals
- omitting background music
- using succinct verbiage and text

**Working memory integrates the words and pictures in a lesson into a unified structure and further integrates these ideas with existing knowledge in long-term memory. The integration of words and pictures is made easier by lessons that present the verbal and visual information together rather than separated.**

The sequencing will begin with an introduction and overview of the book, followed by a brief statement of lesson goals and objectives, and an explanation of material to be covered. Next, the learners will be presented with the lesson/content material. During the lesson, the instructor will provide guidance to the learners by asking prompting questions about the chapter and asking the learners to reflect on previous relevant experiences. At appropriate intervals during the content presentation, learners will form pairs to participate in role-playing scenarios to assess their retention of the material.

## **Case-Based Scenarios**

Roger Schank's "Designing Instruction for Case-Based Scenarios" will be utilized in this CBI primarily with the role-plays. This model does an excellent job of addressing many of the drawbacks of the previous paradigm. Motivation is truly at the heart of this model. Instead of learning random facts in a decontextualized context, Schank suggests using authentic, scenarios which the learners will be facing on a regular basis once they complete the training. This model emphasizes why someone needs to know this information and immediately asks them to apply this knowledge. This model tailors itself to multimedia, online learning which is not easy to do and encourages project-based learning.

Case-based reasoning (CBR) plays a major role in how this model works. CBR is a "theory of how we remember and how we use memories in order to solve new problems" (Reigeluth 166). This is the basis for how this whole model works. Schank argues that CBR is the way people become experts and how most experts reason. An expert is defined as a person with a lot of experiences upon which to retrieve. They can solve problems quickly by simply remembering previous experiences or problems and applying those solutions to the current problem or issue (166). The theory of CBR is the foundation assumption for this whole model.

There are three additional basic assumptions which are crucial to this model:

1. Experience can be transferred from one situation to the next using stories
2. You must initially fail before learning will occur
3. Motivation is imperative for higher level learning to occur.

Because it is assumed that experience can be transferred using narratives, stories are a major part of this model. Stories are incorporated throughout this model but first occur in the cover story. The cover story is used to set the stage for the whole model. The cover story should be authentic and produce a real world problem that is dynamic and interesting. Stories are often also incorporated in the resources section where experts are called upon to tell stories to the learner in order to advance the experiences upon which the learner can draw.

The assumption that one must initially fail before succeeding is called expectation failure. For example, the learner expects to be able to competently, and effectively deliver a sales call but when they call on a doctor for the first time, the doctor is unresponsive and refuses to prescribe the representative's product, an expectation failure has occurred. The learner expected one thing and something else happened. Because the learner does not want to let down themselves or their district manager, they push themselves to review the process and figure out what went wrong. Schank believes this process is necessary for learning to occur.

Schank suggests using real world, authentic scenarios and engaging topics while writing the cover story and role-playing. He writes that too often young instructional designers choose an interesting topic but choose activities within that topic which are dull. The key to motivation and in turn higher learning is real world and authentic, learning scenarios.

To apply this model to the self-instructional module, we have defined the seven essential components of goal-based instruction as it relates to this module.

## **Learning Goals**

*The learning goals are divided into process knowledge and content knowledge. "Process knowledge is the knowledge of how to practice skills, while content knowledge is the information that achievement of a goal requires"(173).*

**Process Knowledge:** The purpose of this module is to teach new pharmaceutical sales representatives how to successfully deliver a sales call.

**Content Knowledge:** Through this module new pharmaceutical sales representatives will learn how to plan a sales call, open the sales call, deliver a feature/benefit presentation, field questions/objections, close the sales call, and perform a post-call analysis.

## **Mission**

*It is important to find a mission that is motivational for the learner to pursue.*

The mission is for the new pharmaceutical sales representative is to recognize appropriate strategies for use in successful sales calls.

## **Cover Story**

*The cover story is the background that creates the need for the mission to be accomplished.*

You are a pharmaceutical sales representative on your first week in the field. As part of your training you are watching taped sales calls to see what was done well and what could be improved.

## **Role**

The learner's role is to analyze the sales strategies and steps involved in a sales call as exhibited the video.

## **Scenario Operations**

*Scenario Operations are all of the activities the learner completes on the way towards the goal.*

The learner should recognize pre-call planning, an opener, a feature/benefit presentation, opportunities for questions/objections, a close, and post-call analysis.

## **Resources**

*Resources are what provide the information which allows the users to meet the goal or mission.*

Learners will have access to the CBI up to this point to review as well as the text which comes with the course as well as any prior knowledge in sales.

## **Feedback**

*Feedback in Learn by Doing should be given only when necessary or to use Shank's terminology, "just in time."*

When an incorrect answer is selected the learner will immediately be told so and will be given one opportunity to select the correct answer, which will then be graded. At the completion of the module the learner will take a post-test and receive a score screen which states exactly how well they did. This score will then be sent to their supervisor.

## **Summary of Theoretical Underpinning**

In summary, this CBI will use the theories of Richard E. Mayer and Roger Schank to ensure learner engagement and learning. Mayer's theories will inform the screen design, delivery, and choice of media to be included, while Schank's Learn By Doing theory will be used to guide the role-play scenarios.

Adult learner's have a number of specific learning needs. Only relevant "need-to-know" information will be presented in this CBI. All extraneous data has been removed to reduce cognitive load and facilitate learning. At the beginning of the CBI a screen will clearly state the learning objectives to assist the adult learner will selecting relevant information as in Mayer's SOI model. Adult learner motivation will also be addressed using the Schank's Learn by Doing theory to produce authentic, case-based scenarios. To further facilitate learning, learners will be encouraged to apply prior sales experiences to a pharmaceutical sales call. Last but not least, learners will be given positive feedback to encourage learning in this CBI.

### System Requirements for Computer-Based Instruction:

- Processor: Celeron or Pentium (450MHZ or better)
- RAM: 240MB or better Hard Drive: at least 2GB free space
- Video card and sound card
- Macromedia Shockwave Viewer
- CD-ROM player with speakers or headphones
- Windows Media Player
- High speed internet connection

## ***Summary of Media and Materials***

<b>Media and Materials</b>	<b>Use</b>
<b>Multimedia Computer</b>	
	To develop and compile the CBI
Macromedia Fireworks	
	To develop CBI background
Adobe Photoshop	
	To edit the pictures
Macromedia Captivate	
	To develop and design the screen design
Microsoft Word	
	To design screen storyboards

***Note: Media and material selections are subject to adjustment based on needs of deliverables***

## **Methods of Evaluation**

### ***Evaluation Procedures***

Ongoing evaluation is the key to producing a quality product. Following the agreed upon blueprint and making deliberate decisions about instructional factors will produce a quality first draft reducing the need for extensive revisions.

### ***Formative Evaluation***

This phase will target specific design and development components of the instructional material and will include, in writing, the revisions required. This type of evaluation will help set a standard of expectations for designers and sponsors to work from. The components evaluated include:

- Subject matter
- Alignment of instructional strategies with objectives
- Affective considerations
- Pedagogy
- Supplementary materials

Computer-based materials will be formatively evaluated individually and in small groups consisting of learners representing the target audience.

### ***Validating the Instructional Package***

This will be the final process of evaluation and is to be done after all development and revisions are completed. The recommendations will be used to determine the effectiveness of the instruction. The evaluation process recommended is commonly referred to as a summative evaluation and will follow the evaluation model developed by Donald Kirkpatrick (1996). The formal process is divided into four steps to include:

- Level-1: Assessing reaction and attitude
- Level-2: Assessing learning



- Level-3: Assessing behavior change in the intended environment
- Level-4: Assessing results and return on investment (ROI)

The first level is used to evaluate the reaction of the learners to the training. The second level is used to assess whether the learners actually learned the content of the training. The third level determines whether the training has had any impact on the learner's behavior and performance. The final level determines whether training achieved the intended outcome and results hoped for.

## Reference

Reigeluth, C.M. (Ed.). (1999). *Instructional-design theories and models: A new paradigm of Instructional Theory*. Mahwah, NJ: Lawrence Erlbaum Associates.

## **Appendix A – Learner Information**

### ***Learner's Previous Knowledge and Skills***

Research indicates there is not one, singular profile of a pharmaceutical sales representative. However, certain education and experience can be expected in this field. Generally, a representative has obtained at minimum a bachelor's degree, with some companies preferring an MBA. Although the undergraduate area of study is not required to have been science-related, an aptitude for and positive attitude towards science is preferred.

When hiring, some companies weigh heavily any previous sales or healthcare industry experience. Clinical skills alone, however, are not considered for employment. Preferred experiences new sales representatives bring with them could include a proven record of accomplishment for being part of a team, being results oriented (perhaps as a coach or teacher), other sales experience including retail, fundraising, or inside sales. Basic technology skills are expected (e.g. familiarity with e-mail and Internet). Because pharmaceutical sales representatives essentially run his/her own business, any previous experience or complimentary skills will be a benefit.

### ***Motivation, Attitude, and Expectation***

Pharmaceutical sales representatives can be expected to have many characteristics in common:

- Confidence
- Positive attitude
- Tactful, diplomatic in approach
- Self-motivated
- Self-starter
- Good at follow-up
- Possess time management skills
- Strong work ethic
- Good written and verbal skills
- Can handle rejection

Based on these characteristics, it is assumed that newly hired pharmaceutical sales representatives are self-driven and motivated to do well. They will be attentive and receptive to new material presented to them during both new-hire orientations, as well as during refresher or follow-up training. The material is relevant to their success in their new position, which will contribute to the overall motivation of the individual and the group. The confidence of the newly hired representative should be attended to during training. Although personal characteristics indicate a higher self-confidence, that could be somewhat diminished during the initial training cycle.