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A PRELIMINARY STUDY OF MATURATION IN HANDWRITING; ALPHABETS
WITH DEVELOPING INDIVIDUAL CHARACTERISTICS IN
AGE GROUP OF (17-22) YEARS

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RESEARCH ARTICLE

**A PRELIMINARY STUDY OF MATURATION IN HANDWRITING; ALPHABETS
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ABSTRACT

Handwriting is considered a written speech of individual's oral efforts, act, personality, characteristics and tends him to differentiate from others. It's establish a testimony and distinctive style in writing which only may be vary by accidental causes such as weakness, disease, excitement, carelessness etc. Handwriting is considered as means of individual's unique identification and varies over a natural range. A testimony phase is found in the handwriting of teenaged and adults. For the present study, 80 samples were collected randomly from Amity University of the age group (17-22) years. By the analysis of age group (17-19) & (20-22) years, it was observed that 75-97% maturation and development of individual characteristics were present in (20-22) years age group while in (17-19) years early phase of maturation was in process which indicates that the maturation in writing and styles tends to the age.

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INTRODUCTION

In forensic field, for identification purpose; a matured handwriting is very helpful which gives individualistic characteristics and formation of letters¹. In its restricted form, handwriting is considered as a written speech, every act of it becomes impressed with characteristics peculiar of an individual². This establish a distinguish style, customary phase in writing which may be more or less varied from time to time either by accidental causes such as haste carelessness, position of writing, disease or weakness. There is a transitory phase of maturation between the teenaged and adults handwriting because the teenager's handwriting (Formation of letters) is much influenced by teacher's handwriting, while the adults create their own formation or standard formation of letters³.

Writing Individuality relay on the hypothesis that the handwriting of every individual distinct from others. Though, proportionate aspects may influence the handwriting style such as gender, age, ethnicity etc., but among them style of handwriting tends towards the personality of its own from others of an individual⁴. The common sources of identification of any two handwritings can be established only if similarities

are observed, and by facts general similarities are found in persons having been from the school or their family or relatives; The individual characteristics of writer develops according to maturation and known as a indicator of personality⁵.

Handwriting is unique identity of an individual, although some characteristics may be acquired when they learn to write by copying letters and words of teachers, but according to the age of writer the handwriting tends and shows additional changes which is considered maturing phase. It's very hard to determine the sex and age of individual from writing analysis⁶. If any disputes found then the measurement of maturity can be helping. On the basis of forensic investigation, experts can minimize the numbers of suspects by eliminating others⁷.

In the present study, 80 samples were collected randomly from Amity University of the age group (17-22) years to see the maturation in the handwriting of young people. By the analysis of age group (17-22) years, it was observed that maturation by handwriting can be done or can be determined which phase of maturation was in process which indicates that the maturation in writing and styles tends to the age.

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MATERIAL AND METHOD

For this Study, all the 80 samples were collected of age group (17-22) years from Amity Institute of forensic Science, Amity Institute of Bio-technology and other institutes of Amity University, Sec-125, Noida, Uttar Pradesh, India. After taking the consent from the writers; a few lines were copied from website and after taking the print out of those lines, the students were asked to write same material on A-4 size white paper sheet including their age and qualification.

METHOD

All the samples were examined to see the development of alphabets in handwriting, formation of letters and individual characteristics such as styles, alignment and formation of letters. An individual always has a unique identity in their handwriting in form of; formation of letters, styles, slants, connecting strokes or spacing between words or finishing the words. For measuring the maturation in handwriting and development, my parameters were the handwriting characteristics such as; connecting letters (more connectivity more maturation), slant, shapes, rhythm (more rhythm, more maturation) and spacing pattern, speed (More speed more maturation).

Hypothesis

In forensic, for identification purpose; a matured handwriting is more helpful which gives the individual characteristics in form of letters and words and about the personality of writer. The ability to produce the letters and formation varies from one writer to another is based on the writer's perception of image and their capacity to repeat that visual image⁸. There is a transitory phase of maturation between the teenaged and adults handwriting, because the teenaged handwriting is influenced either by the teachers or others while the handwriting above 20-22 years indicates their own style which is in fact is individual characteristics⁹. Although most of the samples indicate maximum similarities of class characteristics influenced by the writing of teachers or relatives¹⁰.

RESULT AND DISCUSSION

Handwriting characteristics to which the experts evaluate include the size, slope of writing, pen pressure, pen lifts, and spacing between relative letters, line quality beginning and ending strokes. Single characteristics cannot determine the writers identity rather it is possible through a combination of significant and valuable features. The writing skills cannot be changed or improved in a short time, if any correction or re-touching the letters or words has been made; it demonstrates the appearance in comparison of naturally prepared or written materials. A handwritten sample demonstrates the handwriting development in Figure 1.

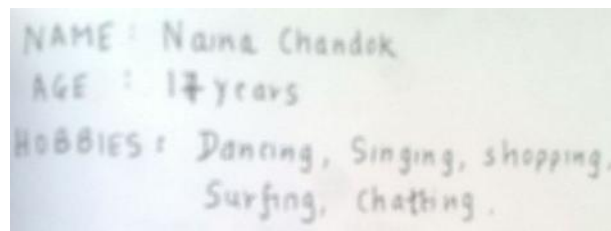


Fig 1 formation of letters and the level of maturation in handwriting

This study was conducted to examine the development of maturation in alphabets in handwriting, and maturation was calculated in percentage for a specific age group in table 1 given below-

Table 1 Percentage of maturation according to age in specific Alphabets

S. No.	Alphabets	Age group (Years)	Percentage of maturation
1.	N,K,B,G,D,T,H,V,P,S	17	54%
2.	Y,B,G,T,N,O,F,	18	65%
3.	S,K,P,I,M,D,G,H,T,U,	19	78%
4.	C,F,G,W,L,A,C,	20	89%
5.	A,F,R,I,E,N,D,N,U,R,Y	21	92%
6.	U,T,D,S,B,H,T,Y,	22	93%

During the examination, it was observed that in age group of 17 years samples indicates immature handwriting influenced from the writing of teachers, lacking of maturation in alphabets, and unconnected letters. With respect of our parameters it indicates 54% maturation. In 18 years age group, handwriting indicates mixed slant, letters shows fast pace of maturation, cursive form of writing and about 65% of maturation.

At this level (19 years) of age, an improvement in maturity about 78% can be seen in form of connection of letters at few places, and an attempt of letters uniqueness; which indicates that deviation in time is about to come. More developed handwriting with mixed slant (vertical and backward) connection of starting letters, cursive form with 89% of maturation was observed in the age of 20 years age group. In the age group of 21 & 22 years, handwriting indicates the cursive form of writing (Feature of maturation in handwriting), uniqueness in alphabets, connecting strokes in the letters and rhythm was seen. It is an indication of maturation in writing of individual characteristics or the identical features in writing. At this level approximately 92 & 93 % of maturation in handwriting was present. If any maturation couldn't be observed at this level then the writing skills or the quality of letters, connecting strokes, rhythm, slant in writing can be taken as an individual characteristics of handwriting.

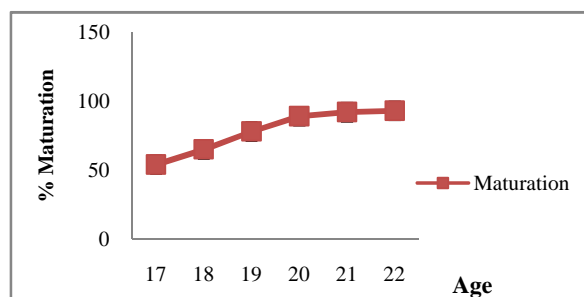


Fig.2 Graphical representation of Maturation according to age

Figure 2; represent the development of alphabets according to the age whose increment indicates the development of maturation in handwriting of a writer. In this preliminary study, we concluded that with respect of age; the development in handwriting takes place and signifies the maturation. It also signifies the individual characteristics of a writer and a symbol for their identity in forensic investigation.

CONCLUSION

The cultural norms, rituals, literature, and theories could be possible to pass from one generation to another from the development of handwriting, which allows them to record and represent the things in different images¹¹. Handwriting of a writer is considered the unique authenticity¹². There may be some characteristics similar to some other people acquired when they learnt to write by copying letters and words thought by teachers. But according to the age of an individual, the handwriting tends and shows additional changes and considered in maturity phase¹³. Some writer's handwriting lack of maturation level according to their age, but that also have identical and individual characteristics. The measurement of maturity can be helping in forensic investigation¹⁴. On the basis of conducted study, we can say that the forensic investigators/experts can minimize the number of suspects by eliminating from others. This study increases the value and reliability of documents examination in court of law¹⁵.

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