AUDIO VISUAL EDUCATION

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Module II   Non Projected Visual Aids

Unit   2   Lettering.

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INSTRUCTIONAL OBJECTIVES:

1. Enumerate the five factors which contribute to good
   readability in lettering.

2. Determine the minimum letter size for non-projected visual
   aid to be used in classroom, 10 Metre deep.

3. Differentiate italic lettering from other types of lettering.

4. Classify different letter styles as

              a) Gothic

              b) Textural

              c) Roman

5. List three principles to be followed in selecting lettering
   styles, for a visual.

6. Demonstrate good lettering layout which can contribute for
   readability in lettering.

7. State the two basic kinds of letter spacing for words.

8. Name the rule to be followed for determining the space
   between lines of lettering.

9. Write the five principles which will help to bring out
   contrast between letters and background.

10. Demonstrate ability to write captions using lettering
    guides and letter stencils, applying the factors contri-
    buting to layout, readability, spacing and contrast.

INTRODUCTION TO LETTERING HINTS
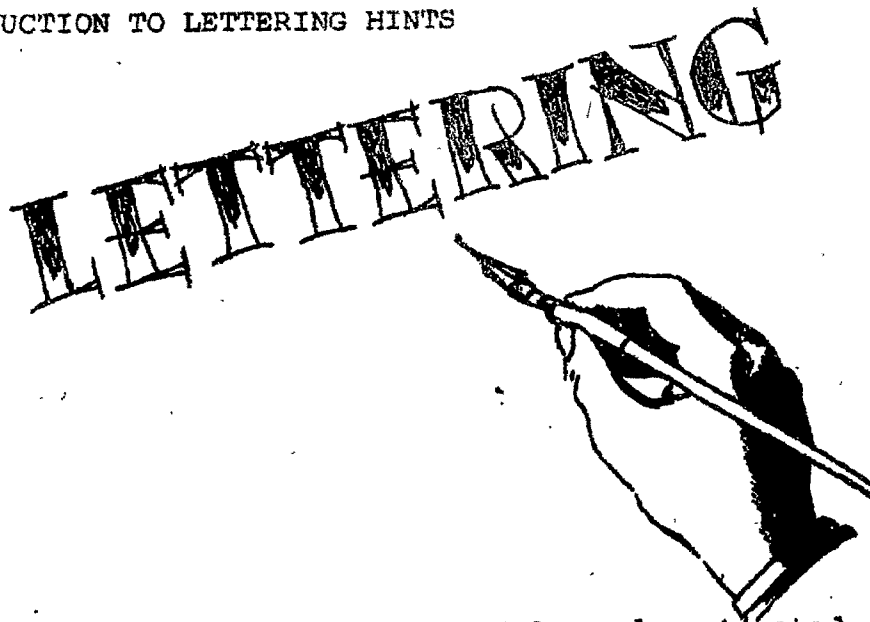
LETTERING

The importance of lettering cannot be underestimated.
Lettering is one of the most important aspects of making non-
projected aids. Every poster or picture, and all graphics
used for instruction user lettering. To prepare effective
instructional materials good lettering is essential. Lettering
is as much important as layout, design and visual tools which
was covered by Unit-1.

GOOD LETTERING HINTS

Good lettering must be easily readable and readability is
determined by the following five facts:

1. The <u>size</u> of the letters.
2. The <u>style</u> of lettering.
3. The <u>layout</u> or general arrangements of the
   word or words, in relation to the background
   area for best appearance.

4. The <u>spacing</u> between letters, words, as well
   as lines, &

5. The contrast between the colour of the
   letters and the background colour on
   which they appear.

The features of good lettering to be considered are therefore
the size, style, layout, spacing and contrast.

SIZE

Different visuals are intended for use at different distances
from the viewer. The viewer's reading position is important
to determine the size of any visual. If the viewer is nearer
to the visual, the size of the lettering can be small. If it
is intended for use in front of a large group, it is obvious
that letters should be relatively large. Experts have said
that at a distance of 10 metres, the vertical height of the
letters must be 25 mm in order to be readable.

Example
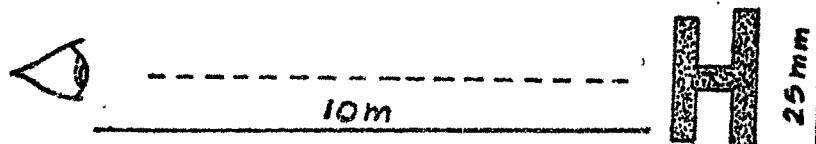
In a classroom where the back row of students is about 10
metres from the front of the room, the size of lettering on
a poster, chart or felt-board should be 25 mm or 1". For a
smaller group, the size can also be smaller. At greater
distances they should be proportionately larger.

Kodak Eastman Company, Rochester, Newyork in the Kodak
Pamphlet No. S-4, 5-56 LKP., recommends the following
letter-height and distance from viewer relationships in an
article on "Legibility Standards for Projected Materials."

Viewing distance	Minimum Letter size
Less than 1.2 m	3 mm
1.2 - 2.4 m	6 mm
2.4 - 4.8 m	12 mm
4.8 - 10 m	25 mm
10 - 20 m	50 mm
20 - 40 m	100 mm

This is only a recommended letter size for the vertical
height of the lower case letters (small letters) under normal
conditions. They are helpful as a general rule of thumb for
guidance in lettering. One may follow the letter sizes from
experience depending on the situation and types and styles of
letters used.

Besides the letter height and viewing distance relationship,
there is also the thickness of the lines used in forming the
letters. There is no fixed rule to say that a letter of
a particular height must have a certain line thickness. Often
beginners tend to make their letters too tall or too thin to
be easily read. The thickness of letters in relation to height
should be selected for best appearance. You must use own
judgment in providing the height, width and thickness of the
letters, in relation to the other factors, namely style, layout,
spacing, and contrast.

Example:

SLIDES —BAD

SLIDES —BETTER

STYLE

All lettering can be classified into three basic groups according to the style in which they are written. These groups are called

     1. Gothic Lettering
     2. Roman Lettering
     3. Text Lettering

Example:

Gothic **ABCDEFGH**
Gothic abcdefgh

   All letters composed of uniform width elements are classified with the Gothics. Before this simplified classification was adopted. Text letters were known as Gothic.

Roman ABCDEFGJ abcdefghi

All letters composed of thick and thin elements are called Roman.

Text ABCDEFGH abcdefghijkl

Includes all styles of Old English Text, Cloister Text, Black Text, German Text, Bradley Text, Gordon Tex and others.

In any of the above letters are made on a slant they are called "Italics".

Example:

Italic

Gothic Italics

Roman Italics

Texts

The style used determines how easily the letters can be read.
Letters that are simple are more easily read than complex styles.

ABCDEFGH   Example:

ABCDEFGJ

ABCDEFGH

When one is writing a sentence or paragraph it is better
to use a combination of capitals and lower case (small)
letters because they are more legible than using capitals
alone.

THIS IS HARDER TO READ

This Is Easier To Read

If letters are formed in terms of squares or rectangles,
they are hard to read if their corners are not rounded.
Rounding their corners will not only make the letters
more readable, but also more pleasing to the eye.

NOT READABLE

READABLE

The layout is the fundamental frame work on which one
builds his lettering on the visual. Planning is the most
important single step in lettering as it is in any form
of art. The arrangement of layout in a teaching visual
is even more important than the style or quality of
lettering because a well planned layout may make up for
weak lettering, but good lettering may not save a weak
layout.

There are almost endless possibilities for lettering
layout in the planning of a chart, poster or sign. It is
a good idea to try out various arrangements in small rough
sketches first before deciding on the final layout in terms
of balance, harmony, simplicity, etc. it is even necessary
at times to make a full scale pencil sample of the whole
visual. It is only possible to suggest a few guidelines as
shown by rough sketches below.

Example

DON'T RUN YOUR
LETTERING RIGHT
TO EDGE OF PAPER

THIS IS
HARD
TO READ

THIS IS
EASY
TO
READ

VARY
SIZE OF
LETTERS
ALSO
WIDTH
OF LINES
AVOID
MONOTONY

YOU CAN
SLANT WORDS
BUT..

YOU CAN
ARCH
YOUR WORDS TOO

SLANT THEM
UP
NOT
DOWN

S P R E A D
OR
CONDENSE WORDS
M A K E THEM FIT

Spacing refers to the amount of space left between the
letters of a word, between the words themselves, and
between lines. A neat lettering job can be ruined by
improper spacing.

There are two kinds of spacing between the letters of a
word. -

    1. Mechanical Spacing
    2. Optical Spacing

Example:

In mechanical spacing, the separate letters are treated as
if they were in a box or rectangular block.

Example:

The spacing is determined by the equalisation of distances
between the block. This type of spacing is found in lettering
that is produced by a machine. Although it is relatively
simple to do, it is not pleasing to the eye because not all
the letters are of equal width, and this mechanical measuring
method leaves too much space between some letters and not
enough between others.

Sample:

SALEMTOWN

Optical spacing is more pleasing to the eye. It is a better
form of spacing for lettering than mechanical spacing. It does
not require a person to measure for equal space between each
letter. In order to successfully space letters optically,
a person has to take into consideration the differences in the
shapes of the various letters.

Example

Regular Rectangular letters **E - H - I - M - N - U**

Circular Letters **B - C - D - G - O - (P) - Q - (R) - S**

Irregular Letters **A - F - J - K - L - P - R - T - V - W - X**

Narrow Letters **B - E - F - I - J - L - P - R - S - T - Y**

Normal Letters **C - D - G - H - K - O - U - V - X - Z**

Wide Letters **A - M - N - W**

Allowance must also be made for extra space inside some
of the irregular and circular letters.

Example:

SWGKLE
FPVCXYZ

It is then important to use personal judgment in the
arrangement of the various letters than form the word so
that the spaces between them are equal as far as possible.

Example:

SALEM TOWN

The basic consideration in optical spacing is therefore
the equalisation of the area or white space that lies between
the letters themselves.

Examples:

IDOKLC

In addition to spacing between letters carefully, there need to be enough space between words also, so that they are not crowded together.

Example:

THISISNOTREADABLE

THIS IS READABLE

Crowding can also take place if there is not enough space between lines of letters and words.
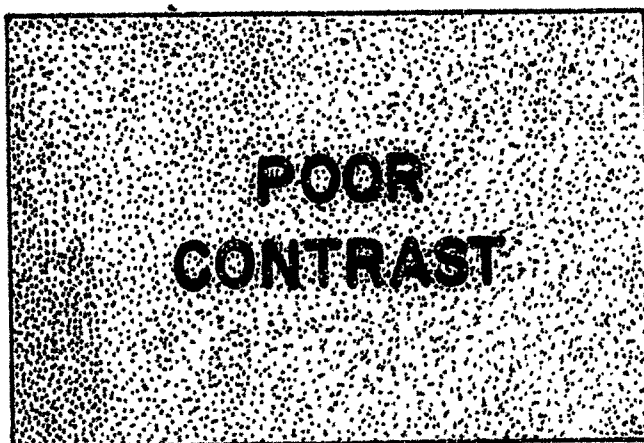
Example:

THIS IS TOO CROWDED

IT IS NOT EASILY READABLE

THIS IS BETTER SPACING

IT CAN BE EASILY READ

As a broad rule, one should allow at least one third of the height of an upper case letter (CAPITALS) for the space between lines of lettering. With practice, good spacing in lettering gets to be a matter of 'feel' than of 'measuring'.

The contrast between letters and their background is an important factor in their readability. Certain colours are more easily "read" than others. Black and the darker colours are usually stronger. They have a higher readability than the lighter pastel shades do. The background or "field" upon which the lettering is placed is of high importance. If black lettering is used on adark field it may be difficult to read the message.

Example:

It is best to select a colour which contrasts well with the background. Light coloured letters should be used on a dark background or dark letters on a light coloured background.

Example:

If a visual or a poster or a chart has a multi-coloured
background, it is difficult to select a colour that will
offer maximum separation (contrast) of the lettering and
the background. One possible solution is to insert a
plain coloured piece of paper over the portion of the
visual or poster or chart where the title or caption
should appear, and then do the lettering on this piece
of paper.

Example:
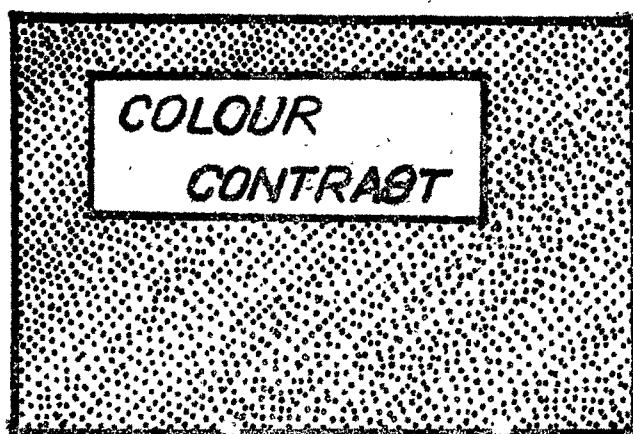
If the above method destroys the impact of the visual or
changes its meaning, then another solution must be found.
Shadowed letters are often quite effective in aiding separation
of the lettering and the background. Shadowed letters are
letters that have some of their edges framed in contrasting
colours. Thus, if light coloured letters are used, a dark
shadow is placed around it to enhance contrast.

SHADOW
TITLE
SLANT
PLAID

FINAL TIPS

Finally, as in all other things, a student of lettering who wishes to come up with a successful job must be prepared to work with patience, pain-staking care, precision and persistance.

Remember that good lettering is simply the selection of the appropriate size and style of lettering, and then arranging the letters and words so that they look attractive to the eye. To enhance their readability, select a contrasting colour for them, so that it will enable them to stand out from their background.

Observe these factors carefully when you are lettering. You are then sure of producing good titles and captions for your various visuals like charts, graphs, posters, etc. Your visuals will then be more effective and your teaching better, when you use good visual aids.

Learner activities:

1. Examine the lettering in different visuals displayed in the visual aid workshop. Find out how far these visuals conform to the tips given in this unit.

2. Classify the visuals in the visual aids workshop as poor and good according to size, style, layout, spacing, and contrast.

3. Discuss among yourselves, the necessity to follow the principles enumerated in this unit.

4. Fix up with your Training Officer in the Visual Aid Workshop time and complete practical exercises 1 to 5 and hand over to your Training Officer. If you have facilities you may do these exercises as per your convenience, but adhere to deadline given

Pr. Ex: 1	:	Stencil Lettering - I (Planograph or Omegraph).
Pr. Ex: 2	:	Stencil Lettering -II (Planograph or Omegraph).
Pr. Ex: 3	:	Mechanical Lettering-I (Letterguide-Duoline, Hopes or Pagel).
Pr. Ex: 4	:	Mechanical Lettering-II (Letterguide-Duoline, Hopes or Pagel).
Pr. Ex: 5	:	Mechanical lettering-III (Letterguide-Duoline, Hopes, Pagel).

AUDIO VISUAL EDUCATION

Module - II   : Non Projected Visual Aids.

Unit - 2   : Lettering

Practical Exercise - 1 : Stencil Lettering - I
                          (Planograph or Omegraph).

A. Problem : Lettering with Stencils letterguides
               six words.

    1. Letter the following six words using
        lettering guides nos:

        ALWAYS   - 15 mm.
        TITLE   - 12 mm.
        MOON   - 10 mm.
        MINIMUM   - 08 mm.
        GLASS   - 06 mm.
        DGET   - 05 mm.

    2. Use capital letters only.

    3. Use stencil guides as given.

    4. Letter neatly on an A4 sheet in vertical
        or horizontal position.

    5. Practice on news paper and old waste paper
        preferably back of your drawing sheets.
        Make your final copy on the A4 sheet.

B. Equipment and materials:
    a) A4 size drawing sheet.
    b) Old drawing sheets.
    c) Drawing board, T. square and set square.

    d. Cello tape.

    e. Indian Ink

    f. Lettering Stencils and pens.

C. Points for grading:

    1. Alignment of letters.

    2. Smoothness of ink.

    3. Spacing.

    4. Neatness of taping.

    5. All over appearance.

D. Deadline for Exercise 1 - 3 rd May

ALWAYS	**15mm**
TITLE	**12mm**
MOON	**10mm**
MINIMUM	**08mm**
GLASS	06 mm
D G E T	05 mm

AUDIO VISUAL EDUCATION

Module - II   :   Non Projected visual aids.

Unit - 2   :   Lettering.

Practical Exercise - 2 :   Stencil Lettering - II
                          Planograph or Omegraph).

A. Problem : Lettering with Stencils letter guides
             using optical spacing.

   1. Letter a two word caption using optical
       spacing to be used as a heading for a
       poster to be made.

   2. Use upper case (Capital) and lower (small)
       letters as desired.

   3. Arrange letters neatly.

   4. Use stencil guides 20 to 25 mm.

   5. Letter neatly on A4 size drawing paper

   6. Practice on old news paper or on back of
       your old drawing sheets.

B. Equipment and materials.

    a) A4 size drawing sheet.
    b) Old drawing sheets.
    c) Drawing board, T-square and set squares.
    d) Cello-tape.
    e) Indian Ink.
    f) Lettering stencils and pens.

C. Points for grading:

    1. Alignment of letters.

    2. Smoothness of ink.

    3. Spacing.

    4. Neatness of taping.

    5. All-over appearance.

D. Deadline for Exercise 2 - 3rd May.

STENCIL LETTERING-II
(Planograph)

PROVIDE

GUARDS

AUDIO VISUAL EDUCATION

Module — II   : Non-projected Visual Aids.

Unit   — 2   : Lettering

Practical Exercise : 3 : Mechanical Lettering — I
                        (Letterguide)
                        DUOLINE, HOPES or PAGEL.

A. Problem : Lettering with letter guides, using mechanical
               spacing 5-10 and mechanical spacing and numbers.

    1. Letter the following words using letterguides
        with appropriate pens.

        AVERAGE   —   5

        MAXIMUM   —   6

        LETTER   —   7

        NATION   —   8

        GANDHI   —   9

        TOOL   —   10

    2. Use only upper case lettering

    3. Arrange words as they appear on drawing
        sheet 200 x 100 mm.

    4. Score 25 mm above and 25 mm below lettering.

B.   Equipment and materials:

    1. Drawing paper 200 x 100 mm.

    2. Old drawing sheets.

    3. Drawing board, T-square.

    4. Tape, Indian ink.

    5. Lettering guides and pen.

C.   Points for grading -

      1. Alignment of letters.

      2. Smoothness of ink.

      3. Spacing.

      4. Neatness of taping.

      5. All-over appearance.

D.   Deadline for exercise 4- 3rd May.

MECHANICAL LETTERING-I
(Pagel)

AVERAGE	5
MAXIMUM	6
LETTER	7
NATION	8
GANDHI	9
TOOL	10

AUDIO VISUAL EDUCATION

Module - II   :   Non-Projected Visual Aids.

Unit   - 2   :   Lettering.

Practical Exercise - 4 : Mechanical Lettering -II
                          (Letterguide)
                       (DUOLINE, HOPES, or PAGEL)

A. -   Problem : Lettering with mechanical letter
                       guides, adopting letter spacing,
                       by your judgment.

1. Letter your name in one line on drawing
    sheet using spacing by judgment and letter-
    guides 10 to 15. Limit to 24 letters.
    Shorten your name or part of it if necessary.

2. Use upper case (capital) letters only.

3. Score 25 mm above and 25 mm below lettering
    done.

4. Cut at 25 mm above and below the scored lines.

5. Cut the sides similarly 25 mm on either side
    of lettering.

6. Use old sheets for rough work.

B.   Equipment and materials.

1. Drawing sheet 250 x 300 mm
2. Drawing sheet for rough work.
3. Drawing board, T-square and set square.
4. Tapes and Indian Ink.
5. Lettering guides and pens.

C.   Points for grading.

        1.   Alignment of letters.

        2.   Smoothness of Ink.

        3.   Spacing.

        4.   Neatness of taping.

        5.   All over appearance.

D.   Deadline for Exercise - 3 - 3rd May.

MECHANICAL LETTERING—II

(Page1)

R.THIRUNAVUKKARASU

AUDIO VISUAL EDUCATION

Module - II	:	Non-Projected Visual Aids.
Unit - 2	:	Lettering

Practical Exercise - 5 : Mechanical lettering III
  (Letterguide)
  (DUOLINE, HOPES or PAGEL)

A.
  Problem : Sentence writing using suitable
  letterguides with right and left
  hand justification.

1. Letter the following words using template
   with appropriate pen (upper and lower case).

   Based on experience and research, the
   International Labour Organisation has
   evolved- a vocational training system
   based- on modules of employable skill
   built up from- a variable- pattern of
   self contained teaching units.

2. Arrange wording as it appears on this
   sheet. ie. both left hand and right hand
   ends of all lines to be same as shown above.
   Use same spacing.

B.   Equipment and Materials

1. A4 size drawing sheet.
2. Drawing board, T-Square and set squares.
3. Tape.
4. Indian Ink.
5. Letterguides and pens.

C. Points for grading

      1. Alignment of letters

      2. Smoothness of ink

      3. Spacing

      4. Left and right hand vertical line.

      5. All-over appearance.

D.   Deadline for project: 3rd May.

MECHANICAL LETTERING-III

(PageI)

Based on experience and research, the Instructional Labour Organisation has evolved a vocational training system based on modules of employable skill built up from a variable pattern of self contained teaching units.

(INCORRECT)

MECHANICAL LETTERING-III

(Pagel)

(Left and Right hand justification)

Based on experience and research the Instructional Labour Organisation has evolved a vocational training system based on modules of employable skill built up from a variable pattern of self contained teaching units.

CORRECT