

INDIVIDUAL VARIATIONS IN ONLINE NEWSPAPER READING

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Abstract: The study attempted to measure the individual differences in reading online newspapers. A sample of individuals from different age groups, income level, occupation and educational qualifications had been chosen for the purpose. Findings reveal that there are individual differences in online newspaper reading habit.

Keywords: Individual Differences, Reading Habit, Newspaper Reading Habit, Online Newspaper Reading

1.0 Introduction:

Among different primary sources of information, the newspaper holds an important position. It is a primary source, which provides up-to-date information. A newspaper encompasses almost every subject of human interest like politics, sports, agriculture, social, economics, jobs, entertainment to name a few. Reading the newspaper is an age-old habit. However, it is our observation that the purpose of reading newspapers depends on the individual itself. Various factors like age, income, habitation, occupation, gender and many others determine the individual choices in reading newspapers.

Individual difference is described as the variations among individuals, that distinguish them from each other. Charles Darwin in 1859 was the first man to deal with the topic 'Individual Difference' in his work "The Origin of Species." Darwin suggested that "new species are the result of extreme within-species variation. Individual changes become so extreme that a new species buds off from an existing one with either physical isolation or environmental pressure" (Insel, 2006). The interest shown by Darwin was carried out by Francis Galton, who attempted to quantify individual differences among people. He was the first to apply statistical methods to the study of human differences (Cohen, 2013).

Farley and Truog (1970) in their work "Individual Differences in Reading Comprehension" depicted that the strongest implication of their study was the identification of consistent ID's (individual difference) sources of variance in reading comprehensions. In their research, reading comprehension was studied as a function of individual differences in extraversion-introversion, neuroticism and academic and resultant achievement motivation. The results were similar to those of Vehar (1968). On the other hand, Debra L. Long & Erin M. Freed (2021) used multi-level modelling to determine the individual-difference factors. Even the recent study on "Individual differences in social media use for information seeking" proved that individual differences exist in media use (Kim, Sin, and Tsai 2014). Also, in his study, Chandra (2019) concluded that 'there are individual differences in information behaviour for assimilation'.

However, existing literary warrant did not reveal any evidence of study on individual differences in online newspaper reading. As a result, a sizable knowledge gap had been identified in the area, necessitating further research.

1.1 Objective

The objective of this study was to assess the individual differences in online newspaper reading habit. However, to reach the objective, the study had attempted to:

- compare the individuals in terms of their age;
- compare the individuals in terms of their educational qualifications;
- compare the individuals in terms of their income; and
- compare the individuals in terms of their occupations.

2.0 Methodology:

To achieve the stated objective, survey method had been employed. An attempt was made first to select the sample from the target population. However, as the population was large and heterogeneous, covering the entire population was not convenient for the study. So, a sample was chosen by using a stratified random sampling method. Four parameters: age, income, educational qualification and occupation were considered while choosing the sample. Each of these four parameters was further divided into appropriate subgroups with a fixed sample size of 3 individuals (for details, please see the table below). Under the subgroups, each sample was selected by using judgment sampling technique. It was intended to compare the differences among selected individuals in reading an online newspaper independently by each of four parameters.

In the parameter 'Age', four subgroups namely 'Age up to 18 years', 'Age between 19 and 35 years', 'Age between 36 and 60 years', 'Age above 60 years' were considered.

For the parameter 'Educational Qualification', four subgroups were considered viz. 'Up to Higher Secondary', 'Graduate', 'Post Graduate', 'Above Post Graduate'.

In the parameter 'Income', three subgroups were considered, namely 'Low Level Income', 'Middle Level Income' and 'High-Level Income'. People whose yearly income was less than 3 lakhs were considered 'Low Level Income', whose income was between 3-7.5 lakhs were considered 'Middle Level Income' and whose income was above 7.5 lakhs were taken as 'High-Level Income' people.

Under the parameter 'Occupation', three subgroups were considered, namely 'Profession', 'Employment' and 'Business'. Here under 'Profession' – Medical, Legal and Engineering were considered. Under 'Employment' - Government, Government aided, and Private jobs were considered. Under 'Business' - Manufacturing, Trading and Service sector was considered.

A total of 42 individuals from the Kolkata district were included in the sample that was chosen using the judgment sampling technique.

An overview of selected samples is furnished below:

Parameters	Subgroups	Total No. of individuals in each subgroup	Sample size
Age	Age up to 18 years	3	12
	Age between 19 and 35 years	3	
	Age between 36 and 60 years	3	
	Age above 60 years	3	
Educational Qualification	Up to Higher Secondary	3	12
	Graduate	3	
	Post Graduate	3	
	Above Post Graduate	3	
Income	Low-Level Income	3	9
	Middle Level Income	3	
	High-Level Income	3	
Occupation	Profession	3	9
	Employment	3	
	Business	3	
Total			42

To collect required data, a structured questionnaire was framed where six reasons for reading online newspapers were given as options to the respondents. They were asked to choose as per their preference only those reasons for which they read online newspapers.

Collected qualitative data were converted into quantitative data. Respondent's preference ranking was converted into the corresponding 'whole number'. For example, 1st preference = '1', 2nd preference = '2', and so on. Also, for the convenience of representing the respondents each of them was assigned an English language alphabet (i.e.: A, B, C, etc.).

To measure the individual differences, a mathematical formula and the ‘C’ programme had been applied. For this, the formula and programme developed by Chandra (2019) in his study was used. The C-programming code helped to analyse the qualitative data. The mathematical Formula used by Chandra (2019) is given below:

$$A = \| x_i - x_j \| = \sqrt{\sum_{k=1}^d (x_{ik} - x_{jk})^2}$$

Figure 1: Pair wise equality test formula

In the above formula, ‘A’ indicates the result of the comparison of two pairs.
 If A= 0 all data are of the same value for a given pair of data, i.e., perfect equality.
 If A ≠ 0, the data of the given pair have not equal value, i.e., the data is different.

Finally, analysis and interpretations of all the collected data (gathered from survey & C programme analysis) had been done to fulfil the objective of the study.

3.0 Data Analysis

Analysis and interpretation of collected data are given below.

3.1 Individual differences in online newspaper reading by Age

Table-1 given below shows the individual differences in online newspaper reading by Age.

Table-1: Individual differences in online newspaper reading by Age

Age	Individuals	Improve Knowledge	Real-Time News Update	Watch videos/ Make Comments/ View Photos	Develop Reading / Writing Skill / Vocabulary	Hobby	Time Pass	Academic / Employment News
Age up to 18 years	A	0	2	0	0	0	1	0
	B	0	0	0	0	1	0	0
	C	3	2	0	1	0	0	0
Age between 19 and 35	D	0	2	0	3	0	0	1
	E	0	2	3	0	0	0	1

	F	4	3	0	1	2	0	0
Age between 36 and 60	G	0	1	0	0	2	0	0
	H	0	0	0	0	0	1	0
	I	0	1	0	0	0	0	2
Age above 60	J	0	3	0	0	1	2	0
	K	0	1	2	0	3	0	0
	L	0	0	0	0	2	1	0

In the age group ‘up to 18 years’ it is seen that ‘A’ selected ‘Time Pass’ as first preference and ‘Real-Time News Update’ as second preference; first preference of ‘B’ is ‘Hobby’; for ‘C’ first preference is to ‘Develop Reading / Writing Skills/ Vocabulary’ second preference to get ‘Real-Time News Update’ and third preference to ‘Improve Knowledge’.

In the ‘age group between 19–35 years’, the first preference of ‘D’ is ‘Academic /Employment News’, second preference is to get ‘Real-Time News Update’ and third preference is to ‘Develop Reading / Writing Skills / Vocabulary’. For the individual ‘G’ belonging to the ‘age group between 36–60 years’ the first preference is to get ‘Real-Time News Update’ and second preference is ‘Hobby’. From the age group ‘above 60 years’ ‘J’ selected ‘Hobby’ as first preference, ‘Time Pass’ as second preference and to get ‘Real-Time News Update’ as third preference.

So, it is evident from the above table that for the parameter ‘Age’, each individual’s preference in reading online newspaper is different.

3.1.1 Results of pair wise equality test for online newspaper reading by Age

Table-1.1 given below shows the results of pair wise equality test for online newspaper reading by Age.

Table-1.1: Results of pair wise equality test for online newspaper reading by Age

AB	06	BC	15	CE	20	DH	15	EL	19	GL	02
AC	11	BD	15	CF	06	DI	11	FG	21	HI	06
AD	11	BE	15	CG	15	DJ	16	FH	31	HJ	11
A E	11	BF	27	CH	15	DK	24	FI	29	HK	15
A F	23	BG	02	CI	15	DL	19	FJ	22	HL	04
AG	06	BH	02	CJ	16	EF	32	FK	26	IJ	13
AH	04	B I	06	CK	24	EG	16	FL	27	IK	17
AI	06	B J	13	CL	19	EH	15	GH	06	IL	10
AJ	03	BK	09	DE	18	EI	11	GI	08	JK	16
AK	15	BL	02	DF	26	EJ	16	GJ	09	JL	11
A L	08	CD	14	DG	15	EK	13	GK	05	KL	07

The Table 1.1 shows the results of the equality test for the 66 pairs of individuals. The first, third, fifth, seventh, ninth and eleventh columns indicate the pairs consisting of two individuals. The second, fourth, sixth, eighth, tenth and twelfth columns indicate the results of the pair wise equality test. The result for each pair of this category is found in ‘number’; not ‘0’ (zero). So, the data of the given pairs do not have equal value and hence the individual differences exist in online newspaper reading habits.

3.2 Individual differences in online newspaper reading by Educational Qualifications

Table-2 given below shows the individual differences in online newspaper reading by Educational Qualifications.

Table-2: Individual differences in online newspaper reading by Educational Qualifications

Educational Qualifications	Individuals	Improve Knowledge	Real-Time News Update	Watch videos/ Make Comments/ View Photos	Develop Reading / Writing Skill / Vocabulary	Hobby	Time Pass	Academic / Employment News
Upto Higher Secondary	A	2	1	5	3	4	0	6
	B	0	0	0	1	2	0	0
	C	1	2	0	3	0	4	0
Graduate	D	4	1	2	0	3	0	0
	E	0	1	0	0	2	0	3
	F	0	3	0	2	0	0	1
Post Graduate	G	3	1	0	4	2	0	5
	H	0	0	1	0	0	2	0
	I	1	2	3	5	0	4	0
Above Post Graduate	J	0	0	0	1	0	0	0
	K	0	2	0	0	1	3	0
	L	2	1	4	0	3	0	0

It is seen in Table 2 that ‘A’ reads newspaper to get ‘Real-Time News Update’ (first preference) whereas for ‘B’ the first preference for reading newspaper is to ‘Develop Reading / Writing Skills /Vocabulary’. For ‘C’ the first preference is to ‘Improve Knowledge’. Although the first preference of ‘D’, ‘E’, ‘G’, ‘L’ matches with ‘A’ but the second preference of ‘D’ is to ‘Watch Videos/ Make Comments/ View Photos’ and for ‘E’ is ‘Hobby’. For ‘G’ the second and third preference are ‘Hobby’ and ‘Improve Knowledge’ respectively. For ‘L’ the second preference is to ‘Improve Knowledge’. So, difference in individual preferences in online newspaper reading habit for the parameter ‘Educational Qualification’ is evident in this table.

3.2.1 Results of pair wise equality test for online newspaper reading by Educational Qualifications

Table-2.1 given below shows the results of pair wise equality test for online newspaper reading by Educational Qualifications.

Table-2.1: Results of pair wise equality test for reading online newspaper by Educational Qualifications

AB	74	BC	29	CE	40	DH	31	EL	30	GL	59
AC	95	BD	23	CF	20	DI	61	FG	37	HI	38
AD	59	BE	11	CG	51	DJ	31	FH	19	HJ	06
AE	51	BF	15	CH	19	DK	34	FI	37	HK	07
AF	75	BG	44	CI	13	DL	08	FJ	11	HL	27
AG	32	BH	10	CJ	25	EF	16	FK	16	IJ	46
AH	86	BI	50	CK	12	EG	29	FL	38	IK	37
AI	78	BJ	04	CL	52	EH	19	GH	60	IL	53
A J	86	BK	15	DE	30	EI	65	GI	60	JK	15
AK	93	BL	23	DF	38	EJ	15	GJ	48	JL	31
AL	47	CD	48	DG	47	EK	20	GK	61	KL	34

Table-2.1 shows the results of the equality test for the 66 pairs of individuals. It is observed that the results for each 66 pairs of data are not equal to zero. So, the data of the given pairs do not have equal value and hence individual differences exist.

3.3 Individual differences in online newspaper reading by Income

Table-3 given below shows the individual differences in online newspaper reading by Income.

Table-3: Individual differences in online newspaper reading by Income

Income	Individuals	Improve Knowledge	Real-Time News Update	Watch videos/ Make Comments/ View Photos	Develop Reading / Writing Skill / Vocabulary	Hobby	Time Pass	Academic / Employment News
Low Level Income	A	0	2	0	0	0	0	1
	B	0	2	0	0	1	0	3
	C	2	1	4	3	0	0	5
Middle Level Income	D	0	0	0	0	1	0	0
	E	2	1	3	0	0	0	0
	F	0	1	2	5	3	0	4
High Level Income	G	0	1	0	0	0	0	0
	H	0	1	0	2	0	3	0
	I	0	2	0	1	0	0	0

It is seen from Table 3 that a difference in reading online newspapers among individuals exists when income level is considered. ‘Academic / Employment News’ is given first preference by ‘A’ whereas ‘B’ selected ‘Hobby’ as the first preference. Although ‘C’, ‘E’, ‘F’, ‘G’, ‘H’ all selected ‘Real-Time News Update’ as their first preference but for ‘C’ the second preference is to ‘Improve Knowledge’ and third preference is to ‘Develop Reading/Writing Skill/Vocabulary’ whereas for ‘E’ the second preference is to ‘Improve Knowledge’ and third preference is to ‘Watch Videos/ Make Comments/ View Photos’. The second preference of ‘F’ is to ‘Watch Videos/ Make Comments/ View Photos’, followed by ‘Hobby’ as the third preference. For ‘H’ the second preference for reading online newspapers is to ‘Develop Reading/Writing Skill/Vocabulary’.

3.3.1 Results of pair wise equality test for online newspaper reading by Income

Table-3.1 given below shows the results of pair wise equality test for online newspaper reading by Income.

Table-3.1: Results of pair wise equality test for online newspaper reading by Income

AB	05	BG	11	DH	15
AC	46	BH	24	DI	06
AD	06	BI	11	EF	55
AE	15	CD	56	EG	13
AF	48	CE	35	EH	26
AG	02	CF	22	EI	15
AH	15	CG	54	FG	54
AI	02	CH	55	FH	47
BC	35	CI	50	FI	46
BD	13	DE	15	GH	13
BE	24	DF	50	GI	02
BF	35	DG	02	HI	11

For the parameter income level, a total of 36 pairs have been tested. Table 3.1 table reveals that the values calculated from the program for pair wise equality test are not equal to zero for all 36 pairs of data.

3.4 Individual differences in online newspaper reading by Occupation

Table-4 given below shows the individual differences in online newspaper reading by Occupation.

Table-4: Individual differences in online newspaper reading by Occupation

Income	Individuals	Improve Knowledge	Real-Time News Update	Watch videos/ Make Comments/ View Photos	Develop Reading / Writing Skill / Vocabulary	Hobby	Time Pass	Academic / Employment News
Profession	A	5	1	4	2	3	0	0
	B	0	0	2	3	4	0	1
	C	3	0	1	2	0	0	0

Employment	D	0	2	0	3	4	0	1
	E	4	2	0	0	0	3	1
	F	0	2	0	0	1	0	0
Business	G	0	2	0	3	1	0	0
	H	0	2	3	0	0	1	0
	I	2	1	0	1	0	0	0

4.0 Summary of Findings

The findings obtained from the study are summarized below:

- i. For the parameter 'Age', the sample of 12 individuals of the four different age groups formed 66 pairs. The equality test result for all the pairs have been calculated from the program, and they are not equal to zero. From Table 1 and Table 1.1 it is clear that, according to age, individual's preferences in online newspaper reading habits differ from each other.
- ii. For the parameter 'Educational Qualifications', Table 2 reveals that a difference exists in individual preferences. Also, the result of pair wise equality test of 66 pairs is not zero for any of the pairs (Table 2.1). Thus, it is clear from Table 2 and Table 2.1 that there are individual differences in reading online newspapers, while considering the parameter of educational qualifications.
- iii. For the parameter 'Income', the sample of 9 individuals from three different income levels formed 36 pairs. The result of the pair wise equality test is not equal to zero for any of the 36 pairs (Table 3.1). The difference in preferences is seen in Table 3 clearly. It is clear that individuals' preferences according to income level in online newspaper reading habit differ from each other.
- iv. The study also reveals that the result of pair wise equality test is not equal to zero for each 36 pairs for the parameter 'Occupation' (Table 4.1). So, there are individual differences according to occupation in online newspaper reading habits.

5.0 Conclusion

The aim of the study was to prove that no individual is completely similar to another in respect to their online newspaper reading habit. From the study, it is seen that individuals' preferences for reading the newspaper differ when parameters like age, educational qualifications, income, and occupations are considered. The study indicates that the aforementioned factors have an impact on people's choices, which in turn shape their online newspaper reading habits. The equality test further supports this by showing that the results of the pairs tested are 'not equal to zero'. Considering the findings drawn, it is concluded that there exist individual differences in online newspaper reading habits.

6.0 References

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