

Task Analysis

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Introduction

The instructional topic I will be developing an online course for is a training program for sign shop employees. The purpose of this employee onboarding training is to educate new sign shop employees about the process of making signs. The goal of the training is to provide sign shop employees with the skills and knowledge necessary to identify and select the appropriate substrate, operate machinery, and demonstrate safety procedures. This task analysis will follow the procedural method, focusing on sequential tasks that are necessary for the completion of the job. Each task is broken down into subtasks, steps, and the required knowledge structure like facts, concepts, procedures, or principles for the employee to successfully fulfill their job responsibilities. Based on the task analysis I have developed measurable objectives to ensure that learning outcomes have been fulfilled.

Task Analysis

1.1 Identify vinyl substrates (Concept)

1.1.1 Explain the use of vinyl in sign production. (Fact)

1.1.2 Differentiate between cut and digital vinyl. (Concept)

1.1.3 Recognize when to use reflective, transparent, and block out vinyl. (Concept)

1.2 Identify aluminum substrates (Concept)

1.2.1 Describe the use of aluminum for outdoor and long term signage. (Fact)

1.2.2 Differentiate between different thicknesses and finishes. (Concept)

1.3 Identify coroplast and polymetal substrates (Concept)

1.3.1 Explain the characteristics and typical uses of coroplast in temporary signs. (Fact)

1.3.2 Differentiate between coroplast and polymetal (Concept)

1.3.3 Identify when to use polymetal for outdoor signs and coroplast for short-term displays. (Principles and Rules)

2.1 Load the vinyl into the cutter (Procedure)

2.1.1 Place the vinyl roll into the machine. (Procedure)

1. Open the machine cover.
2. Align the vinyl roll with the feed rollers.
3. Adjust the roller tension to ensure smooth feeding.

Visual Cue: Rollers aligned correctly will be shown in green on the machine's control screen.

2.2 Set up the cutting design File (Procedure)

2.2.1 Open Adobe Illustrator on the computer. (Procedure)

2.2.2 Import the design file and verify the dimensions. (Procedure)

Visual Cue: The design preview on-screen should match the physical dimensions of the sign.

2.2.3 Choose the correct blade pressure settings based on the type of vinyl. (Concept)

Visual Cue: Machine test cuts should peel away easily without cutting through the backing paper.

2.3 Start the cutting process (Procedure)

2.3.1 Press the start button on the machine. (Procedure)

Visual Cue: The machine display will show a successful start message.

2.3.2 Monitor the cutting progress. Do not leave vinyl cutter unattended (Procedure)

Visual Cue: The vinyl should be feeding evenly without wrinkles or shifts in the material.

2.3.3 Remove the vinyl once the cut is complete. (Procedure)

3.1 Weeding vinyl (Procedure)

3.1.1 Use a weeder tool to remove excess vinyl. (Procedure)

1. Start at the outer edge of the design.
2. Pull up the vinyl while using the weeder tool to ensure clean removal.

Visual Cue: The remaining vinyl should match the design with no excess material.

3.2 Apply transfer tape to the design (Procedure)

3.2.1 Cut a piece of transfer tape slightly larger than the vinyl design. (Procedure)

3.2.2 Place the tape on top of the vinyl. (Procedure)

1. Align the tape carefully over the design.
2. Use a squeegee to smooth out any air bubbles.

Visual Cue: No visible bubbles under the tape

3.3 Peel the vinyl backing (Procedure)

3.3.1 Slowly peel the backing away from the transfer tape and vinyl. (Procedure)

Visual Cue: The entire design should be adhered to the transfer tape with no pieces left on the backing paper.

4.1 Load the substrate into the printer (Procedure)

4.1.1 Place the substrate material into the printer. (Procedure)

1. Lift the material feed lever.
2. Align the substrate with the printer guides.
3. Secure the substrate by lowering the feed lever.

Visual Cue: The substrate should feed straight without skewing, indicated by alignment marks.

4.2 Set up the design in Adobe Illustrator (Procedure)

4.2.1 Open Adobe Illustrator and import the print file. (Procedure)

1. Select the print settings based on the substrate type, vinyl, polymetal, coroplast.
2. Choose CMYK color mode
3. Export as high resolution JPEG 300 PPI

Visual Cue: The software preview should match the dimensions and color

4.3 Monitor the printing process (Procedure)

4.3.1 Start the print and watch for any print errors. (Procedure)

Visual Cue: The print should progress smoothly, and color distribution should be even.

4.3.2 Remove the substrate after printing is complete. (Procedure)

5.1 Wear the required personal protective equipment (Attitude)

5.1.1 Wear gloves when handling sharp materials. (Fact)

5.1.2 Use protective goggles when operating cutting or printing machines. (Fact)

5.2 Follow safety guidelines for machine operation (Procedure)

5.2.1 Never leave the machine unattended while running. (Fact)

5.2.2 Use safety guards and emergency stops when needed. (Procedure)

Visual Cue: Emergency stop buttons are prominently placed on all major machines and are marked in red.

Objectives

The onboarding training will provide sign shop employees with the skills necessary to perform important tasks throughout the sign production process. By the end of the training, employees will be able to identify and differentiate between various substrates like vinyl, aluminum, coroplast, and polymetal. This objective is a part of the cognitive domain at the knowledge and comprehension levels. This involves understanding the unique properties, strengths, and appropriate applications for each material providing learners with a foundational knowledge crucial for effective decision making. Employees will also demonstrate their ability to operate a vinyl cutter, which includes procedural tasks such as loading materials, setting up design files, and adjusting blade pressure. This objective aligns with the psychomotor domain at the guided response and mechanism levels because it requires hands on practice and familiarity with equipment to achieve proficiency. In addition to operating the cutter, the training will cover the essential task of weeding vinyl and applying transfer tape which also engages the psychomotor domain. Learners will follow specific procedural steps to ensure clean removal of excess vinyl and proper transfer tape application, using visual cues to confirm success and accuracy in their work. Employees will learn to follow safety protocols like wearing protective

gear and using safety guards during machine operation. This element addresses the affective domain at the receiving and responding levels and highlights the importance of a safety first mindset in a manufacturing environment. The training will emphasize the significance of performing tasks with precision and care, integrating rules and principles to guide decision making like selecting the correct substrates based on project requirements and following safety guidelines. By incorporating a variety of learning objectives that span cognitive, psychomotor, and affective domains, the training ensures a holistic approach to employee development. These objectives are measurable and clearly linked to fact-based, concept-based, and procedural content structures allowing for effective assessment of employee readiness.

Conclusion

This online employee onboarding training program for sign shop employees is designed to equip employees with the essential skills and knowledge for success in their role. By breaking down the sign making process into smaller manageable tasks and subtasks, I can ensure that employees understand their responsibilities. The measurable objectives developed from the task analysis will help me track learning outcomes and confirm that my training course effectively prepares employees to operate machinery, produce signs, and prioritize safety.