

# Reading on Paper and on Screen of Teenagers: A Pilot Study of Two Schools in Colombo District, Sri Lanka

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**Abstract** - With the development of computers, mobile phones and other digital devices with the internet, reading on screen has become an everyday activity as well as reading on paper. It is understandable that the task of reading has become more complicated with reading on screen. Therefore, the society is concerned about Reading on Paper and on Screen, especially of children and teenagers. The aim of the study is to gain an understanding of the nature of reading habits of teenagers in Colombo District, Sri Lanka. Main objectives of the study are to investigate the nature and extent of reading habits of teenagers, to find out the medium that the teenagers prefer when reading and to find out the attitudes of teenagers towards reading paper and screen. Both groups use e-media as well as read books. Though the majority prefer Paper as the medium of reading, they use the Screen medium too. Since the teenagers are much used to screen, we can use it to improve reading.

**Keywords:** Reading Habits, Teenagers, Reading Paper, Reading Screen

## I. INTRODUCTION

Reading is defined as a complex cognitive process of decoding symbols in order to construct or derive meaning. Reading out loud has been used more for entertainment, religious and educational purposes and reading has become a more personal act at present. With the development of computers, mobile phones and other digital devices with the internet, reading on screen has become an everyday activity as well as reading on paper. People respond to emails without printing them. They have become used to read newspapers and magazines on screen.

According to Bercovici[4] in 2014, e-books comprised some 30% of all book sales in the United States. Malik[7] points out that from January until August 2012, Amazon.co.uk has sold 114 Kindle books for every 100 printed books. It is understandable that the task of reading has become more complicated with Reading on Screen. Therefore, the parents, teachers, educationists, book publishers, researchers and the society as a whole are concerned about Reading on Paper and on Screen, especially of children and teenagers.

In this study, reading conventional material such as books, magazines and newspapers were considered as Reading Paper and reading on a computer screen, other devices such as e-readers and mobile phones were considered as Reading Screen. Teenagers aged 13 years to 19 years were selected

because they are in a transition period in the context of reading, as well as in mind and body.

## II. RELATED LITERATURE

With the development of the technology, especially with the screen, reading was redefined. While spending more time reading mainly on digital devices, people take printouts of electronic material for in-depth reading and annotating. According to Liu[12], screen-based reading behaviours have emerged such as scanning, browsing, keyword spotting, one-time reading and reading more selectively. People have got used to non-linear reading and go through various topics with hypertexts. As he points out these features of the digital reading and screen medium come with some disadvantages such as decreasing continuous attention and distract readers from thinking deeply about a single subject. One of his observations was that most people like to read only the first screen of text without scrolling down for more information or in-depth reading.

Even though some researchers point out the disadvantages of reading the screen, some are positive about it. Waite[2] raises a question – "if a child is used to read on the screen at his early ages, will he not read better on screen later?" According to Waite, most of the research was done with people who are used to read the paper and we have to wait for some years to do research with children who are used to read the screen from the beginning. While the researchers point out the advantages and disadvantages of the print medium and screen medium, the society as a whole is concerned about the reading habits of people, especially of children and young adults.

According to a study conducted by pediatrics namely Mohanty and Bonner[5] in 2015 with 350 children in a low-income, minority community, ages six months to four years, 97% of children were found to have used a mobile device of some kind, 20% of one-year-olds have their own tablet computer, and that 28% of two-year-olds can navigate a cell phone, tablet, or e-reader without any help. They say that the older the children are, the more likely they were to own their own type of technology. Weale[8] reports that in another study done in UK in 2015 the researchers found that 37% of those aged between three and five have their own tablet.

A survey done by Madden and Lenhart[6] with 12- to 17-year-olds in USA reported that 93% have home computer access, 37% own a smartphone, and 23% have a tablet computer; one in four reported that they use their phone to go online most of the time. According to Hu[11] and Rockinson-Szapkiw[1], tablets and electronic books are being adopted by students of all ages for access to textbooks and other instructional materials and Blume[3] reports that in 2013 the Los Angeles Unified District approved iPads for every child in the district's schools. Therefore it is clear that the society is expected to face the changes that are happening rapidly related to the reading environment.

### III. METHODOLOGY

The aim of the study is to gain an understanding of the nature of reading habits of teenagers in Colombo District, Sri Lanka. Main objectives of the study are to investigate the nature and extent of reading habits of teenagers, to find out the medium that the teenagers prefer when reading and to find out the attitudes of teenagers towards reading paper and screen.

To achieve the above objectives a survey was conducted consisting of both quantitative and qualitative components. A questionnaire was used as the basic instrument for data collection and it was constructed in order to find out the demographic information, the nature of reading habits, the time duration that they devote to reading, their preferred medium and the attitudes towards reading paper and screen.

The population of the study were the students aged 13-19 of Nugegoda/Lyceum International School (N/LIS) and Pannipitiya/Dharmapala Maha Vidyalaya (P/DMV). These two schools are situated in Colombo district of Western Province in Sri Lanka as well as N/LIS is a private international school and P/DMV is a government school. There were around 2000 students in N/LIS between 13 and 19 years old. From that study population, a random sample of 5% was selected. In P/DMV there were around 2500 students aged 13 to 19, and a sample of 5% was selected.

The questionnaire which was distributed among the sample of N/LIS was in English language since their medium of learning in English and the language of the questionnaire distributed among the sample of P/DMV was Sinhalese because their main medium of learning is Sinhalese. Even though 100% of N/LIS sample have responded, only 89% of P/DMV sample have responded to the questionnaire.

### IV. RESULTS AND DISCUSSION

#### A. Demographic information

##### 1. Gender & Age

From the sample of N/LIS, 49% were male and 51% were female as well as from the sample of P/DMV 47% were male and 53% were female. From the sample of N/LIS,

49% were between 13-15 of age, while 51% were between 16-19 of age. In the sample of P/DMV, 45% were of ages 13-15 and 55% were of ages 16-19.

##### 2. Educational qualifications

From the sample of N/LIS and P/DMV, the majority have studied up to G.C.E. O/L. These are respectively 74% and 39% of the samples. In the group of N/LIS, only 17% have studied up to A/L, but 38% of P/DMV have studied up to A/L.

##### 3. Income of the family

TABLE I INCOME OF THE FAMILY

School	N/LIS		P/DMV	
	n	%	n	%
INCOME RANGE				
Less than Rs.10,000/-p.m.	2	2	1	1
Rs. 10,000/- - 20,000/- p.m.	1	1	17	15
Rs. 20,000/- - 30,000/- p.m.	1	1	19	17
Rs. 30,000/- - 50,000/- p.m.	6	6	40	36
More than Rs. 50,000/- p.m.	90	90	28	25
Total	100		105	

90% of the families of the group from N/LIS have stated that they get more than Rs. 50,000/- p.m. as income, when only 25% from P/DMV have stated that they get more than Rs. 50,000/- as monthly income. It is natural that families of the N/LIS group get higher income because otherwise, they are not in a position to pay the school fees since the school is a private international school. The parents of P/DMV students have to spend a very little money as school fees and they can choose to which tuition classes they are going to send their children to get extra help which is not compulsory. But the parents who have their children in International schools like Lyceum International school have to pay a huge amount of money as school fees and it is compulsory. So that the families of N/LIS getting a higher income is not strange.

#### B. Nature of Reading Habits

##### 1. Availability of a collection of books, radio, T.V. etc

When the two groups were asked whether they have a collection of books, radio, T.V., DVD player, satellite T.V., computer and internet facility at home, the majority of both samples have told that they have one or more of the items.

##### 2. Reading Books, Magazines, Newspapers and Internet

The two samples were asked about the number of books they read per year, magazines they read per month, newspapers (hours per week) and read through the internet (hours per week).

TABLE II AVAILABILITY OF A COLLECTION OF BOOKS, RADIO, T.V. ETC

School	N/LIS				P/DMV			
	Particulars	n	%	M %	F %	n	%	M %
A collection of books	89	89	51	49	103	93	45	55
Radio	92	92	52	48	107	96	44	56
T.V.	97	97	49	51	110	99	45	55
DVD player	93	93	52	48	88	79	45	55
Satellite T.V.	80	80	58	42	23	21	48	52
Computer	90	90	57	43	95	86	49	50
Internet facility	89	89	53	47	80	72	51	49

TABLE III READING BOOKS, MAGAZINES, NEWSPAPERS AND INTERNET

School	N/LIS					P/DMV				
	Particulars	n	%	1-10	10-50	50 >	n	%	1-10	10-50
Books (per year)	79	79	25	29	03	104	94	34	41	09
Magazines(per month)	62	62	38	07	00	80	72	53	14	00
Newspapers (hrs per wk)	55	55	41	03	00	104	94	93	11	00
Internet (hrs per wk)	90	90	48	20	00	65	59	50	15	00

Some have not mentioned the number of books or magazines they read, as well as the number of hours they spend on reading newspapers and internet, but they have indicated that they were engaged in above activities. From the group of N/LIS who read books, three of them read more than 50 books per year. All three are females and they each read 90, 620 and 750 books per year. The two students who read 620 and 750 books can be considered as exceptional cases. In N/LIS group the number of students who read on the internet (90%) is higher than who read

books (79%) as well as in P/DMV, the number of students who read books (94%) is higher than who read on the internet (59%). So that reading on the internet of N/LIS (90%) is higher than P/DMV (59%). Reading newspapers of P/DMV (94%) is higher than N/LIS (55%).

*C. Time devoted to Reading*

*1. Time devoted to reading and using e-media per week*

TABLE IV TIME DEVOTED TO READING AND USING E-MEDIA PER WEEK

N/LIS							
Task	0-1 hrs	1-2 hrs	2-4 hrs	4-8 hrs	> 8 hrs	Total	%
Reading books/ magazines/ newspapers	38	15	18	08	04	83	83
Listening to the radio.	42	15	06	05	10	78	78
Watching television.	17	18	22	10	19	86	86
Watching DVD s.	18	24	14	10	16	82	82
Using computer.	27	10	18	08	23	86	86
Using internet.	20	11	19	13	24	87	87
P/DMV							
Task	0-1 hrs	1-2 hrs	2-4 hrs	4-8 hrs	> 8 hrs	Total	%
Reading books/ magazines/ newspapers	23	33	25	16	07	104	94
Listening to the radio.	54	17	17	04	01	93	84
Watching television.	18	20	25	14	19	96	87
Watching DVD s.	31	16	18	06	00	71	64
Using computer.	23	24	19	14	03	83	75
Using internet.	22	15	14	12	02	65	59

## 2. Reading Paper and Screen.

TABLE V READING PAPER AND SCREEN

N/LIS								
	Paper				Screen			
	n	%	M%	F%	n	%	M%	F%
Books	57	57	51	49	26	26	69	31
Newspapers	54	54	46	54	31	31	68	32
Magazines	47	47	49	51	48	48	77	23
P/DMV								
	Paper				Screen			
	n	%	M%	F%	n	%	M%	F%
Books	95	86	53	47	16	14	63	37
Newspapers	89	80	46	54	22	20	41	59
Magazines	90	81	81	49	21	19	57	43

From both groups, the majority prefer the paper when reading books and newspapers. When reading magazines the preference of N/LIS has no significant difference while in P/DMV group more prefer paper (81%) than the screen (19%). When reading via the screen, the number of boys who prefer screen was higher than girls in N/LIS. When reading newspapers via the screen, the number of male participants is higher in N/LIS while the number of female participants is higher in P/DMV.

### 3. Attitudes towards Reading Paper and Screen

12 statements were given to the two groups to express their attitudes towards reading paper and screen on a five-point scale.

*Reading Paper and Screen:* Statements 1,2,3 and 4 were designed to get an idea of their fondness to screen medium and the majority of both groups have agreed to the statements, even though 39% of P/DMV have not agreed to statement 1 (Computer makes reading more interesting.). Though they like to read on screen they are aware that they cannot feel the paper when they read screen (statement 5).

*Attitude towards Internet:* The results show clearly that the N/LIS group uses more internet than the P/DMV group. 45% of N/LIS group agree to the statement 6 (I get bored in my free time if I do not have internet access.) while only 20% of P/DMV agree to it. While 64% of N/LIS agree to statement 7 (Searching the internet is more interesting than reading a book.) only 38% of P/DMV agree to it. When 37% of N/LIS agree to statement 8 (Internet is a good way to escape from problems.), only 8% of P/DMV agree to it. Even though using the internet is not Reading Screen, both are very much interrelated.

*Attitude towards Reading and Books:* When the two groups were given statement 9 (I read only when it helps my studies.) and statement 12 (I read only when I need to find some information.), 38% and 37% of N/LIS agree with the statements while only 26% and 11% of P/DMV agree with

them. When the statement 10 (I don't think books will be important fifty years from now.) tests about their attitude towards books, 31% of N/LIS and 16% of P/DMV agree to it. Their response to these statements shows that the P/DMV group have a more positive attitude towards Reading and Books.

## V. CONCLUSIONS

Having radio and T.V. at home is important for both groups as well as having book collections. Using Satellite T.V. is more important to N/LIS students when comparing with P/DMV. N/LIS group read more on the internet than P/DMV as well as P/DMV group read more books, magazines and newspapers than N/LIS group. Having higher income and fluency in the English language can be the reasons for more usage in Satellite T.V. and more reading on the internet of teenagers of N/LIS.

N/LIS group is more fond of using internet and Reading on Screen medium. Their attitude towards Reading on Screen and using the internet is more positive than the other group. Being more fluent in the English language can be one of the main reasons for the difference. In general, the attitude of P/DMV group towards Reading and Books is more positive than the N/LIS group.

## VI. SUGGESTIONS

Developing the quality of the screen is something that most of the researchers are concerned. With all the shortcomings and the complaints about the screen, still, the medium and the screen reading skills of people should be developed because we cannot avoid using screen medium. Producing eBooks and eBook readers, publishing interactive books and integrate printed version and multimedia facilities are some of the developments done in the book publishing world in recent decades. To improve reading speed on screen, Kurniawan and Zaphiris[9] suggest using bigger font size or high contrast between the text and the background. According to Bouda[10], by using recent scientific findings

the screen medium can be developed. “Well-designed applications could bridge the gap between reading on paper and reading electronic text. That could be achieved if designers of electronic text or e-readers applications were familiar with recent scientific research findings, which are often based on experimental methods such as eye-tracking, EEG or MRI techniques.” [ p .4 ]

## VII. FURTHER STUDIES

Since this is only a pilot study, further studies should be done by selecting more schools in the Western Province and as well as in other provinces in Sri Lanka.

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