CHAPTER - III

HANDWRITING : THEORY & RELATED STUDIES.

1. Studies on Handwriting
2. Definition of Handwriting
3. Handwriting & Graphology
   (a) History of Graphology
4. The UNESCO Monographs on Handwriting
   (a) The First UNESCO Monograph
   (b) The Second UNESCO Monograph
5. Wisconsin Study
6. Some Major issues of the Teaching of Handwriting:
   (a) Style of writing : Manuscript V/s Cursive Script
   (b) The Use of Handwriting Instruments
   (c) Tracing Vs Copying
   (d) Speed Vs. Quality
   (e) Race Difference and Handwriting
   (f) Intelligence and Handwriting

***
1. STUDIES ON HANDWRITING:

Writing serves an important function in human communication. It is universally recognised together with reading as a fundamental aspect of literacy. In view of the fact that very little has been done by Indian research workers in this field, a survey of some of the important studies is attempted below. However, before proceeding to discuss the theories of handwriting, the term itself needs defined precisely.

2. DEFINITION OF HANDWRITING:

The term 'handwriting' should be carefully defined before developing an objective measuring instrument thereof. Some of the usual definitions are given below:

(1) The Thorndike Junior Dictionary: "Writing by hand, writing with pen, pencils, etc." (1)

(2) A Learner's Dictionary of current English: "A person's style of writing by hand, writing by hand", (2)
Basic Dictionary of American English: "Way a person writes, writing done by hand, not typed or printed". (3)

The Oxford Dictionary of Current English: "Writing with the hand especially of a particular person". (4)

Encyclopaedia Britannica: "Handwriting or Chirography, writing with the hand as distinguished from print... restricted to mean the form of writing peculiar to each person... in addition to the actual motor act and the resulting script, handwriting includes also handwriting identification and graphology". (5)

Warren's Dictionary of Psychology: "Symbolic tracing or marks made on paper or other material by the human hand or its equivalent as a record of thought or as a means of communication". (6)
The above definitions are basically similar in the scope of their meanings but the last definition is more comprehensive as compared with the earlier ones. In the present study the term handwriting is defined, bearing in mind all the relevant ideas involved. Accordingly, handwriting is defined as, "any record of language symbols, used to convey thoughts or ideas, made by the hand using certain common materials like a pen, a pencil, etc. on certain standard media like a slate, paper, etc. aiming at conveying thoughts or ideas through the symbols."

3. **HANDWRITING AND GRAPHOLOGY**:  

The earlier studies of handwriting were mainly devoted to the determination of personality traits by examining a person's handwriting. This branch is known as graphology. According to Dorothy Sara, "Graphology (handwriting analysis) reveals a person's inner traits of character as they are expressed in the letter formation". (7) Billie Pesin Rosen elaborates the same idea when he says -
"Graphology teaches that each of us writes a little differently; no two handwritings are exactly alike, just as no two finger prints are ever identical. Every unique variation in our script is meaningful, because it reveals particular personality traits. The graphological analysis of a handwriting specimen becomes a behavioural indicator and remarkably accurate gauge of the writer's character". (S)

Robert Holder in his book "You Can Analyze Handwriting" gives a speedy overall view of what handwriting analysis covers:

<table>
<thead>
<tr>
<th>Handwriting characteristics</th>
<th>Personality characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spacing of writing</td>
<td>State of mind</td>
</tr>
<tr>
<td>Speed of writing</td>
<td>Amount of energy</td>
</tr>
<tr>
<td>Slope of writing</td>
<td>Degree of affection</td>
</tr>
<tr>
<td>Size of writing</td>
<td>Concentration powers</td>
</tr>
<tr>
<td>Line of writing</td>
<td>State of disposition</td>
</tr>
<tr>
<td>Terminal Strokes</td>
<td>Degree of generosity</td>
</tr>
<tr>
<td>Capital letters</td>
<td>Personal tastes</td>
</tr>
<tr>
<td>Small letters</td>
<td>Mental development</td>
</tr>
<tr>
<td>Signature</td>
<td>Individuality</td>
</tr>
<tr>
<td>Flourishes</td>
<td>Superficialities</td>
</tr>
</tbody>
</table>
Robert Holder also pointed out that for a quick picture of an individual's personality what one may need is any scrap of his handwriting. It can be in pen or pencil. It can be a signature on the back of a cheque, a hastily written inter-office memo. (9).

Clinical investigation of handwriting specimens has disclosed large qualities of information concerning the validity of handwriting as a fine indicator of character. Therefore it is important to note the history and stature of graphology.

(a) History of Graphology:

In tracing the origin and growth of the study of handwriting analysis recorded history shows that graphology, as we know it today, is a little more than three hundred years old. In tracing the origin of graphology, Dorothy Sara writes, "The first record of a book on the
subject of graphology is dated about 1630 A.D., written by Camillo Baldo, an Italian professor. The very long title was "Tratto come Una lettera missiva si Cognoscano la natura e qualita del Serittore" - or How to know the nature and qualities of a person by looking at letters which he has written" (10). It created a temporary stir at the time, but nothing much was done about it, since people then felt one had to possess a gift of inner sight or intuition to be able to understand character from handwriting.

About two hundred years later the subject of handwriting analysis was revived in France, when Abbe Flandrin, a scholarly churchman became greatly interested in Baldo's book. The Abbe felt it merited study and discussion. He formed a group who worked on the subject, classifying handwritings of people of various interests and pursuits. From the work that group did were born the basic rules of handwriting analysis now in use. To give this new science a name, the Abbe used two Greek words; grapho,
meaning "to write" and ology, which means "a science." — Thus we have the coined word graphology.

In 1872, Abbe Michon wrote a book titled 'Systeme de Graphologie' and it was the first time that the word 'Graphology' appeared in print. In 1880 Michon's work was developed by Grepieux Jamin, into more concise methods of classification of various traits shown through handwriting analysis.

Scholars such as Goethe and Moreau later wrote leaflets on the subject. Keen interest soon spread through Germany, then to England where a group of intellectuals including Elizabeth and Robert Browning spent a great deal of time developing the study and application of handwriting analysis. Dr. Kleges of Germany, the father of modern graphology, undertook laborious task of proving and establishing the principles of graphology.

Graphological societies have been in existence in many countries since the nineteenth century. The subject is taught in many European
universities as an integral part of psychology. In United States graphology is still young. The pioneers were Louise Rice and De Witt B. Luces whose books brought graphology to the attention of American people.

THE STATUS OF HANDWRITING INSTRUCTION IN DIFFERENT EDUCATIONAL SYSTEMS IN THE WORLD.

Several research studies have been conducted on the status of handwriting in the world. Out of them the following two are worth mentioning:

(a) The Unesco Monographs on Handwriting
(b) The Wisconsin Study -

A brief summary of both the studies are given below:

4. THE UNESCO MONOGRAPHS ON HANDWRITING:

The UNESCO has sponsored two monographs of international scope on the teaching of handwriting.
The First UNESCO Monograph:

It provides a summary of replies from 48 countries to a questionnaire on the current practices in the teaching of handwriting (11). This report not only gives a concise summary of the status of handwriting throughout the world, but also contains a number of illustrations of the types of characters which must be learned to produce handwriting in various languages. The chief findings of this report were later summarized and elaborated upon in a more formal UNESCO report, the American version of which was issued in 1956. This survey prepared by William S. Gray, was designed to investigate the related functions of reading and writing so that a concerted effort might be made to improve literacy on an international scale, especially among adults. After noting the nineteenth century emphasis upon the form and the quality in handwriting, the report indicates concern, since the turn of the century, with a learner and his problem in expressing his meaning with an acceptable standard of speed and quality. Handwriting is widely thought of
not only as a communication tool but also as a means of individualized personal expression.

There appears to be considerable agreement that activities which provide for simple perceptual-motor coordination can be encouraged before the child is formally taught to write. A trend is evident in some countries to emphasize the writing of word-"wholes" rather than letters, especially during the phase of initial instruction. Evidence based upon the use of Roman type letters is cited to support the position that the perception of word-"wholes" is both easier and more meaningful to the child during the stages of initial instruction in handwriting than is corresponding perception of the parts of words. Many countries have adopted simple forms of writing to help children overcome certain difficulties in the beginning stages of instructions in handwriting. In countries using an alphabetic language, the simplified form of writing is variously called as script, print script or manuscript writing. Handwriting is a very complex skill which involves consideration
of the maturation of the learner as well as appropriate practice opportunities. This idea seems to be wide-spread.

(b) The Second UNESCO Monograph:

The report directs attention to the increasing use of scales in evaluating handwriting and cites the recent development of two handwriting scales in Spain: (12). There also appears to be widespread interest in many countries in the techniques so as to diagnose and find out the remedy for poor handwriting. The report also touches on several controversial issues in the teaching of handwriting on the international scene, including such questions as the extent to which an individual should be allowed to vary his style of handwriting, the relative hygienic values in the use of vertical versus slanted writing, and certain unresolved problems concerning the condition of practice in handwriting.

Other aspects of the status of handwriting are discussed in connection with the nature and
extent of illiteracy, as indicated by data
gathered from responses to a UNESCO questionnaire
received from 109 countries and territories,
representing about 80 percent of the world's
population. If literacy is thought of as the
ability to write a simple letter, on the one
hand, and the ability to read relatively simple
materials in the vernacular on the other hand,
then, the UNESCO data suggest that approximately
onehalf of the world's population is illiterate.

5. THE WISCONSIN STUDY:

This exhaustive study on handwriting
practices was completed in 1951. It was conducted on a sample of 232 school systems in the
State of Wisconsin in the United States of
America (13). While selecting samples care
was taken to issue a representative sampling
of sizes and types of schools in rural and
urban locations in all parts of the State.
Some of the important findings of the study
are as follows:

(a) Teachers rate legibility as the
most important objective of hand-
writing. They rate the specific legibility factors like letter formation, slant and spacing as of next importance. Speed is a factor least stressed.

(b) Teachers, on the whole, seem to be aware of individual problems in learning to write, including the difficulties encountered by the left-handed writer and the corresponding adjustment needed in regard to handwriting position, the paper and the handwriting instrument.

(c) Teachers expect children to learn all the symbols of handwriting at the beginning of the fourth grade and to acquire them in this order: numerals, lower case letters, and capital letters.

(d) Most teachers follow a commercial system for the teaching of handwriting and report that few other
outside resources are available except for visual aids and certain types of printed materials.

(c) Less than half of the schools reported the use of scales in evaluating handwriting quality. Wherever scales were used, they were commercially prepared, although a few locally developed scales were also in use.

(f) Many types of handwriting instruments are used by the children during and out of the time allotted for handwriting instruction. The most frequently used instruments are the pen, the fountain pen, the beginner's pencil, the ball-point pen, crayon, chalk, the mechanical pencil and the steel pen, the holder, etc. Children typically write on lined white paper of regular size, with space ranging from one inch in the Kindergarten
to three-eighth of an inch from grade IV onwards.

(g) Practice is a valuable factor in the acceptance and use of standard handwriting symbols. Those symbols showing the greatest variation in form were upper case cursive letters and manuscript numerals, whereas the least variation in form was found for small cursive letters.

6. **Some Major Issues in the Teaching of Handwriting:**

There are certain controversial issues on the teaching of handwriting. An attempt is made here to discuss along with the solution, if any, provided by experimental studies.

(a) **Style for Writing: Manuscript Vs. Cursive Script:**

Many studies have been conducted to find the suitability of these two forms of writing in schools. West concludes, from experimental evidence, that manuscript writing tends to be
written faster in the beginning grades and cursive writing, faster in the later grades and at the adult level (14) Hildreth (15) found that the eighth grade students could copy unjoined strokes significantly more rapidly than they could copy joined strokes, which gives some evidence that manuscript writing may, at least under some circumstances, be written rather rapidly.

Herrick presented the arguments for each style of writing and summarized the researches prior to 1960 pertaining to each. His conclusion favoured the retention of manuscript writing beyond the primary grades, but he also stated that the question is probably not important to most adults who should be allowed to decide on their own style (16).

According to Anderson (17) who examined earlier researches on the two styles in terms of the issues of legibility, speed and ease of learning, concluded that manuscript writing not only is more legible than cursive but can also be written at least as fast and learned more
easily by children and adults. He suggested that longitudinal research is needed to provide definitive evidence of the superiority of the manuscript style over the other one.

Discussing the problems regarding English Handwriting, an Indian author Mr. P.D. Pathak raises the question, "which writing should be encouraged script or cursive?" He gave the solution specially for Indian pupils, "Script writing is simple and easy, neat and legible. It is adapted to the child's capacity because it has no loops and flourishes. It removes the confusion from the child's mind due to two kinds of writing with which he has to contend in learning to read and to write. It brings about an improvement in spelling because a comparison with the printed word is possible. It produces less strain on the hand muscles because no effort is made to join letters. For all these reasons, script writing suits children who start writing for the first time". (18)

In the article, "A Decade of Research in Handwriting", in 'The Education Digest', Mr. Eunice
Askov, and others observe, "On the question of manuscript vs. cursive writing for initial instruction, only a few relevant studies were reported in the 1960's. Those by Rudolf Meis, Loretta Byers and John Bolen compared the number of errors made while children used each style, but none offered conclusive evidence for the superiority of either style. Elaine, Templin, studying adults 10 years out of high school, found that those who had received only manuscript instruction in the elementary school wrote more legibly than any others. For practical purposes, there seems to be no need to change from manuscript to cursive writing if manuscript writing is introduced first. Definitive data, to show that introduction of manuscript writing produces superior results, has not yet been reported". (19).

(b) **The Use of Handwriting Instruments**

The nature of handwriting instruments that facilitate learning to write is an important factor to consider. Research in this area is too scanty to permit any conclusion. Whittaker compared the relative effectiveness of steel
pens and fountain pens in the attainment of speed and quality. He found that improvement in quality and speed favoured the fountain pen and that both children and teachers preferred fountain pens to steel pens. (20) The most notable series of studies during the decade of 1960-70 were by Herrick in this area. He reported that children prefer adult pencils over beginner pencils, which have not been shown objectively to be better for beginning writers. (21) In another study the general conclusion was reached that the use of ball point pens is conducive to deterioration of handwriting quality. (22)

More work is needed in this area to determine what modifications in writing instruments are associated with easier, faster and more legible writing.

(c) Tracing Vs Copying:

There are controversies as to which of the procedures is more suitable for the beginner. Research studies conducted in 1923 by Gates and Taylor have proved that in learning handwriting,
copying is a better method than tracing (23). Hertaberg in a study conducted in 1926 comes to the same conclusion (24).

(d) Speed Versus Quality:

A formula for expressing the relationship between quality and speed in a combined handwriting score was developed and validated by Gates (25). The relationship expressed in a formula in which the "Combined score equals quality times the cube root of speed" reflects the more recent emphasis upon quality in the instruction of handwriting. Another study by A.R. Wills, conducted in England, showed that in successive age levels from eight to twelve years, speed and quality in normal handwriting tended to vary, together with substantial positive correlation (26).

(e) Race Difference and Handwriting:

Garth and others compared the handwriting speed and quality of Negro and White children in grade IV to VIII. They found that there was
no significant differences in handwriting speed and quality between the two groups. (27).

(f) Intelligence and Handwriting:

On the basis of several studies to find the relation between intelligence and handwriting it appears that there is a low but positive correlation between these two factors. The study of Gates and La Salle, which proved earlier this relationship has been verified by other research workers also. (28).

Over and above, there are other issues like slant in writing, handwriting, and fatigue, the role of drilling, left handedness which also need for further basic research. These factors also effect directly the handwriting process.

If we want to understand the factors involved in the instruction of handwriting and to improve it, some of the studies on the above issues must be conducted in each language area in our country.

***
BIBLIOGRAPHY


***