Curriculum Analysis Report

Manufacturing Skill Standards Council's Certified Logistics Associate (CLA) & Certified Logistics Technician (CLT) Curriculum

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Table of Contents

Table of Contents i
Executive Summary 1
Section 1 3
Curriculum Review 3
Section 2 5
Skill Analysis Survey 5
Section 3 6
Skill Level Setting 6
Applied Math 6
Graphic Literacy 8
Workplace Documents 12
Section 4 18
Results and Recommendations 18
Appendix A 19
Skill Descriptions 19
Appendix B 37
Learning Objectives 37

Executive Summary

The Manufacturing Skill Standards Council and ACT recognize the benefits to relative stake-holders of "stacking" MSSC certification credentials upon ACT's WorkKeys Assessments, specifically the National Career Readiness Certificate (NCRC), as the "foundation" for MSSC's Certified Production Technician (CPT), Certified Logistics Associate (CLA), and Certified Logistics Technician (CLT) credentialing programs. The results of this project and review of its findings can help guide the selection of students into the program and encourage skill development for those applicants whose skills currently do not match the recommendations for entry.

Textbooks

MSSC offers two textbooks which are aligned with MSSC standards for CLA and CLT. These books should be viewed as primers for their respective levels. One of their purposes is to generate interest and further education in this field so workers will continuously enhance their knowledge, thereby improving the performance of their companies. PDF versions of both textbooks are available to instructors and students enrolled in the courses described above. Hard copies can be purchased for an additional fee.

CLA: Supply Chain Logistics: Foundational Knowledge. This textbook describes the foundational-level knowledge that front-line workers in supply chain logistics should understand. This text instructs students on the foundational knowledge they must have to be competent in the critical work activities common across all facilities within the supply chain: safety, quality control, communications, teamwork, good workplace conduct, and familiarity with the key computer systems that underpin supply chain operations.

CLT: Supply Chain Logistics: Mid-level Technical Knowledge: This textbook describes the knowledge and skills that mid-technical level workers in supply chain logistics should understand. This text describes a higher level of knowledge needed by front-line workers through front-line supervisors and traces the flow of a product from the time it enters a logistics facility through its processing, storage, and shipment until it is transported to a final destination.

E-Learning Portal

Courses are offered on a customized OpusWorks® virtual portal for institutions that provide access to MSSC's e-learning for CLA and CLT. The portal includes the CLA and CLT courses, PDF copies of both textbooks, a virtual classroom for instructors to post messages and share documents with students, pre- and post-tests for each chapter, comprehensive practice tests for each course, and instructor reports on student performance. Instructors also have the ability to organize their own content and distribute it to students. The portal provides access to the OpusWorks library, which includes other courses that are available for purchase. Additional courses available include: the Win-At-Work Series, SixSigma, Lean, Statistics, Statistical Process Control, Project Management, Juran Problem Solving, Effective Problem Solving, Root Cause Analysis and ISO 9001.

The Subject Matter Experts (SMEs) identified by MSSC completed a skill analysis survey to identify the WorkKeys skills required to accomplish each objective and to identify how the skills are used during the training program. Dr. Hill created a survey for both the CLA and the CLT curriculums. The SMEs were asked to identify which of the three WorkKeys skills are required for each learning objective within a unit, and they were asked to provide specific examples of how the skills are used. For example, if a graphic is used, they were asked to name the graphic and to briefly describe how it is used. If a formula is used, they were asked to provide the formula or to reference the page number.

The SMEs participated in a WebEx session prior to receiving their survey. Rebekah Hutton, VP of Strategic Initiatives welcomed and thanked the SMEs and explained the purpose of the study. Dr. Hill then explained that the study would consist of a survey and a second WebEx session to go over the results of the survey and to set entry and exit levels for each of the WorkKeys skills. Dr. Hill then reviewed the definitions for the WorkKeys Workplace Documents, Graphic Literacy, and Applied Math skills and provided examples from the training materials of each. (Descriptions of the WorkKeys skills can be found in Appendix A.) The SMEs were given the opportunity to ask questions throughout

After the WebEx session, Dr. Hill sent each SME an e-mail containing links to the CLA and CLT surveys, along with the learning objectives for their convenience. SMEs were encouraged to have the curriculum materials available for reference.

ACT combined the SME's input. During the second webcast, the results were used to guide the setting of the skill levels32(nput)(t)-2(e)4usionsnput5 Td Td [(d t)-2(he)tmlu37.79 -10 Tc 0,iTd [(d

On November 10, 2015, a second WebEx session was held with the SMEs to review the survey results and to set WorkKeys skill levels for entry into the program. Dr. Hill presented detailed descriptions of the WorkKeys skill levels to the SMEs and showed them examples of problems or situations that individuals deal with at each level. For each WorkKeys skill, the SMEs decided the skill level that is necessary for entry to the training program and the skill level that is expected by program completion.

APPLIED MATH

WorkKeys Applied Math is the skill people use when they use mathematical reasoning and problem-solving techniques to solve work-related problems. Employees may use calculators and conversion tables to help with the problems, but they still need to use math skills to think them through.

Certified Logistics Associate (CLA)

The SMEs indicated that students must be able to review numerical examples of profitability and explain the consequences of losses. However, they are not required to work any math problems. Therefore, the Applied Math skill is not required.

Certified Logistics Technician (CLT)

The SME group indicated that the WorkKeys Applied Math skill is required to enter into and to complete the training program. The skill is used to accomplish 10.6% of the objectives of the training program.

In Unit 5, the students need to be able to understand the concept of inventory turnover and why it is important. An example of how to calculate basic inventory turn rate is provided in the textbook. "Bob's tackle shop had an average inventory cost of $6,000 for his fishing lure department last year. He sold $30,000 of fishing lures, at cost last year. His Turn Ratio for the year was 5 times ($30,000/$6,000). This year, Bob liquidated slow moving items from his fishing lure inventory, his inventory cost dropped to $5,000 for the year, but he still sold $30,000 of fishing lures. His Turn Ratio became 6 times, and he freed up $1,000 to use on other expenses." While students do not need to actually calculate the turn ratio, it is important that they understand it's importance.

In Unit 5, the students will also need to be able to understand ABC Inventory Control Principles. This requires them to understand percentages and proportions. For example, different proportions can be applied based on objective criteria. "A" items typically account for a large proportion of the overall value but a small percentage of number of items.

kilometers to meters to feet. They can identify why a mistake occurred in a solution. Employees can find the best deal and use the result for another calculation. They can find the area of basic shapes (rectangles and circles) when it may be necessary to rearrange the formula, convert units of measurement in the calculations, or use the result in further calculations. At Level 6 employees can find the volume of rectangular solids. They can calculate rates, productions rates, and rate by time. They can identify the correct equation for solving a problem.

Students may need Level 6 Applied Math skills in Unit 7 to determine the best mode of transportation or equipment to use. For example, they may need to transport 40,000 gallons of liquid across country. A semi-trailer can carry 7,865 gallons, a tanker truck can carry 9,000, and a rail car can carry 30,240 gallons. They will need to divide 40,000 by 7,865 to find out that they need 5.08 semi-trailers, 4.44 tanker trucks, or 1.32 rail cars. They will then need to calculate the fixed and variable costs to determine the best deal. They will also need to factor in the amount of time required to reach the destination. Once they are in the workplace, the company will have a transportation or warehouse management system that will make these calculations automatically.

Students often need to decide what information, calculations or unit conversions to use in order to solve a problem. This often requires them to look up a formula so they can convert from one unit to another usually between systems of measurement. Depending on what information they have and what they need, they may need to rearrange the formula or convert more than one time. Anytime students are converting they are likely to end up with decimals or mixed numbers. They will not be working with fractions.

For example, a barrel holds 28 gallons and you need to know how many liters it holds. The student will need to look up the conversion and multiple 28 gallons by 3.78541 to determine that it holds 105.99148 liters.

Another example would be when a student needs to convert a metric volume measurement to U.S. equivalent. A container has a capacity of 500 cubic meters. To determine its capacity in cubic feet the student will need to look up the conversion in a table and then multiply by 35,3147 to determine that the container's capacity is 17,657,35 cubic feet.

As stated previously, students may enter the program with a level 4, but are likely to increase their math skills to level 6. However, they are unlikely to require this level of skill on the job due to the availability of technology.

Graphic Literacy

The WorkKeys Graphic Literacy skill is the skill people use when they work with workplace graphics such as tables, graphs, charts, digital dashboards, flow charts, timelines, forms, maps, and blueprints. Employees use this skill when they find, summarize, compare, and analyze information to make decisions using workplace graphics to solve work-related problems.

Certified Logisti cs Associate (CLA)
The SMEs indicated that the WorkKeys

and/or y axis), if there are axes; and if a low moderate graphic and a simple graphic are required to solve the problem, they should be considered a high moderate graphic. At Level 4, employees can use one high moderate graphic to locate and find information and identify the next or missing step in a process.

Warehouse layouts can be very simple or very complex and detailed. For the CLA training, they tend to be straightforward. A linear warehouse layout is shown in the textbook, and it consists of five areas with arrows showing the flow. It is important for the student to understand how each area relates to the other and why the order is important (i.e., receiving dock, storage, picking area, assembly area, shipping dock).

Safety markings and signage are critical. The tables included are straightforward, but the student must understand how the colors relate to the meaning and what they are used to identify. For example, an orange warning sign would be used to identify an electrical box with start and stop buttons. Two different ways of showing a Fire Safety Set are provided. They are both straightforward, but one uses symbols, colors, and pictures while the other one is a table with primarily text. In both, the student has to be able to identify the class of fire and the type of fire extinguisher to use based on the type of flammable material. Students have to understand how t0.0w are criufuPa8(nt)-2(i)-fuPan0.002 Tw [

the requirements of the training program to WorkKeys Graphic Literacy skill Levels 3 through 5. The SMEs agreed that Level 4 skills are required for entry into the training and that a Level 5 would be reached upon exit from the training

At Graphic Literacy Level 4, workplace graphics are common and of low to high moderate difficulty. Characteristics of low moderate graphics include a moderate amount of data; more than one level of data, but no nesting; several variables; one or two axes, if there are axes; and if two simple graphics are required to solve the problem, they should be considered a low moderate graphic. At Graphic Literacy Level 4, employees can use one or two low moderate graphics at a time to locate information in a graphic using information found in another graphic; compare two or more pieces of information; identify a trend/pattern/relationship; make an inference or decision; and identify the graphic that accurately represents the data. High moderate graphics may be less common at Graphic Literacy Level 4 and have characteristics which include a moderate amount of data; more than one level of data and it may be nested; many variables such as types of wood, drill speeds, hole diameter, and type of bit; one or two axes (such as an x and/or y axis), if there are axes; and if a low moderate graphic and a simple graphic are required to solve the problem, they should be considered a high moderate graphic. At Level 4, employees can use one high moderate graphic to locate and find information and identify the next or missing step in a process.

At Graphic Literacy Level 5, workplace graphics may be less common and of low moderate, high moderate, or difficult complexity. Characteristics of low moderate graphics include a moderate amount of data; more than one level of data, but no nesting; several variables; one or two axes, if there are axes; and if two simple graphics are required to solve the problem, they should be considered a low moderate graphic. At Level 5 Graphic Literacy, employees can use a low moderate graphic to compare two or more pieces of information; interpret a trend/pattern/relationship; make a reasonable inference or decision based on one graphic after finding information in another graphic; justify a decision or inference based on information; identify the most effective graphic for the task; and justify the most effective graphic for the task. High moderate graphics may be less common at Graphic Literacy Level 5 and have characteristics which include a moderate amount of data; more than one level of data and it may be nested; many variables; one or two axes if there are axes; and if a low moderate graphic and a simple graphic are required to solve the problem, they should be considered a high moderate graphic. At Level 5 Graphic Literacy, employees can use one high moderate graphic to locate information in a graphic using information found in another graphic; compare two or more pieces of information; identify a trend/pattern/relationship; make an inference or decision; and identify the graphic that accurately represents the data. Difficult graphics at Graphic Literacy Level 5 are likely to be less common or a composite of graphics. Data presented is dense; more than one level of data and nesting is likely; there are many variables such as types of wood, drill speeds, hole diameter, and type of bit; three or more axes, such as an x, y, and z axis, if there are axes; and if a high moderate graphic and a low moderate graphic are required to solve the problem, they should be considered a difficult graphic. At Level 5, employees can use one difficult graphic to locate and find information and identify the next or missing step in a process.

Students will use Level 5 skills when they are completing a classroom exercise that requires them to decide whether to accept or reject materials as they are received. For example, a student would need to compare the material received to the purchase order and to the bill of lading supplied by the carrier. Additional documents they may work with include a delivery receipt, airway bill, advanced ship notice, and a carrier freight bill. Students may be required to compare the documents to each other and to compare them to the actual product being received. If there is a discrepancy or the product is damaged, additional forms will need to be completed detailing the problem.

The students will use level 5 Graphic Literacy skills to understand how to use a Warehouse Management System (WMS). While most of the data entry into this type of system are done through hand-held devices, the students need to learn how to track an item within a facility by Graphic Literacy on various screens. These screens can be very detailed and contain a lot of information that is not relevant for the task they are performing. They may also need to compare what they are seeing on screen to what they are actually seeing in the warehouse.

Students must be able to locate information on hazmat labels and placards. They must understand the Global Harmonization Standard. A Hazmat label will include the class number at the bottom of the label and the material symbol at the top of the label and should be located near the Proper Shipping Name. Hazmats are classified into nine classes based on characteristics or specific hazards presented. One container may have multiple labels. The student will need to be able to summarize the information and may need to label containers. They will also need to refer to the Safety Data Sheet and shipping papers. A Safety Data Sheet has 16 different sections.

Students also use Graphic Literacy Level 5 skills when they practice using transportation documentation to track and communicate with stationary and in-transit vehicles and containers.

Workplace Documents

WorkKeys Workplace Documents is the skill people use when they read and use written text in order to do a job. The written texts include memos, letters, directions, notices, bulletins, policies, and regulations. It is often the case that these workplace communications are not necessarily well written or targeted to the appropriate audience. Workplace Documents materials do not include information that is presented graphically, such as in charts, forms, or blueprints.

Certified Logistics Associate (CLA)

The SMEs indicated that the WorkKeys Workplace Documents skill is required to accomplish 95.3% of the learning objectives for this program. The Supply Chain Logistics: Foundational Knowledge textbook is a critical component of the Certified

Logistics Associate (CLA) Certificate program. There is also an e-learning portal available that allows students to listen or read the text.

According to the SMEs, students need the Workplace Documents skills to:

- describe in their own words, the concept of and examples of cost effectiveness as it related to competition.
- identify four main initiatives that improve international logistics security (i.e., Customs-Trade Partnership Against Terrorism (C-TPAT), Free and Secure Trade (FAST), Container Security Initiative (CSI), Advanced Manifest Regulations, and Interconnection Security Agreement (ISA)
- cite examples of how logistitics activities impact the environment and become familiar with government regulations such as The Clean Water Act, The Clean Air Act, and The National Environmental Policy Act.
- describe the functions for various types of equipment
- identify different safety principles and requirements in order to apply them to the work environment
- differentiate federal agencies (such as OSHA and DOT) and understand how the agencies regulate logistics activities and provide enforcement.
- provide examples of how frontline workers support Quality Control Principles
- identify technologies used to capture and store logistics information.

To determine the level of Workplace Documents skill needed, the SMEs considered the difficulty of the reading materials and how hard it is for individuals to find the information they need and make use of it. The SMEs compared the requirements of the training program to WorkKeys Workplace Documents skill Levels 3 through 6. The SMEs agreed that Level 4 skills are required for entry into and to exit from the program.

At Workplace Documents Level 4, reading materials include policies, procedures, and notices. Materials are straightforward with some long sentences and contain a number of details. These materials use common words, but do have some harder words, too. They describe procedures that include several steps. When following procedures, employees must think about changing conditions that affect what they should do. For example, they can follow directions that include if-then statements. When employees use Level 4 skills they can identify the main idea and details that may not be clearly stated, use the reading material to figure out the meaning of words that are not defined for them (not jargon or technical terms), apply information/instructions to a situation that is the same as the situation in the reading materials, and choose what to do when changing conditions call for a different action.

The SMEs pointed out that the textbook assists the reader to identify the main ideas and specifically what they are expected to be able to do after reading the material by providing an overview and the objectives for each chapter. For example, at the beginning of Chapter 3 there is an Objectives box with the following, "When you have equipment, 4. Describe function and types of conveyors, 5. Identify common automated systems used in material handling." There is also a separate box titled Overview of Chapter. The following is an excerpt from this box, "The purpose of this chapter is to explain various types of material handling equipment from the simplest hand truck to the most complex automated systems. Different modes of transportation, types of facilities and types of products require diverse types of equipment to move products through the supply chain…"

While the material is straightforward, some of the sentences can be long and contain a number of details. The following example appears in a Think About It! box, "For example, a sit-down, counterbalanced high-lift rider truck is more likely than a motorized hand truck to be involved in a falling load accident because the sit-down rider truck can lift a load much higher than a hand truck."

Students must apply instructions with several steps to a situation that is the same as the situation in the reading material, and they choose what to do when changing conditions call for a different action. The steps for lifting are a good example. A few of the steps for lifting are: get a secure grip, use both hands whenevs

and technical jargon. If students acquire Level 5 Workplace Documents skills by the time they complete the program

APPLIED MATH SKILL

WorkKeys® Applied Math is the skill people use when they use mathematical reasoning and problem-solving techniques to solve work-related problems. Employees may use calculators and conversion tables to help with the problems, but they still need to use math skills to think them through.

There are five levels of difficulty. Level 3 is the least complex and Level 7 is the most complex. The levels build on each other, each incorporating the skills assessed at the previous levels. For example, at Level 5, employees need the skills from Levels 3, 4, and 5. Examples are included with each level description.

When deciding what level of the Applied Math skill employees need for the tasks they do at work, consider the following questions:

- How is the information presented? That is:
- Is it presented in the same order that it is needed?
- Is it necessary to change the order that the information is in before the math can be performed?

Is all the information needed for solving the problems provided? That is:

- Is all the information presented in the right form?
- Is it necessary to do some calculations to get some of the important information?
- Does the problem require a formula?
- Does the information need to be taken from a graphic?

What kind of mathematical operations do employees perform? That is:

- Can the math problem be completed in one step?
-

Applied Math Level 3

Level 3 problems can easily be translated from a word problem to a math equation requiring a single type of math operation. All the needed information is presented in a logical order and there is no extra information given.

When employees use Level 3 Applied Math skills on the job, they can:

- Solve problems that require a single type of mathematical operation. They add or subtract either positive or negative numbers (such as 10 or -20). They multiply or divide using only positive numbers (such as 10).
- Convert a familiar fraction (such as ½ or ¼ to a decimal) and convert from a decimal to a common fraction; OR convert between decimals to percentages (such as 0.75 to 75%).
- Convert between familiar units of money and time (for example, one hour equals 60 minutes or ½ of a dollar equals $0.50)
- Add the prices of several products to reach a total, and they can make the correct change for a customer.

Applied Math Level 4

At Level 4, tasks may present information out of order and may include extraneous information. One or two operations may be needed to solve the problem. A chart, diagram, or graph may be included.

When employees use Level 4 Applied Math skills on the job, they can use the skills described at Level 3, and they can:

- Solve problems that require one or two operations. They may add, subtract, or multiply using positive or negative numbers (such as 10 – 2), and they may divide positive numbers (such as 10).
- Figure out an average or mean of a set of numbers (such as $\frac{(10\ 11\ 12)}{3}$). For this they use whole numbers and decimals.
- Figure out simple ratios (such as $\frac{3}{4}$), simple proportions (such as $\frac{10}{100}$ cases), or rates (such as 10 mph).
- Add commonly known fractions, decimals, or percentages (such as ½, .75, or 25%).
- Add or subtract fractions that share a common denominator (such as $\frac{1}{8} + \frac{3}{8} + \frac{7}{8}$).
- Multiply a mixed number (such as $12\frac{1}{8}$) by a whole number or decimal.
- Put the information in the right order before they perform calculations.

For example, at this level, employees can figure out sales tax or a sales commission on a previously calculated total, and they can find out rates of use or business flow.

Applied Math Level 5

In Level 5 problems, the information may not be presented in logical order; the item may contain extraneous information; it may contain a chart, graph or diagram; and the mathematical set-up may be complicated. In solving, the test taker may need to perform multiple operations. For example, at this level employees may complete an order form by totaling an order and then computing tax.

When employees use Level 5 Applied Math skills on the job, they can use the skills described at Levels 3 and 4, and they can:

- Decide what information, calculations, or unit conversions to use to find the answer to a problem.
- As part of a multiple step problem, the employee may have to find one value and use it to find another value that answers the question.
- Add and subtract fractions with unlike denominators (such as ¼) ½ -
- Convert units within or between systems of measurement (e.g., time, measurement, and quantity) where the formula is provided such as converting from ounces to pounds or from centimeters to inches.
- Solve problems that require mathematical operations Calculate using mixed units, such as adding 3.50 hours and 4 hours 30 minutes or subtracting 3 feet and 10 inches from 6 feet and 4 inches.
- Identify the best deal by doing one and two step calculations and then comparing the results to determine the solution that meets the stated conditions.
- Calculate perimeters, circumference, and areas of basic shapes like rectangles and circles.
- Calculate a given percentage of a given number and then use that percentage to determine the solution (e.g., find the total cost of a product after calculating discount, markup or tax.
- Identify where a mistake occurred in a calculation (such as identifying the row in a spreadsheet where a problem occurred).

Applied Math Level 7

At Level 7, the task may be presented in an unusual format and the information presented may be incomplete or require the employee to make an assumption. Tasks often involve multiple steps of logic and calculation, and multiple operations.

When employees use Level 7 Applied Math skills on the job, they can use the skills described at Levels 3, 4, 5, and 6, and they can:

- Solve problems that include ratios, rates, or proportions with at least one of the quantities related to a fraction
- Identify the reason for a mistake.
- Convert between units of measurement that involve fractions, mixed numbers, decimals, or percentages.
- Find the area of multiple shapes or find the area of a composite shape.
- Calculate volumes of spheres, cylinders, or cones
- Calculate the volume when it may be necessary to rearrange the formula, convert units of measurement in the calculations, or use the result in further calculations
- Set up and manipulate ratios, rates or proportions where at least one of the quantities is a fraction.
- Determine the better economic value of several alternatives by using graphics or by finding a percentage difference or a unit cost.
- Apply basic statistical concepts for example calculate the weighted mean, interpret measures of central tendency, or interpret measure of spread and tolerance.

The WorkKeys Graphic Literacy skill is the skill people use when they work with workplace graphics such as tables, graphs, charts, digital dashboards, flow charts, timelines, forms, maps, and blueprints. Employees use this skill when they summarize, compare, and analyze information to make decisions using workplace graphics to solve work-related problems.

There are five levels. Level 3 is the least complex and Level 7 is the most complex. At each new level, employees need more demanding skills in addition to the skills used at the previous levels. For example, Level 5 includes the skills used at Levels 3, 4, and 5. At the lower levels, employees may need to locate or find information in a simple graphic. At the higher levels, employees may use information in one or more difficult graphics to draw conclusions and make decisions. The complexity can also increase as the quantity and/or density of the information increases.

Skill levels depend on two things: the complexity of the graphic and the task that the employee is asked to perform. When you consider what skill level is needed for the tasks that employees complete on the job, think about the following things:

How complex is the workplace graphic?

- Is the graphic simple or difficult, common or uncommon?
- Is the content familiar or unfamiliar?
- How many graphics are there? Is there oe3(n)-20(y)20( )-10(g)10(r)3(a)4(phi)-12(c)4(s.5i4(

Graphic Literacy Level 3

At Level 3, workplace graphics are common and of simple or low moderate difficulty.

Characteristics of simple graphics include:

- A limited amount of data (i.e., less than twenty data points/fields)
- One level of data such as number of items in inventory
- One or two variables such as day of the week and number of items in inventory
- If there are axes, there will be one or two, such as an x and/or y axis

Characteristics of low moderate graphics include:

- A moderate amount of data
- More than one level of data, but no nesting
- Several variables
- If there are axes, there will be one or two
- If two simple graphics are required to solve the problem, they should be considered a low moderate graphic.

At Level 3, employees use one simple or low moderate graphic at a time to perform the following tasks:

- Locate and find information
- Identify the next or missing step in a process

Graphic Literacy Level 5 Continued

At Level 5, employees have demonstrated all of the skills defined at Level 3 and 4, and they can use one high moderate graphic to perform the following tasks:

- Locate information in a graphic using information found in another graphic
- Compare two or more pieces of information
- Identify a trend/pattern/relationship
- Make an inference or decision
- Identify the graphic that accurately represents the data

Difficult graphics are likely to be less common or a composite of graphics and have the following characteristics:

- Data presented is dense.
- More than one level of data and tiers is likely
- Many variables such as types of wood, drill speeds, hole diameter, and type of bit
- If there are axes, there will be three or more such as an x, y, and z axis.
- If a high moderate graphic and a low moderate graphic are required to solve the problem, they should be considered a difficult graphic.

At Level 5, employees have demonstrated all of the skills defined at Level 3 and 4, and they can use one difficult graphic to perform the following tasks:

- Locate and find information
- Identify the next or missing step in a process

Graphic Literacy Level 6 Continued

At Level 6, employees have demonstrated all of the skills defined at Level 3, 4 and 5, and they can use one difficult graphic to perform the following tasks:

- Locate information in a graphic using information found in another graphic
- Compare two or more pieces of information
- Identify a trend/pattern/relationship
- Make an inference or decision
- Identify the graphic that accurately represents the data

Graphic Literacy Level 7

At Level 7, workplace graphics may be less common and of difficult complexity.

Difficult graphics are likely to be less common or a composite of graphics and have the following characteristics:

- Data presented is dense.
- More than one level of data and nesting is likely
- Many variables
- If there are axes, there will be three or more.
- If a low moderate graphic and a high moderate graphic are required to solve the problem they should be considered a difficult graphic.

At level 7, employees have demonstrated all of the skills defined at Levels 3, 4, 5 and 6, and they can use a difficult graphic to perform the following tasks

- Compare two or more trends/patterns/relationships
- Interpret a trend/pattern/relationship

WorkKeys Workplace Documents is the skill people use when they read and use written text in order to do a job. The written texts include memos, letters, directions, notices, bulletins, policies, and regulations. It is often the case that these workplace communications are not necessarily well written or targeted to the appropriate audience. Workplace Documents materials do not include information that is presented graphically, such as in charts, forms, or blueprints.

There are five levels of difficulty. Level 3 is the least complex and Level 7 is the most complex. The levels build on each other, each incorporating the skills assessed at the preceding levels. For example, at Level 5, employees need the skills from Levels 3, 4, and 5. The reading materials at Level 3 are short and direct. The material becomes longer, denser, and more difficult to use as readers move toward Level 7. The tasks also become more complex as readers move from Level 3 to Level 7. At Level 3, readers begin by finding very obvious details and following short instructions. At the more complex levels, tasks can also involve more application and interpretation.

When you consider what level of Workplace Documents skill is needed for the tasks

Workplace Documents Level 7

At Level 7, the reading materials are very complex. The information includes a lot of details, and the concepts are complicated. The vocabulary is difficult. Unusual jargon and technical terms are used, but they are not defined. The writing often lacks clarity and direction. Readers must draw conclusions from some parts of the reading and apply them to other parts.

When employees use Level 7 Workplace Documents skills on the job, in addition to using the skills at Levels 3, 4, 5, and 6, they can:

- Figure out definitions of difficult, uncommon words based on how they are used.
- Figure out the meaning of jargon or technical terms based on how they are used.
- Figure out the general principles behind the policies and apply them to situations that are quite different from any described in the materials.

The Learning Objectives for the training program are shown in the table below. An “X” in a skill column means that, according to the SMEs in the profile session, the objective row requires that skill.

CERTIFIED LOGISTICS ASSOCIATE – CLA				
Objective/ Skill		Applied Math	Graphic Literacy	Workplace Documents
Unit 1: Global Supply Chain Logistics				
OBJ 1	Describe the principal elements of the global supply chain logistics life cycle		X	X

CERTIFIED LOGISTICS ASSOCIATE – CLA				
Objective/ Skill		Applied Math	Graphic Literacy	Workplace Documents
Unit 4: Safety Principles				
OBJ 1	Identify the principal federal safety organizations and their fundamental requirements			X
OBJ 2	Identify characteristics of a safe, clean, and orderly work environment			X

[redacted]ED LOGISTICS ASSOCIATE – CLA

[redacted]kill		Applied Math	Graphic Literacy	Workplace Documents
[redacted]	List characteristics of an effective team member			X
[redacted]	Explain ways to set team goals			X

[redacted]

problems and resolve conflict

CERTIFIED LOGISTICS TECHNICIAN (CLT)				
Objective/ Skill		Applied Math	Graphic Literacy	Workplace Documents
OBJ 3	Explain typical steps to protect products from weather			X
OBJ 4	Describe the process to ensure that outbound product counts are accurate and products are free from defects			X
OBJ 5				

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Objective/ Skill	Applied Math	Graphic Literacy	Workplace Documents