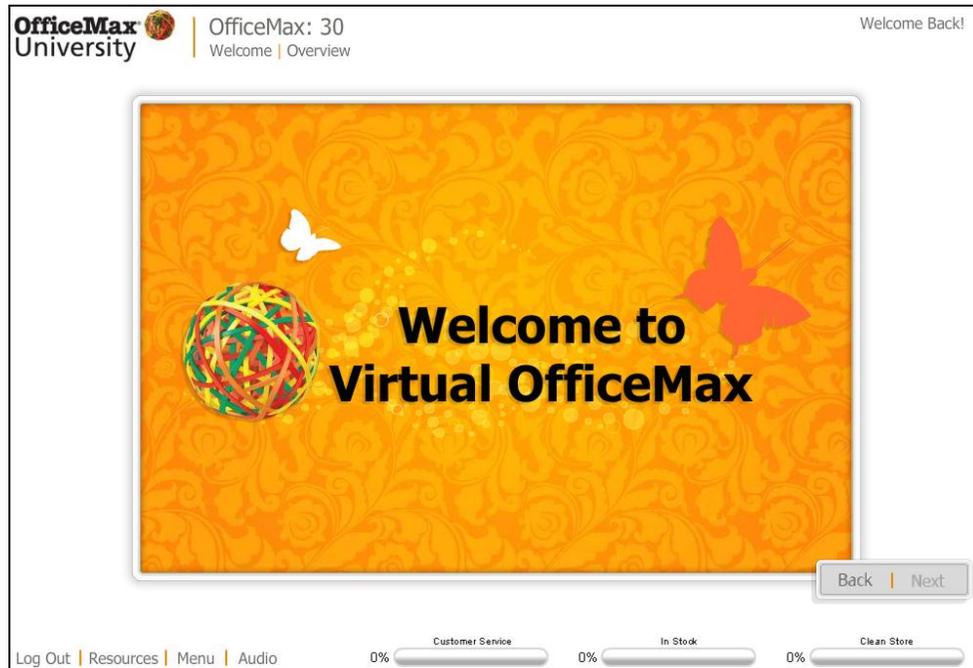


Lesson 7 – Final Report

Mark Rash

markrash@vt.edu

April 14, 2010



A. Desired Outcomes

- A1.** Program Objectives (with respect to the Customer Service measurement only):
- Recognize customer expectations for behavior, environment, and level of engagement
 - Apply company service standards for customers
 - Apply basic product knowledge to customer service scenarios
- A2. Rewritten Objective:** Given a detailed description of a retail store customer interaction, store associates will be able to identify the correct response(s) or action(s) such that the customer service level reaches at least 95% favorable. [Intellectual Skills]

B. General Product Description

- B1.** Title: Virtual OfficeMax – 30-Day Edition

- B2.** Designed & Developed by Noggin Labs, Brian Schneider, and Jason Goebel
- B3.** The program is intended for use by a single learner using a training computer in an office within a retail store.
- B4.** This is an online instructional program that makes use of text, graphics, animation, audio, and video. In addition to the multimedia content delivery, the program includes activities that the learner must print, complete in the physical store, and turn into her or his manager for evaluation. Several virtual characters act as guides within the program itself and learners are referred to their managers for additional guidance and activities in the actual store.
- B5.** The program is exploration-based and places the learner central in the instructional process. There are predefined milestones scattered throughout the program, but the learner controls the pathway to those milestones in an attempt to bring three metrics (“Customer Service,” “In stock,” and “Clean Store”) to acceptable levels. There are no distinct lessons.
- B6.** The program was designed for newly hired retail store associates within the first 30 days of employment.

C. Instructional Context Description & Evaluation

- C1.** Virtual OfficeMax is a situation exploration in which learners are presented with a dynamic, simulated retail store environment and are allowed to freely explore various scenarios within the virtual environment. The program incorporates more than 200 potential scenarios involving customer interactions, incoming merchandise, management interactions, system simulations, and floor duties within the store. Free exploration of these scenarios makes the learning experience meaningful and relevant because these are the same types of scenarios the learners will face in the performance context.

The program also incorporates some gaming elements by keeping the learner’s scores in the three areas of priority. This is done for a few reasons. First, it provides a motivational element of interest and fun. Second, it gets learners familiar with the same three areas of priority by which they will be measured in the performance context. Third, it provides a means of assessing learner performance and providing constant feedback throughout the program experience.

- C2.** The situation exploration context within the program functions as both **instructional** and **transfer**. Throughout the program, learners explore various scenarios within a predefined virtual store environment that is reflective of any typical OfficeMax store environment. The learning contexts serve an instructional function by presenting information directly related to the learning objectives, providing activities for learners to explore and develop new knowledge and skills, giving learners practice and immediate feedback, reviewing the key points, and assessing the learners' performance. The learning contexts serve a transfer function by eliciting performance under new conditions and providing ways for the associate to actively apply newly acquired knowledge and skills in the workplace both during and after using the program.
- C3.** Both the instructional and transfer types serve their functions well. There are more than enough instructional and transfer elements to consider the program to be effective at these functions.
- C4.** The program allows learners to **select topics and tasks that appeal to their curiosity and their need to explore**, which serves to gain the learners' attention. Additionally, the **gaming element and embedded simulations require learner participation**, also serving to maintain the learners' attention. The program establishes relevance by **stating the future usefulness** of success in the course (i.e. success on the job) and by **providing meaningful alternatives for achieving goals** within the program (many scenarios can follow multiple paths based on the learners' responses).

The program starts right off with an attempt to build the learner's confidence by **stating the learner's likelihood of success** in the program and resulting success on the job. Finally, the inclusion of interactions with management provides an opportunity for managers to reinforce the concepts being covered and to provide **praise and attention** to learners who are doing well, contributing to the satisfaction factor.

- C5.** The established contexts closely resemble the performance context, thus requiring no changes. In fact, the learning context expands to include the actual performance context throughout the program as activities must be printed and performed in the actual store. Additionally, the program incorporates several ARCS principles to motivate users. The program experience is so immersive that I found myself working with it for hours.

D. Instructional Components & Conditions Descriptions & Evaluation

D1. Introduction – the program begins with an introduction that provides an overview of the content that will be covered and basic navigational instructions.

Information & Activities – the program includes a variety of information presentation and discovery, as well as activities that are to occur both inside the program itself and in the associate's physical store. The information and activities all appear to be relevant to the purpose of the program. The program also provides information about the three performance metrics that will be measured both in the program and in the performance environment.

Practice & Feedback – numerous opportunities are provided for practice inside the software itself. Users are presented with various scenarios and must respond accordingly, with feedback provided immediately. Some practice involves performing an activity in the store and turning in a handout to the user's manager, who provides feedback and remediation as needed. Feedback is also provided to the user in the form of three progress bars at the bottom of the screen, with one bar representing each performance metric.

Review – the program reviews key points as the user progresses through the material. When a user's metrics drop in a particular area, additional review is provided and materials are revisited in an attempt to help the associate bring the metrics back up.

Assessment – several quizzes are scattered throughout the program and the three progress bars constantly assess the learner's performance in real time based on her/his actions and inactions. A learner is not finished with the program (i.e. has not achieved the objectives) until the three performance indicators achieve a level of 95% or higher. Activities that occur outside the program itself are assessed by the associate's manager.

Transfer – the program involves scenarios that mirror those the associate will experience in the store. Some activities involve performing actual functions in the store, which provides for application of concepts in the actual performance environment. Other activities, such as system simulations,

mirror the performance environment as closely as possible in order to aid transfer.

D2. Elements and Conditions

• Introduction

1. **Gain learner attention** - The course introduction consists of some colorful animations and graphics to catch the learner's attention and state the name of the program. An audio track describes the purpose of the program and explains why the program is important to the learner.
2. **Inform learner of objectives** - The introduction provides the learner with the list of overall program objectives.
3. **Present the utility of the SKA to be learned** – The introduction establishes the relevance of the program, which is to provide the learner with everything he/she needs to know to succeed as a new store associate.
4. **Establish clearly-perceived learner accountability, roles, and tasks within the learning environment** – The narrator explains the learner's role throughout the program is to explore store scenarios and satisfactorily respond through interaction with the virtual store. Learners are informed that their actions or inactions result in real-time updates to the three progress indicators, which measure successful achievement of the program goals and the company's three priority metrics. The introduction also provides an overview of navigating and interacting with the virtual store environment. This overview includes the acceptable performance level for each priority (95%).
5. **Establish clearly-perceived instructor role(s) and learner support mechanisms** - Learners are not immediately informed of the various support mechanisms available within the program environment and in the physical store; however these are explained later in the program. The introduction informs learners that they can access the "help" menu for assistance within the program, or contact their manager for additional help.

- **Information / Activities**

1. **Establish the appropriate conditions for the types of new SKA facilitated** - After the introduction and overview, learners are presented with the virtual store environment, which is an overhead view of the inside of a typical OfficeMax retail store. Learners can immediately see the three progress bars on the screen.
2. **Structure activities conforming to Situated Learning guidelines and strategies** – The virtual store environment is an **authentic context** that is similar to how the desired knowledge and skills will be used on the job. Additionally, the **activities in the program are authentic** as well. At various times throughout the program, different screen elements animate and/or highlight, encouraging the user to click on the elements. For example, a person may be shown entering the store and walking around, representing a customer. Clicking on the customer will present a randomly selected customer interaction scenario that the learner must read and respond to.

At any one time, as many as ten different elements could be waiting for the user's attention, each having an impact on the three priority metrics of customer service, in stock, and clean store. Ignoring an element for too long will lower the score in that element's related metric. For instance, ignoring the customer who entered the virtual store will result in a drop in the customer service level.

The program's activities help the learner experience **multiple roles and perspectives** (such as cashier, stock clerk, cleaning, and salesperson), just as she/he will do on the job.

3. **Present a variety of clear, concrete examples and non-examples** – The numerous scenarios presented provide the learner with countless examples and non-examples, often based on the learner's particular chosen path through a scenario. For instance, the learner may hear the script of how a customer interaction could possibly go based on the learner's response in the program

– this could serve as an example or non-example depending on the user’s response.

4. **Provide opportunities for learners to explore the learning environment with minimal instructor guidance and intervention**

- The program is designed so that the learner can explore the virtual environment with little or no outside intervention or guidance.

• **Practice / Feedback**

1. **Provide initial learner guidance** – This is done at the beginning of the program during the introduction. Additionally, as scenarios are presented, the learner is provided with quick guidance in terms of how to respond within the program and how to apply the particular objective being addressed.
2. **All should get practice** – There are countless activities, quizzes, and assessments throughout the program, all of which address one or more of the three priorities. The learner’s progress in each category determines how much each priority is addressed; however, the program appears to provide plenty of practice for every objective, including the objective specifically identified as part of this evaluation.
3. **Feedback as immediate as possible** – The three progress bars at the bottom of the screen provide constant feedback on the learner’s performance and progress toward the 95% expectation for each metric. Additionally, many of the scenarios involve system simulations (such as for a Point of Sale, or POS, transaction involving a customer at the checkout line) that include quizzes or other assessments that provide immediate feedback and remediation right inside the program. Feedback is also provided throughout the program with message displays and audio clips of a cheering audience (for positive feedback) or a message to try again (for corrective feedback).

• **Review**

1. **Restate objectives** – As learners progress through the program and “graduate” from one level to the next, the program reminds learners of the goal or priority that has been met.
2. **Content Review** – The program provides a brief review at the completion of nearly every scenario and another review every time one of the three performance metrics rises. If a performance metric falls or is in critical status for too long, the program displays a warning and revisits prior topics along with a review of key points to provide remediation.

- **Assessment**

1. **Must match performances and conditions indicated within objectives** – Some scenarios involve activities that the learner must print and physically complete in the store. For example, the learner may be presented with a scenario related to finding a particular type of ink or toner for a customer. That scenario may involve printing a handout that requires the learner to physically walk to the ink and toner section of the store and write down or check off information about how the products are organized in order to best assist the customer. These activities serve as practice mechanisms and assessment tools, since the store manager will evaluate the learner’s performance on these tasks.

Additionally, quizzes are scattered throughout the program, and the three progress bars provide a source of constant assessment based on the associate’s responses to various interactions and quizzes in the program.

The learner does not appear to be assessed on anything beyond what is stated in the objectives. For the objective selected for this evaluation, the learner must meet a level of 95% customer service before that priority is considered mastered.

- **Transfer**

1. **Present new context that elicits the same performances under different conditions** – Some of the scenarios within the virtual store ask the learner to print job aids or worksheets that require

something to be physically completed in the actual store. These “scavenger hunt” activities allow the program to move beyond instruction and into the transfer function, eliciting the same types of actions within the actual performance context where the knowledge and skills will be ultimately used. The learner must turn these printed assignments into his/her manager for evaluation, discussion, and remediation (if needed).

2. **Make utility of success in the new context apparent** – Since the learner will be evaluated by his/her manager with regard to printed activities, the relevance of success is made clear. Additionally, doing well in the actual store is clearly an indicator of success in the learner’s new role as a store associate.
3. **Clearly identify the incentives/rewards for succeeding within the new context** – When the associates do well on the in-program activities, the program emphasizes how this equips them for life in the store. When they complete activities in the actual store context, they see how the skills they have learned are essential in the actual environment. The program emphasizes how this can result in a successful associate experience with the company.

- **Skill-Specific Conditions** (from Appendix D)

1. Present varied examples or instances of concepts and rule applications, calling attention to the distinctive features of examples, definitions, and procedures.
2. Present non-examples or non-instances of the concept if they will help to clarify the concept.
3. Encourage learners to recall previously learned information or examples that illustrate concepts or rules being presented.
4. Clearly communicate the definition of defined concepts, using the fewest number of words.
5. Break down the process of performing or applying rules into steps, and clearly communicate these steps to the students.
6. Provide learners with opportunities to "play" with concepts and rules within simulated or "real" environments, identifying and

selecting their own examples and non-examples of concepts and rule applications if possible.

7. Present a variety of contexts or experiences that allow the students to practice applying the rules or identifying/describing concepts, providing guidance throughout early stages of practice.

- D3.** The program provides practice throughout and feedback is provided immediately upon response. The feedback is a hybrid between knowledge of response and elaborative feedback. The user is informed of whether the selected answer is correct or incorrect. If the selected answer is incorrect, the program elaborates on why that answer is incorrect and the user must try again. If the selected answer is correct, the program elaborates on why that answer is correct.
- D4.** The program's review component could be stronger if it somehow provided learners with a way to summarize the key points, what they learned to do, and how they personally learned it. This is accomplished somewhat by the "on the floor" activities in which the user must perform functions in the store and report to his/her manager. However, this could be accomplished within the program as well, perhaps with a form of built-in assessment, such as a fill-in-the-blank or short answer quiz, or arrangement of items on the screen.
- D5.** All of the conditions are adequately addressed.
- D6.** Adequate feedback is provided for all practice and assessment activities.

E. Instructional Message Display Description & Evaluation

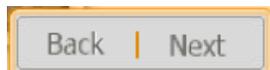
- E1.** The screen display follows the American standard left-to-right and top-down organization. All the screens contain only relevant information that is easy to identify. The program uses various ways to call attention to message components that need to stand in contrast, including animation, color, and graphic devices such as shapes and objects used as dialog elements. Both visual and aural messages are presented in a way that keeps like topics together. The learner is in control of the program pace and flow, which prevents any issues with being too fast for comprehension or too slow to maintain the viewer's attention. The program explains some of the basic navigation techniques, but it should provide a bit more information in this regard so that the learner isn't caught off guard.

- E2.** The program excels in the area of General Message Display and follows nearly every principle. Some particular strengths include the typical left-to-right and top-down American format, use of relevant information that is easy to identify, little-to-no non-critical detail to distract from the content, learner-driven pace and flow, and use of animation and graphic objects to call out special points. An opportunity for improvement could be to clarify the navigation system right at the start so that the learner is aware of the additional interface elements on some screens.
- E3.** The text flows well throughout the program and is logically structured according to the text itself, rather than based on space available. Headings are used to keep things organized and keep the user aware of the topic being addressed. The text and background have nice contrast, often with black text on a white background (and any variations from that are still clear and legible). The text uses standard capitalization and formatting throughout.
- E4.** The program follows the text principles flawlessly. It applies sound logic and breaks text according to topic and standard rules of grammar (as opposed to basing breaks on space available). It labels text and graphics with labels, uses clearly contrasting text and background colors, and uses standard capitalization and formatting.
- E5.** Pictures are used throughout the program to reiterate the spoken or written message, to establish context, to reinforce what is being discussed or taught, and to provide examples and non-examples. I did not find myself wondering why any particular picture was used or what it represented. When needed, the program provides instructions for interpreting a picture (such as a planning diagram for an end-cap product display). The program does not make use of illustrations or organizational charts. The representational pictures (including the virtual store itself and objects contained within it) are realistic and easily recognized.
- E6.** The program makes deliberate use of pictures as reinforcement of the aural or visual message, establishment of context, and to provide examples and non-examples. When needed, the program explains how a picture should be interpreted. Representational pictures are realistic and easy to recognize with little or no interpretation.

- E7.** The program does not include any diagrams, charts, or graphs and I did not find any instances where they would be needed to portray any abstract ideas or relationships.
- E8.** No diagrams, charts, or graphs are used in the program and the content did not seem to call for these.
- E9.** The program makes extensive use of audio throughout. A main narrator's voice is used in the introduction and several other voice actors appear throughout, including a store manager, an announcer, and customers. Speech effectively communicates ideas. When the content is complex, text and pictures are used instead of or in conjunction with audio. All speech is clearly related to the context and content of the text. Generally, sound effects are appropriately used, although a particular sound effect is used as text is being "written" to the screen (similar to a typewriter) and becomes distracting at times.
- E10.** The program uses audio effectively to communicate ideas and messages. When the content becomes complex, visuals are used more than speech (often in combination with speech) to ensure the key points are received. Speech is clear, high quality, and closely relates to the context of the text and other visuals. Sound effects are clean and appropriate, although the sound effect played when text is scrolling is somewhat distracting. This does not negatively impact the quality of the product, however, and would not require any type of intervention or action for a facilitator.
- E11.** The overall user interface is clean and visually appealing. The main program screen is consistent with other educational software used by the organization. The user interface provides the company logo and course information in the upper left corner. The upper right corner contains the overall program progress. The lower left corner allows the user to logout of the program, access resource documents (job aids), open a menu of course topics (with access only to those that have been covered), or turn sound on and off.



The core of the program is the virtual store itself, which the user navigates by clicking a *Back* or *Next* button in the lower right area of the main display:



The user cannot click *Next* until the current screen has finished playing and/or all of the requesting actions have been completed successfully. This is used consistently throughout the program for navigating within the store itself. However, at times these buttons highlight with a flashing orange bar when the user needs to click the *Next* button, but this does not happen every time.

Within individual screens, the user may be presented with other objects to click on. This is not immediately obvious to the user, however. One of the early screens begins discussing the three priorities and intends for the user to click on the first priority (“In Stock”), but the user is never informed to do this. After this initial mishap, it becomes fairly clear that the user may need to click on other objects on the screen, even if not specifically instructed to do so.

Within other individual screens, the user is presented with a different set of buttons (“Previous” and “Next”) that take the user through various pieces of the current scenario or information presentation. The use of these buttons is not immediately clear to the user, although it is simple enough to become familiar with as the user progresses. This second set of buttons seems a bit inconsistent with the “main” Next and Back buttons.



Other modules within the software can sometimes cause the user to wonder what needs to happen next. For instance, a particular screen has the user drag an image of a product to its proper location on an image of a store shelf, but it isn't immediately clear what object the customer should be dragging.

Through use of the virtual store interface, the navigation structure gives the learner a great deal of control over learning the specified outcomes. While all the topics must be covered, the learner determines the order in which they are covered and the learner's responses determine how much time is spent on each objective.

Finally, the user interacts with quizzes by simply clicking on the appropriate response or dragging information or objects to their appropriate place (for sequential or matching quizzes).

- E12.** Overall, navigation of the user interface is clean and clear. Some facets of navigation are consistent throughout the program, while others may seem to contradict or leave the user guessing as to what action to take next. Navigation instructions are provided up-front; however they do not include all points necessary to successfully navigate the program. The facilitator (store manager) should inform users of the additional navigation requirements before they begin the program to avoid any confusion as they proceed.

F. ID Expert Review Evaluation Report: Final Thoughts

I am extremely impressed with the quality of Virtual OfficeMax. Based on my own experience with the program and the results of this thorough evaluation, I believe it has

great potential value as a tool for facilitation of the specified outcomes. The program's effectiveness could be enhanced if the facilitator (i.e. store manager) provides the learner with more complete navigational hints in the beginning or if a learner aid is created to provide these tips to every user. Since this is a proprietary product, there are no other titles to compare it to and I have not used any similar products. I would highly recommend the product to a colleague; however due to its proprietary nature I unfortunately would not be able to recommend it to anyone outside the company. I would, however, certainly recommend the concepts and developers to others. Development of the program was a significant investment of time and resources for the company. It is worth the investment because it has created an immersive learning experience that replaces over 20 previous text-based courses that required more time and had less of an impact overall.