

# Accelerating Data Warehouse Usage and ROI

**Teradata Customer Education's Customized, Performance-based Training for Business Users Methodology**

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## Table of Contents

<i>Executive Summary</i>	2
<i>Introduction</i>	3
<i>Six Proven Steps to Success</i>	4
<i>Web-based Training</i>	6
<i>Internal Certification</i>	7
<i>Summary</i>	7

## **Executive Summary**

With growth once again at the top of the corporate agenda, data warehouses are expected to help organizations become more innovative, serve customers better and add to top and bottom line growth. As organizations invest more money and resources into data warehousing projects, business user training becomes ever more critical to facilitating productivity and accelerating a return on investment. Investments in learning are vital to enhancing revenue and increasing shareholder value. There is no technology investment that will deliver productivity without some degree of learning.

Teradata Customer Education's Customized, Performance-based Training for Business Users program is designed to facilitate the productivity of your data warehouse and accelerate your return on investment. Teradata's proven methodology for training business users enables faster adoption of your company's data warehouse, enabling faster decisions and decreased costs while helping business users achieve personal and corporate goals.

# Accelerating Data Warehouse Usage and ROI

A critical component to enabling business users to effectively use your company's data warehouse is accomplished by tying training to specific corporate and/or departmental goals such as increasing revenue, reducing operating costs or optimizing query performance.

Teradata® Customer Education's customized Business Intelligence (BI) tool training teaches business users how to use key features of your company's preferred BI tool to generate reports to retrieve desired data, and shows users how to interpret report data; enabling them to make business decisions that help to achieve corporate goals. Through the customized training program, students learn effective ways to use the BI tool to: generate specific reports, manipulate report data, and interpret results in ways that are targeted towards achieving company goals. Students learn "how to" and more importantly, "how to apply" to use the system to more effectively perform their job tasks.

Customized SQL training for business users teaches students how to optimize Teradata SQL to retrieve data from their data warehouse by incorporating production equivalent queries and tables, examples, and hands-on exercises. This hands-on approach can help business users reduce the submission of run-away queries and optimize performance of your data warehouse.

## Introduction

How important is training to improving data warehouse productivity and ultimately improving business performance? A survey of 285 learning executives conducted by Accenture® Learning clearly demonstrated a link between the most effective learning organizations and the overall performance of the companies they serve. Companies that demonstrate high-performance learning characteristics – about 10 percent of the survey sample – also return better revenue and profit growth compared to their competitors and industry peers. These firms exceed their peers in terms of:

- > Productivity, as measured by sales per employee, (27 percent higher)
- > Revenue growth (40 percent higher)
- > Net income growth (50 percent higher)

With the proper user training, productivity can soar. According to a recent research study involving more than 13,000 users of an ERP application, user productivity jumped an average of 20 percent after completing a training class on the software. The research was conducted by Knowledge Advisors®, surveying users immediately following the completion of training and again 60 days later. In addition to showing a 20 percent improvement in user productivity, the research also showed a 24 percent improvement in cycle time, or an improvement in the learning curve of getting users up to speed and productive with the software.

## Customized Training Anticipates and Meets Your Needs

Training programs are most effective when tailored to your organization's specific needs. The goal is to create programs that promote internal commitment to training objectives, methods and assessment on the part of the student. To this end, Teradata Customer Education utilizes a collaborative training methodology, involving you in the design, implementation and delivery of your training solution.

Customized courses are developed using performance-based learning objectives with a formal methodology to communicate your business goals and outline how to achieve those goals within the training program. Goal-oriented usage of the data warehouse maximizes productivity, speeds decision-making and lets students focus on issues and exceptions.

## Key Elements of the Customized Performance-based Training for Business Users Program:

Teradata Customer Education helps business users optimize the power of the Teradata system by developing customized education courses using the data and tables from your data model to help users:

- > Identify which reports will provide the required data and interpret that report data to achieve business goals and optimize these queries for manageable report data – an answer set that is not too large or cumbersome to interpret.

# Accelerating Data Warehouse Usage and ROI

- > Learn how to use a BI tool to generate pre-defined reports, manipulate report data, export report data to Microsoft Excel or Adobe PDF format and other specific features associated with using a BI tool.
- > Discover how to optimize and use Teradata SQL to retrieve data from your data warehouse by incorporating production equivalent queries, examples, and hands-on exercises. Teradata Customer Education can either develop the SQL curriculum using customer production equivalent SQL queries that use the most commonly accessed tables or use the Teradata Customer Education standard training database. To ensure your data warehouse resources are maximized, performing analytics in the database in lieu of porting the data into a front-end analytical tool is also discussed.
- > Involve your subject matter experts by engaging their participation in the final training delivery. They help to interpret report data, thus communicating how to use the data to achieve desired results.
- > Employ a graded pre-test to provide users with the opportunity to “test out” of the requirement to complete a course.
- > Employ a graded post-test to measure student comprehension and ability to perform tasks once they return to their work environment.

## Six Proven Steps to Success

Teradata Customer Education uses a proven methodology to develop customized training courseware. The customization effort begins by performing an analysis of business user skill levels for using BI tools, writing SQL queries and optimizing performance of the Teradata Database. The next few pages describe each step Teradata Customer Education uses to develop customized courseware and the benefits of each step.

### Step 1

#### *Determine the Skill Level for Accessing/Retrieving Data from the Teradata System*

Teradata Customer Education will develop a questionnaire specifically tailored to your data warehouse environment.

The key is to identify the gap between the current skill levels and the desired skill levels. Based on your business requirement, the survey questions probe experience levels for SQL programming and performing business analytical functions.

The skill level analysis becomes the basis for recommendations about instruction, supporting organizational strategies and for enlisting support throughout the organization. The purpose of the skill level analysis phase is to acquire information on each of these components in order to verify a need and identify possible solutions.

Teradata Customer Education works with Teradata Professional Services and your subject matter expert(s) assigned to the project to gain insight when developing the questionnaire, which ensures opportunities for improvement are identified and addressed in the skill analysis phase.

The skill level analysis phase provides the foundation for determining the training requirements for business users. The next step begins after the questionnaires have been completed and returned.

### Step 2

#### *Group Business Users into Appropriate Skill Level*

In step two, the completed questionnaires are collated. Teradata Customer Education identifies common areas and prioritizes all the gaps listed. When all results are compiled, the gaps identified will become training requirements and will be drafted into a training strategy.

Teradata compiles results on a master spreadsheet categorizing the tasks to be performed and the user's level of competency for performing those tasks. Business users are grouped into one of the following skill levels:

#### **Skill Level 1**

Advanced Analytic – Users who may build analytic models (for example candidates using Teradata Warehouse Miner or SAS® Enterprise™ Miner)

# Accelerating Data Warehouse Usage and ROI

## Skill Level 2

Power Users – Heavy analytic users; Report developers using a BI tool; business users responsible for generating ad-hoc queries

## Skill Level 3

Moderate Users – Heavy analytic users who usually retrieve data through SQL

## Skill Level 4

Basic Users – Candidates for accessing canned reports using a BI tool. This level of user is usually comprised of managers and others that require data presented in an easy-to-read format.

Students with the same competency level should be scheduled together for training in order to pace the classes appropriately.

The next step, once all users have been categorized and training requirements identified, is to develop the learning objectives that will meet the needs for each skill level of user.

## Step 3

### *Develop Training Design Document*

Teradata Customer Education will develop a Training Design Document (TDD) that outlines the customized course curriculum and learning objectives required for each skill level. The TDD provides:

- > Skill Level Descriptions
- > Course Descriptions (including length of course)

- > Course Modules Descriptions
- > Learning Objectives (for each course module)
- > Description of how Teradata Customer Education will develop the course curriculum to meet the learning objectives
- > Description of delivery media

The TDD is the basis from which the course curriculum is developed. The TDD has the added benefit of ensuring training and development initiatives are aligned with your organizational goals and culture, thus creating a training solution that meets your organization's unique requirements.

## Step 4

### *Develop Course Curriculum Outlined in the TDD*

The course development process will be led by Teradata personnel with extensive Instructional Design backgrounds. Course content is developed by a team of Teradata subject matter experts.

- > Courses will be developed to meet the learning objectives outlined in the TDD.
- > Each course will include hands-on laboratory exercises to reinforce relevant concepts.
- > Teradata Customer Education will work with your company's subject matter expert(s) to determine business scenarios applicable to your environment.

The lessons will be constructed to be representative of tasks students will be expected to perform in the actual data warehouse production environment. Students are more motivated to learn when their learning environment allows them to work on authentic issues in settings for which they are familiar or can relate to.

## Step 5

Based on how your students learn most effectively, you can choose a curriculum of web-based training and/or instructor-led training courses.

### *Deliver Instructor-led Customized Training Courses*

If you choose instructor-led delivery, the following delivery methods are used when conducting customized training courses:

#### **Facilitative Instruction**

The instructor leads lesson instruction and encourages students to learn by performing tasks, asking questions and interacting with their knowledge of skills being taught. Learning activities are carefully structured to generate the synergy of cooperative and collaborative learning. By design, some tasks are open-ended and invite students to ask "what if" questions.

Interaction with the instructor and their peers helps the student consolidate ideas, test hypotheses and enhance their learning experience.

# Accelerating Data Warehouse Usage and ROI

## Instructor-led Exercises

The instructor leads students through exercises to reinforce the concepts discussed in the course lessons. The instructor will support students by assisting with parts of the task that they may not perform, then gradually reduce the amount of instructor support, shifting more and more control to the students.

## Independent Practice Exercises

Students must be given time and opportunity for practice. No student can gain confidence about the ability to perform a task without being able to use the skills and processes being learned. Independent practice allows the instructor to observe students as they complete tasks and to provide hints and/or assistance if necessary. The personalized attention that a one-on-one instructor provides is important for students to pinpoint problems in performance and make needed adjustments.

Each course module will have practice exercises for students to complete on their own. An answer sheet that includes the code for the exercise as well as a screen print with the correct result as applicable is also provided. The independent practice exercises will be appropriately motivating, challenging, and focused so students become engaged, take pride in their progress, and master learning objectives.

## Q&A Section

At the end of each module there is a Q&A section to reinforce knowledge of how to perform the tasks taught in the module lessons. Learning and remembering important concepts is made easier by questioning. Correct responses to questions reinforce the concepts learned.

Students will independently complete the questions in the Q&A section followed by instructor review and group discussion.

## Pilot Class

Our experience shows training is most effective when Teradata Customer Education can “pilot” each customized training course prior to scheduling of all students. This allows time for any necessary corrections or required clarifications of training material.

## Web-based Training

Web-based Training (WBT) courses for using a BI tool can be developed by Teradata Customer Education using the following WBT course template:

### WBT Course Main Menu

The main menu consists of the following links: Introduction, Lesson Title, Activity, Score and Activity Completed.

## Course Introduction

By clicking on the Course Introduction link, the student will be taken through a series of screens informing them of how to navigate the online learning course.

## Lesson Title

By clicking on Lesson Title from the course menu, the student will be taken to a Lesson Introduction page for that particular lesson. For all lessons, this page will introduce the lesson material and, more importantly, state the performance-based learning objective of that lesson. On each Lesson Introduction page, a button will be provided that takes the student to the practice segment of the lesson when he/she is ready to proceed. The practice segment of the lesson will present the student with a series of interactive screens designed to provide a simulation of the student's interaction with a data warehouse. The student will be able to navigate through the practice section by performing the step as it would be performed in the actual work environment.

## Lesson Content

In each lesson, topics that meet one or more of the learning objectives will be presented. Lessons are designed to build skills necessary to perform tasks to retrieve the data from your data warehouse. For ease of use, students may bookmark their place within the lesson, enabling them to complete their training at their own pace.

# Accelerating Data Warehouse Usage and ROI

## Lesson Summary

After completing a lesson, a summary page will reinforce the key points that support the learning objective that each student should retain for that lesson. A link will be provided to return the student to the Main Menu or proceed to the activity for the lesson.

## Activity

Following each lesson within the WBT course, an interactive activity will test the students understanding of the objectives stated in the lesson. These questions will be a series or combination of multiple choice, true/false, identify by clicking activities, or a graded simulation interacting with the EDW. The student's score on each activity will be recorded and available to import into a customer's Learning Management System.

## Step 6

### *Evaluate the Effectiveness of the Customized Training Courses*

Teradata provides course evaluation forms to verify training objectives were met during the training session. In some cases, the evaluation forms are given to students prior to the start of the class, which allows students to complete the evaluation at the conclusion of each course module. This method is a very effective tool to improve course curriculum during the training pilot phase.

Teradata Customer Education reviews the completed evaluation forms to identify areas for improvement for future classes.

## Internal Certification

Implementing a customized training program can help you to develop an internal certification process for your users. Each user should successfully complete assigned courses prior to receiving a user id and password for the data warehouse production environment. Employing this strategy will help to optimize the performance of your data warehouse.

## Summary

As more is expected of data warehouses to help organizations become more innovative, serve customers better, and add to top-and-bottom line growth, business users training becomes ever more critical to facilitating productivity and accelerating a return on investment.

Teradata Customer Education's Customized, Performance-based Training for Business Users program will facilitate the productivity of your data warehouse and accelerate your return on investment. The program teaches business users to more efficiently and effectively use the data warehouse. Teradata Corporation's proven methodology for training business users facilitates faster adoption of the company's data warehouse, enabling faster decisions and decreased costs while helping business users achieve personal and corporate goals.

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