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# EFFECT OF ONLINE AND OFFLINE LEARNING RESOURCES IN RELATION TO STUDY HABITS AMONG THE UNDERGRADUATE LEARNER OF ASSAM

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**Abstract**

The present study is a focus on how the types of learning resources have effected in the student's learning style of higher education and to what extent do the activities of those learning resources have benefitted to the students in their academic process. The study was carried out on 180 fourth semester undergraduate students from four colleges of Assam, who were continuing their studies in the session 2016-17. For the purpose of the collection of the data a self-developed Study Habits Scale was deployed. The Scale consisted of the three dimensions viz – Memory, Understanding, and Interest in relation to Online Learning Resources and Offline Learning Resources. The analysis of the data was done by using the chi-square test of the statistical technique.

***Keywords:***
Effect;
Online-Offline Learning Resources;
Undergraduate students;
Study Habits;
Memory;
Understanding;
Interest.

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## 1. Introduction

The very inception of the so-called Modern Information and Communication Technology (ICTs) has brought manifold changes in the lifestyle of the person and society. It has a great impact on the education sector too, it provides an opportunity to access and get mastery over the knowledge. With the invention of different technologies, internet technology, as one of the most important components of modern Information and Communication Technology (ICT) has brought changes in the education sector. The advancement of network system has provided a new means to learning on the part of the students and teachers in a more flexible, personalized and portable way/s, giving a path to a new era of learning.

The modern electronic sophisticated gadgets viz. computer, smartphone, laptop etc. have enabled students to access the learning resources online. With its high-intensity features, the students can learn digitally. They can view and read the materials that may display on the screen such as texts, image, videos, and audios and can learn things at their own pace. Now the student learners can obtain resources in connection to their academic study materials, course-related information, content related information, subject related information, research relation information, and news related information etc. in general.

- **Meaning of Online Learning Resources**

The Online Learning Resources is those resources, which you can achieve by the connection of the internet and can access from a computer, Smartphone, laptop, tablet etc with a web-browser that is completely screen-based learning. The Online Learning Resources is the modernized added tools or type of learning resources and materials, to assist the students in order to meet with the expected domain of learning tasks or the pre-determined learning objectives in a digital way. Sometimes, Online Learning Resources have also regarded as the extension of the framework of traditional learning resources for the effective outcome/s.

- **Meaning of Offline Learning Resources**

The Offline Learning Resources constitute those learning resources, which can avail in the form of handouts materials or printed materials. They are purely paper and ink based printed materials. These resources are the traditional way of resources without the connection of the

internet technology and are completely opposite to the screen learning having the connection with the www (or web-based). This form of learning resources consists of textbooks, magazines, resource book, news items, journals, newspapers, theses, dissertation, module, pamphlet and anything that comes across as printed or hard media.

- **The Need for the Study**

Nowadays things have transformed manually to the digital. This new trend of technologies has called the present generation for changes from traditional activities to new activities. Evolution of electronic technologies has driven the students into digital learners making them free agent approach to learning. With their Smartphone, iPhones, Computer, Laptop students can collect information, knowledge, learning materials, study tools etc. related to their formal academic practices. They are now self-reliant, self-tutor, self-learner, self-approach along with the traditional means like – printed materials, textbooks, and supplementary materials for their learning purpose. **Woody and et.al (2010),** in their result, found that undergraduate students who were e-book users still preferred print texts for learning. **Spencer, C (2006),** revealed that learners preferred the paper/printed materials and learners who preferred to read on the screen indicated their desire to have the option for the printed materials. Teachers and Students have already marked towards the change, shifting from the traditional way of teaching and learning to the modern sophisticated way of teaching and learning. Therefore, a study on the familiarity, use, and effect of online and offline learning resources among the students is utmost necessary and important for the quality learning.

- **Purpose of the Study**

The study intends to know the effect of online and offline learning resources in relation to study habits among the undergraduate learners of Assam. At the same time, the study also intends to know if there existed any significant difference between the effect of online and offline learning resources among the students.

## 2. Research Method

The participants of the study constituted the 180 fourth semester undergraduate students from four colleges (i.e. from four clusters each – north, south, east, and west) of Assam, who

were continuing their studies in the session 2016-17. For the purpose of the collection of the data a self-developed Study Habits Scale was deployed. The Scale consisted of the three dimensions viz – Memory, Understanding, and Interest in relation to Online Learning Resources and Offline Learning Resources. The analysis of the data was done by using the chi-square test of the statistical technique.

## 3. Results and Analysis

**Table – 1.2.1: The Summary of the Calculated Chi-Square for the Overall Responses of the Undergraduate Students on each Statement of the Dimensions in Relation to Online Learning Resources**

| Statements | Response | | | Computed $x^2$ | Critical $x^2$ | Remarks |
|---|---|---|---|---|---|---|
| | Never | Sometimes | Always | | | |
| **Dimension -1 'Memory' on Online Learning Resources** | | | | | | |
| 1 | 98 | 65 | 17 | 55.26 | 5.991 | Significant |
| 2 | 67 | 60 | 53 | 1.62 | 5.991 | Not Significant |
| 3 | 97 | 60 | 23 | 45.62 | 5.991 | Significant |
| 4 | 92 | 62 | 26 | 36.38 | 5.991 | Significant |
| **Dimension – 2 'Understanding' on Online Learning Resources** | | | | | | |
| 5 | 57 | 98 | 25 | 44.62 | 5.991 | Significant |
| 6 | 65 | 62 | 53 | 1.28 | 5.991 | Not Significant |
| 7 | 63 | 67 | 50 | 2.62 | 5.991 | Not Significant |
| **Dimension – 3 'Interest' on Online Learning Resources** | | | | | | |
| 8 | 55 | 70 | 55 | 2.67 | 5.991 | Not Significant |
| 9 | 48 | 51 | 81 | 11.1 | 5.991 | Significant |
| 10 | 54 | 56 | 70 | 2.37 | 5.991 | Not Significant |

**Interpretation –**

From the table (1.2.1) it has been found that

i. The computed $x^2$- value for 2 df, came out to be (55.26) at 0.05 level of confidence which is significantly greater than the criterion $x^2$-value (5.991). This means the students do differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'can recall of more information of content matter in e-resources'***. It is clear from the table that the majority of the under sample students cannot recall more information on the content matter when they go through e-resources, while in case of the average students it do happen in sometimes basis and in case of fewer it happen always.

ii. The computed $x^2$- value for 2 df, came out to be (1.62) at 0.05 level of confidence which is significantly smaller than the criterion $x^2$-value (5.991). This means the students do not differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'can't remember for a long time what is read on screen'***. The table conveys that student's opinion varies in almost equal proportion in the three categories.

iii. The computed $x^2$- value for 2 df, came out to be (45.62) at 0.05 level of confidence which is significantly greater than the criterion $x^2$-value (5.991). This means the students do differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'Mind goes blank on the quit to read of the e-resources on screen'***. It is clear from the table that that the majority of the under sample students never go blank on quitting to read e-resources on screen, while in case of the average students it do happen in sometimes basis and in case of fewer it happen always.

iv. The computed $x^2$- value for 2 df, came out to be (36.38) at 0.05 level of confidence which is significantly greater than the criterion $x^2$-value (5.991). This means the students do differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'lessened of retention power due to regular use of online resources'***. It is clear from the table that the majority of the under sample students have never lessened their retention power on the regular use of online resources, while in case of the average students it do happen in sometimes basis and in case of fewer it happen always.

v. The computed $x^2$- value for 2 df, came out to be (44.62) at 0.05 level of confidence which is significantly greater than the criterion $x^2$-value (5.991). This means the students do differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the

statement related to ***'find difficult to understand relevant information while studying on internet based resources'***. It is clear from the table that that the majority of the under sample students sometimes find difficult to understand e-resources/ online based resources, while in case of the average students it never happen and in case of fewer it happen always.

vi. The computed $x^2$- value for 2 df, came out to be (1.28) at 0.05 level of confidence which is significantly smaller than the criterion $x^2$-value (5.991). This means the students do not differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'can't grasp important points on online study materials'***. The table conveys that student's opinion varies in almost equal proportion in the three categories.

vii. The computed $x^2$- value for 2 df, came out to be (2.62) at 0.05 level of confidence which is significantly smaller than the criterion $x^2$-value (5.991). This means the students do not differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'can understand the main theme of the e-text or e-resources'***. The table conveys that student's opinion varies in almost equal proportion in the three categories.

viii. The computed $x^2$- value for 2 df, came out to be (2.67) at 0.05 level of confidence which is significantly smaller than the criterion $x^2$-value (5.991). This means the students do not differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'do not seek pleasure to learn on screen'***. The table conveys that student's opinion varies in almost equal proportion in the three categories.

ix. The computed $x^2$- value for 2 df, came out to be (11.1) at 0.05 level of confidence which is significantly greater than the criterion $x^2$-value (5.991). This means the students do differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'like to learn on online-based resources'***. It is clear from the table that that the majority of the under sample students always like to learn on online based resources for it delivers any kind of information at anytime and anywhere, while in case of the average students it do happen in sometimes basis and in case of fewer it happen never.

x. The computed $x^2$- value for 2 df, came out to be (2.37) at 0.05 level of confidence which is significantly smaller than the criterion $x^2$-value (5.991). This means the students do not differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'often feel boredom to study on screen for the technical problem'***. The table conveys that student's opinion varies in almost equal proportion in the three categories.

**Table – 1.2.2: The Summary of the Calculated Chi-Square for the Overall Responses of the Undergraduate Students on each Statement of the Dimensions in Relation to Offline Learning Resources**

| Statements | Response | | | Computed $x^2$ | Critical $x^2$ | Remarks |
|---|---|---|---|---|---|---|
| | Never | Sometimes | Always | | | |
| **Dimension -1 'Memory' on Online Learning Resources** | | | | | | |
| 1 | 15 | 68 | 97 | 57.62 | 5.991 | Significant |
| 2 | 21 | 68 | 91 | 42.42 | 5.991 | Significant |
| 3 | 89 | 59 | 32 | 27.08 | 5.991 | Significant |
| 4 | 99 | 45 | 36 | 38.7 | 5.991 | Significant |
| **Dimension – 2 'Understanding' on Online Learning Resources** | | | | | | |
| 6 | 41 | 97 | 42 | 34.22 | 5.991 | Significant |
| 7 | 27 | 60 | 93 | 36.3 | 5.991 | Significant |
| 8 | 51 | 73 | 56 | 4.42 | 5.991 | Not Significant |
| **Dimension – 3 'Interest' on Online Learning Resources** | | | | | | |
| 9 | 46 | 89 | 45 | 21.02 | 5.991 | Significant |
| 10 | 19 | 50 | 111 | 73.02 | 5.991 | Significant |
| 11 | 55 | 62 | 63 | 0.62 | 5.991 | Not Significant |

**Interpretation –**

From the table (1.2.2) it has been found that –

i. The computed $x^2$- value for 2 df, came out to be (57.62) at 0.05 level of confidence which is significantly greater than the criterion $x^2$-value (5.991). This means the students do differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'can recall more on the textual materials'***. It is clear from the table that the majority of the under sample students always can recall more on the textual printed materials, while in case of the average students it do happen in sometimes basis and in case of very less it happen always.

ii. The computed $x^2$- value for 2 df, came out to be (42.42) at 0.05 level of confidence which is significantly greater than the criterion $x^2$-value (5.991). This means the students do differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'find a long term memory on reading the printed materials'***. It is clear from the table that the majority of the under sample students always find long term memory of reading on printed materials, while in case of the average students it do happen in sometimes basis and in case of very less it happen always.

iii. The computed $x^2$- value for 2 df, came out to be (27.08) at 0.05 level of confidence which is significantly greater than the criterion $x^2$-value (5.991). This means the students do differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'Often find a problem in remembering the details of the textual materials'***. It is clear from the table that that the majority of the under sample students never find a problem in remembering the details of the textual materials, while in case of the average students it do happen in sometimes basis and in case of fewer it happen always.

iv. The computed $x^2$- value for 2 df, came out to be (38.7) at 0.05 level of confidence which is significantly greater than the criterion $x^2$-value (5.991). This means the students do differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'can't recall the main theme of the content on printed study materials'***. It is clear from the table that the majority of the under sample students can recall the main theme of the content on printed materials, while in case of the average students it do happen in sometimes basis and in case of fewer it happen always.

v. The computed $x^2$- value for 2 df, came out to be (34.22) at 0.05 level of confidence which is significantly greater than the criterion $x^2$-value (5.991). This means the students do differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'can understand better of the concepts when reading printed study materials'***. It is clear from the table that that the majority of the under sample students sometimes can understand better of the concepts when reading printed study materials, while in case of the average students it do happen always and in case of fewer it never happen.

vi. The computed $x^2$- value for 2 df, came out to be (36.3) at 0.05 level of confidence which is significantly greater than the criterion $x^2$-value (5.991). This means the students do differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related

to ***'can pick out the relevant information easily on reading the printed study materials'***. It is clear from the table that that the majority of the under sample students always can pick out the relevant information easily on reading the printed study materials, while in case of the average students it do happen sometimes and in case of fewer, it never happen.

vii. The computed $x^2$- value for 2 df, came out to be (4.42) at 0.05 level of confidence which is significantly smaller than the criterion $x^2$-value (5.991). This means the students do not differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'often find the problem to understand the details of the content given in the textual study materials'***. The table conveys that student's opinion varies in almost equal proportion in the three categories.

viii. The computed $x^2$- value for 2 df, came out to be (21.02) at 0.05 level of confidence which is significantly greater than the criterion $x^2$-value (5.991). This means the students do differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'like to read textbooks for it provides a balanced, chronological presentation of information for a long duration in the comfortable form'***. It is clear from the table that that the majority of the under sample students sometimes like to read textbooks for its qualities, while in case of the average students it do happen in equal proportion of always and never.

ix. The computed $x^2$- value for 2 df, came out to be (73.02) at 0.05 level of confidence which is significantly greater than the criterion $x^2$-value (5.991). This means the students do differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'like to study printed papers for it can move between pages as the need'***. It is clear from the table that that the majority of the under sample students always like to study printed papers for it can move between pages as the need, while in case of the average students it do happen in sometimes basis and in case of fewer it happen never.

x. The computed $x^2$- value for 2 df, came out to be (0.62) at 0.05 level of confidence which is significantly smaller than the criterion $x^2$-value (5.991). This means the students do not differ in their opinion in three categories viz. 'Never', 'Sometimes' and 'Always' on the statement related to ***'like to depend on printed materials for it provides the better quality and originality in terms of authentic information'***. The table conveys that student's opinion varies in almost equal proportion in the three categories.

**Table – 1.2.3: The Summary of the Calculated Chi-Square for the Overall Dimensional Responses of the Undergraduate Students on the Effect of the Online and Offline Learning Resources**

| Resources | Dimensions | Never | Sometimes | Always | Computed $x^2$ | Critical $x^2$ | Remarks |
|---|---|---|---|---|---|---|---|
| Effect of Online and Offline Learning Resources | **Memory** | | | | | | |
| | Online | 88 | 62 | 30 | 19.4 | 5.991 | Sig |
| | Offline | 56 | 60 | 64 | | | |
| | **Understanding** | | | | | | |
| | Online | 62 | 75 | 43 | 9.36 | 5.991 | Sig |
| | Offline | 39 | 77 | 64 | | | |
| | **Interest** | | | | | | |
| | Online | 53 | 59 | 68 | 2.46 | 5.991 | Not Sig |
| | Offline | 40 | 67 | 73 | | | |

**Interpretation –**

From the table (1.2.3) it has found that

i. The computed $x^2$-value for 2 df for the dimensional components viz. – 'Memory' and 'Understanding' came out to be (19.4) and (9.36) respectively at 0.05 level of confidence which were significantly were greater than the criterion $x^2$-value (5.991). Since the computed $x^2$-values (19.4) and (9.36) exceeded the criterion $x^2$-value (5.991), at 0.05 level, therefore, it has understood that the undergraduate students do differed significantly in the dimensional components of 'Memory' and 'understanding' respectively of the online and offline learning resources.

ii. Furthermore, the table has also depicted that the computed $x^2$-value for 2 df for the dimensional component of 'Interest' came out to be (2.46) at 0.05 level of confidence which was significantly smaller than the criterion $x^2$-value (5.991). Since the computed $x^2$-values has fallen behind the criterion $x^2$-value (5.991), at 0.05 level, therefore, it has understood that the

undergraduate students do not differed significantly in the dimensional component of 'Interest' of online and offline learning resources.

## 4. Conclusion

Nowadays most of the time it has been observed that the students from any field /area are using some electronic gadgets like Smartphone, Laptop, Tablet, Computer etc. as a tool to access e-resources or materials for their academic learning purpose. With the familiarity of the internet-technology, students are now aware of the e-resources. They have marked a shift from a traditional way of learning to the modern sophisticated way of learning. Because of which their study habits also changes largely. Reading and studying e-resources on screen have developed rapidly, printed materials and e-materials as both the teacher and student use a learning resource. Now to what extent the types of learning resources do effect on the student's study skills. The results indicated that the students significantly differ in the dimension of 'Memory' for online learning resources except for the duration of time for memory. Similarly, for the dimensions of 'Understanding' and 'Interest' a significant difference was found in the difficulties to understand the relevant information while studying on internet resources and a significant difference was also found in- like to learn on online resources. No significant difference was found in the can't grasp important points on online study materials; can understand the main theme of the e-text/e-resources and do not seek pleasure on onscreen learning, feel boredom to study on screen for its technical problem respectively.

The results also indicated that students do differ significantly in the dimension of 'Memory' for offline learning resources. Similarly, for the dimension 'Understanding' students do significantly differ in understanding concepts better when reading on printed materials and easily picking out important information when reading on printed materials, and no significant difference was found in the problems in understanding details of the content of the text. For the dimension 'Interest' a significant difference was found in the like to read the textbook for a balanced, chronological presentation of information and like to study printed materials for it can move between pages as per the need. No significant difference was found in like to depend on printed materials for better quality and originality in terms of authentic information.

Furthermore, the results indicated that there is a significant difference in the effect of online and offline learning resources in the dimension of 'Memory' and 'Understanding' and no significant difference in the dimension of 'Interest'.

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