

1. Topic Description:

Charcoal drawing, a form of art using charcoal sticks or pencils. Charcoal drawing allows easy blending and smudging abilities to create different tones and textures. This short course is an introduction to charcoal drawing. After completion of the course the learner would be able to identify the required tools for charcoal drawing, draw basic shapes with charcoal, and identify basic shading techniques.

Learner Description: The motivation of the learner is to explore the new medium in art. The learner demographic consists of people from different backgrounds and age groups with strong interest in art.

Prerequisite knowledge:

1. Knowledge of basic shapes and forms

Knowledge Dimension: Factual Knowledge

Cognitive Process: Remembering

2. Understanding of basic drawing techniques such as shading and blending

Knowledge Dimension: Conceptual Knowledge

Cognitive Process: Understanding

3. Familiarity with different grades of charcoal and their properties

Knowledge Dimension: Procedural Knowledge

Cognitive Process: Applying

4. Understanding of the principles of composition and perspective

Knowledge Dimension: Conceptual Knowledge

Cognitive Process: Understanding

5. Knowledge of basic color theory and how it applies to charcoal drawing.

Knowledge Dimension: Metacognitive Knowledge

Cognitive Process: Evaluating

6. Familiarity with basic drawing tools such as erasers, blending stumps, and fixatives

Knowledge Dimension: Procedural Knowledge

Cognitive Process: Applying

The information will come from the book "Simplified Essentials of Charcoal Drawing By Charles X. Carlson · 2013" and the evaluation will be done through a test with multiple Choice and short descriptive answer questions identifying the tools and techniques of charcoal drawing.

Implementation Link: <https://www.andem.in/charcoal-drawing-1>

2. Learning Objectives:

1. Identify and differentiate between the different charcoal drawing tools and their properties.

Knowledge Dimension: Factual Knowledge

Cognitive Process: Remembering

2. Create a blended shape using foundational charcoal blending techniques.

Knowledge Dimension: Procedural Knowledge

Cognitive Process: Applying

3. Analyze and evaluate the blending quality of a charcoal drawing.

Knowledge Dimension: Metacognitive Knowledge

Cognitive Process: Evaluating

3. PRE-TEST QUESTIONS:

1. Which of the following are basic shapes in drawing?
 - a. Circles and squares
 - b. Triangles and rectangles
 - c. Lines and curves
 - d. All the above

Knowledge Dimension: Factual Knowledge

Cognitive Process: Remembering

2. What is the process of combining two or more colors smoothly in a drawing called?
 - a. Shading
 - b. Blending
 - c. Stippling
 - d. Hatching

Knowledge Dimension: Factual Knowledge

Cognitive Process: Understanding

3. Which of the following is a type of charcoal used in charcoal drawing?
 - a. AB
 - b. HB
 - c. 4B
 - d. None of the above

Knowledge Dimension: Procedural Knowledge

Cognitive Process: Applying

4. What is the technique used to determine the relative size and position of objects in a drawing?
 - a. Composition
 - b. Perspective
 - c. Proportion
 - d. Contrast

Knowledge Dimension: Metacognitive Knowledge

Cognitive Process: Evaluating

4.POST-TEST QUESTIONS:

1. What type of paper is recommended for charcoal drawing?

Knowledge Dimension: Factual Knowledge

Cognitive Process: Remembering

Ans: Drawing paper with a slightly rough texture or paper specifically designed for charcoal drawing.

2. What are common tools used for blending charcoal?

Knowledge Dimension: Factual Knowledge

Cognitive Process: Understanding

Ans: Blending stumps or tortillons are commonly used for blending charcoal.

3. How would you shape a kneaded eraser for selective removal of charcoal and creating highlights?

Knowledge Dimension: Procedural Knowledge

Cognitive Process: Applying

Ans: To shape a kneaded eraser for selective removal of charcoal and creating highlights, tear off a small piece and roll it between your fingers. Shape it into a fine point or thin edge for precise erasing or flatten it slightly for broader coverage.

4. Reflecting on the charcoal drawing provided below, evaluate the effectiveness of blending techniques used.

Knowledge Dimension: Metacognitive Knowledge

Cognitive Process: Evaluating

5. How to use the system:

The E-Learning system designed for “Basics of Charcoal Drawing” is very easy to use. Access the website by clicking on this link or <https://www.andem.in/charcoal-drawing-1> . Take the Pre-test to start the learning process and follow the instructions provided. The menu bar provides quick access to different sections of the system and highlights the current section to show the progress.

6. How I applied Learner-centered Design principles:

Learners are given the freedom to choose their learning path and progress at their own pace, allowing for a personalized approach to their individual needs. The system integrates prior knowledge assessment through pre-test questions, ensuring that learners' existing understanding is considered, and relevant content is provided. Interactive learning activities, such as blending exercises and evaluating charcoal drawings, actively engage learners and promote deeper understanding and skill development. Visual and multimedia elements, including diagrams, illustrations, and videos, cater to different learning styles and enhance comprehension. Assessment and feedback, through post-test questions and evaluation of drawings, enable learners to track their progress and receive guidance for improvement. The user-friendly interface with clear navigation and progress indicators ensures ease of use for learners from various backgrounds and age groups.

7. My Evaluation:

The pre-test and post-test questions for the "Basics of Charcoal Drawing" course are designed to assess the learners' knowledge, understanding, and application of the course content. The questions are aligned with the learning objectives of the course to ensure a comprehensive evaluation. In the pre-test, learners are tested on their recall of basic shapes in drawing, understanding of color blending techniques, knowledge of charcoal types used in drawing, and familiarity with techniques. These questions correspond to the learning objectives of identifying charcoal drawing tools, creating blended shapes, and analyzing blending quality.

In the post-test, learners are asked questions about recommended paper for charcoal drawing, common tools used for blending charcoal, shaping a kneaded eraser for selective removal of charcoal, and evaluating the effectiveness of blending techniques. These questions align with the learning objectives of identifying charcoal drawing tools, creating blended shapes, and evaluating blending quality. By matching the questions to the learning objectives, the pre-test and post-test effectively evaluate the learners' understanding and application of the course content, providing valuable feedback on their progress and comprehension of charcoal drawing techniques.

The pre-test questions are designed as a multiple choice to get a quick understanding of the learner's knowledge before testing the system without overwhelming the learner. The post test questions are designed to be subjective descriptions to allow the learners to engage and showcase their depth of understanding of the concepts.

I had the opportunity to share the test with 12 individuals all of them who fit the learner profile and from different demographics. 12 individuals completed the test successfully, only 2 individuals provided the optional feedback and 0 completed the optional exercise.

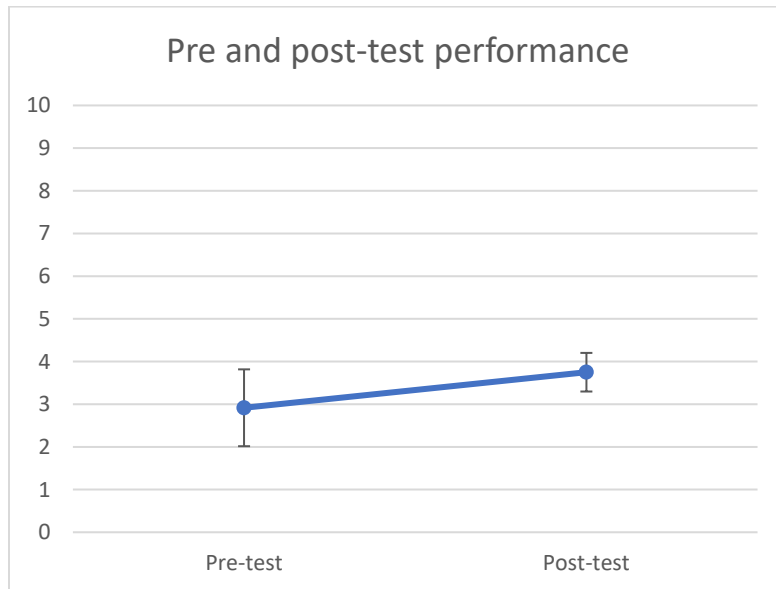
Based on the Pre-test and post-test data, the t-value indicates that the p-value will be small, approaching zero. A small p-value indicates that the difference in scores between the pre-test and post-test is statistically significant.

The calculated Cohen's d of 0.921 indicates a large effect size. It suggests a substantial difference between the pre-test and post-test scores, indicating a significant impact of the system.

8. Further research/development:

Interactive demonstrations to enhance the learning experience and provide visual examples of charcoal drawing techniques, additional resources such as downloadable worksheets or reference materials for learners to use as they continue their charcoal drawing journey and a discussion forum or community platform where learners can interact with each other, ask questions, and share their artwork for feedback may help the learners engage with the system more effectively.

9. Appendix:



Participants	Pre-test	Post-test	t-test
1	4	4	5.4E-03
2	3	4	
3	2	4	
4	4	4	
5	2	3	
6	3	4	
7	4	4	
8	2	4	
9	2	3	
10	3	3	
11	4	4	
12	2	4	
	2.92	3.75	
	0.90	0.45	

Resources:

Book: Simplified Essentials of Charcoal Drawing By Charles X. Carlson · 2013

Kneaded eraser: https://www.ehow.com/how_10013359_make-kneaded-eraser-soft.html

Blending Stump: <https://rapidfireart.com/2015/05/08/detailed-guide-how-to-use-a-blending-stump/>

Line in Charcoal drawings: <https://www.youtube.com/watch?v=uK-Cm0Q2jAw>

How to hold a pencil: <https://youtu.be/pMC0Cx3Uk84?t=55>