

Impact of Digital Learning on Students During Covid-19 Pandemic: An Analytical Study on the Students of Three Leading Colleges of Nalbari District

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Introduction

Corona virus disease is a communicable disease caused by a newly detected corona virus. The 2019-20 corona virus epidemic is an ongoing epidemic of COVID-19, caused by SARS-CoV-2. The Outbreak was first found in Wuhan, Hubei, China, in December 2019, and was declared as a pandemic by the WHO on 11th March 2020. The peoples get infected by close contact with one another of about 6 feet distance through respiratory droplets produced when an infected person coughs, sneezes or talks. To ensure the distance measure among the peoples, the social or physical distancing is the only appropriate way to control the COVID-19. WHO depicted countries to take immediate actions and scale up responses to treat, detect and reduce transmission to save people's lives. As per the report of the WHO, as of month March 2020 more than 7,50,000 cases of COVID- 19 has reached 213 countries and territories, resulting in around 45,000 deaths and over 1,00,000 recoveries. With the spread of COVID-19, the educational institutions all over the world have been temporarily closed to contain the spread of the COVID-19 pandemic. The closure of educational institutes is impacting over 91% of the world's student population. The only way to stop the spread of this deadly virus was to maintain social distancing. The Indian government has announced several defensive measures to reduce the entry and spread of the corona virus in the country. Prime Minister Narendra Modi is continuously reviewing the country's readiness in battling the COVID-19 epidemic in India, while both the state and central governments continue to announce new measures and responses to deal with that situation.

Almost the people of every state in India are threatened due to the speedy spread of dangerous COVID-19 which is life challenging. To prevent and eradicate the darkness caused by the COVID-19, the Government of India has taken number of preventive measures including the closure of all educational institutions followed by day nationwide Janta-curfew to combat virus and 21 days lockdown to curb the corona virus, etc. Showing the great concern towards students, teachers and other stakeholders many circulars/ notices/ letters were issued by the relevant authoritative governing bodies like MHRD, UGC, CBSE, etc. India went under complete lockdown from 25th of March. All sorts of educational institutions, offices, shops, transports and communication facilities were closed. The economy was shrinking as the major economic forces like companies, shops and business institutes were forced to be closed. Along with the economic activities, the educational sector took a major blow when all of a sudden, the educational institutions all over the world were forced to be closed as it was believed that children were more likely to be affected by the virus. Thus, slowly but steadily almost all the educational institutions moved towards online mode of delivering education to the students in different parts of the world. The online classes have a fair share of their perks as well as perils. With the shutdown of educational institutes during the pandemic of COVID-19 in India, about 320 million learners and students are waiting for the opening of schools or colleges and also undergoing for the uncertain situation of teaching, learning and examinations. In a country like India where classroom teaching is followed everywhere, the transformation to online mode of teaching was drastic. The advancements made in online education in such a short period of time are remarkable. A

transformation, that was neither easy for teachers nor the students. But this was the only alternative. The present era is known for its digital technology. Several multimedia and technological tools are available, which have shortened the distance among the people far from each other. To compensate for the educational loss during the pandemic of COVID-19 in India, the government has decided on online teaching and learning for delivering the content in the absence of physical classrooms. As a consequence of it, the popularity of digital learning process has increased ser rapidly lose remotely and on digital platforms, such as Zoom, Google (classroom and Google Meet etc. With this view, the educational institutions of Assam including Universities, Colleges and Schools have taken part to promote digital learning process for maintaining their academic activities. Not only educational institutions take part to promote digital learning, but also many online learning platforms have come forward to provide their services freely to mitigate the effects of the Covid-19 on the teaching-learning process.

1.2 Statement of the Problem:

Digital learning is one of the most influential alternatives for mitigating the effects of a pandemic on the teaching-learning process. Especially in the present COVID-19 crisis, digital learning has emerged as a great alternative for continuing academic activities where the physical gathering is completely prohibited. Academic institutions and other online learning platforms take initiatives to promote digital learning process during these days. The closure of educational institutes all over the world put the future of young students at stake. To cope with this problem online mode of education was followed by all the countries. This was not new for technologically developed countries. But in India students faced a lot of trouble as they suddenly faced a situation which was unprecedented. Even the teachers had a tough time coping with this transformation. Network connectivity was one of the major problems faced by teachers as well as students. According to data published in Sandhya Keelery in July 2020, the internet penetration rate in Assam only 38%, and more than 2500 villages in Assam yet to be covered by mobile connectivity. Besides, a large number of remote villages of the state have been depriving of getting electric facility decades after decade, where digital infrastructure is quite poor. Though the majority of the private schools, and colleges of the state enhanced digital learning process during these pandemic days, but most of the government educational institutions are lagging in terms of facilitating digital learning process. In this study, an attempt has been made to understand the impact of digital learning on the students of three leading colleges of Nalbari District.

1.3 Objectives of the Study:

The present study aims to study the following objectives:

- To study the impact of digital learning among students.
- To know the challenges faced by the students on digital learning process during COVID-19 pandemic.
- To study the perceptions of students on digital learning.

1.4 Review of Literature:

Ming-Hung Lin et al. (2017) researched of the Effects of Digital Learning on Learning Motivation and Learning Outcome”. The research results conclude that-

- a) digital learning presents better positive effects on learning motivation than traditional teaching does,
- b) digital learning shows better positive effects on learning outcome than traditional teaching does

c) learning motivation reveals significantly positive effects on learning effect in learning outcome

d) learning motivation appears remarkably positive effects on learning gain in learning outcome Deepika Nambiar (2020) studied on “the impact of online learning during (COVID-19 students” and teachers perspective”. The purpose of his study was to conduct an online survey regarding teachers’ and student’s perception and experience related to online classes from the colleges and universities in Bangalore city. This survey describes college and university teachers and students’ perceptions and concerns with regard to taking online classes that have been made mandatory in the wake of COVID-19. Digvijay Pandey et al. (2020) studied on COVID-19: A Framework for active Delivering of Online Classes during Lockdown the key objective of their study is to assess the socio- demographic and related factors on the attitudes towards delivering of online classes during lockdown COVID-19 pandemic in India. It explores and describes the numerous online teaching platforms. Study materials. Techniques. And technologies; being used to ensure that educating the students does not stop. Lda Faridah et al. (2020) studied on Effect Digital Learning on Student Motivation during COVID- 19”, The main point of their research is to determine whether the use of digital learning during the COVID-19 period will affect student motivation in learning so that the purpose of his stud is to describe the results of student motivation in using digital learning in Indonesia. Lokanath Mishra et al. (2020) studied on “Online teaching-learning in higher education during lockdown period of COVID-19pandemic”. In their study. A portrayal of online teaching-learning modes in higher education adopted by the Mizoram university for the teaching-learning process and subsequent semester examinations during lockdown period of COVID-19 pandemic .It employs both quantitative and qualitative approach to study the preparations of teachers and students on online teaching-learning modes and also highlighted the implementation process of online teaching-learning modes. Pinaki Chakraborty et al. (2020) studied on “Opinion of students on online education during the (COVID-19) pandemic”. In their study highlighted the opinion on different aspects of online education of undergraduate students in an Indian university during the ongoing COVID-19 pandemic and they found that the students considered online education a viable alternative under the current circumstances.

Prof. Rajni Pathak and Dr. Pratima Sheorey (2020) studied on “Impact of Digital 1 Technology on Teaching-Learning” In their study. Highlighted the Impact of digital transformation on teaching methodologies used by teachers in schools., colleges and universities and the impact of digital transformation on students learning in Maharashtra. An attempt is also being made for comparison of Digital Methods versus Conventional methods in teaching and learning. The result of the study indicates that leveraging digital tools will not only raise the excellence level in education but could also be a true game changing experience for both students and teachers in coming years. Kari Almendingen et al. (2021) studied on “Student’s experiences with online teaching following COVID-19 lockdown n: A mixed methods explorative study “ The purpose of their study was to assess how Norwegian Public health Nutrition students experienced the shift to digital teaching following campus lockdown. Students were also asked to provide feedback on what might improve the learning outcomes in future online lectures and courses.

Ms. Tanuja Khan et al. (2021) studied on Impact of Digital Learning on the Academic Achievement of Students of Government and Private Schools”. This study highlighted on the impact of digital learning on the academic achievement of students belonging to Government and Private Schools of Bhopal. This study revealed that achievement in maths and science in attitude towards maths were found to be effect in computer using students. And they get benefit from computer instruction, showing higher achievement. Selma Korlat et al. (2021) studied

on “Gender Differences in Digital Learning during COVID-19: Competence Beliefs, Intrinsic Value, Learning Engagement, and Perceived Teacher Support”. In this study, they include both biological sex and gender role self- concept in order to investigate the role of gender in different components of this stereotyped domain in a more differentiated way. A total of 19,190 Austrian secondary school students participated in an online study in April 2020 and answered questions regarding their competence beliefs, intrinsic value, engagement, and perceived teacher support in digital learning during the pandemic-induced school closures.

1.5 Research Gap:

After doing a review of literature, it has been identified that there has been a variety of research about Digital Learning, but most of the studies have focused either on the Effect of Digital Learning on Learning Motivation and Learning Outcome or Student’s and Teacher’s perception on academic achievement. Again, some studies are conducted before COVID-19 pandemic. On the other hand, many of the studies are conducted in other countries and some studies were in other areas. And, I have not found any similar topic related to the impact of Digital Learning on students of three leading colleges of Nalbari District during COVID-19 pandemic. So, the present study tries to fill this research gap. Thus, this study mainly focuses on exploring the impact of Digital learning on students during COVID-19 pandemic.

1.6 Design of the Study:

This study attempts to understand the impact, perceptions and challenges faced by the students regarding Digital learning, during COVID-19 pandemic. The research design for this study is selected based on the research objectives. This research is actually conducted to make descriptions of the phenomena or characteristics which can be better assessed through Descriptive Research Design Methods. A field survey has been carried out among 100 students in three leading colleges of Nalbari District in the month of December, 2021. A structured Questionnaire is used as a tool for collection of primary data on the basis of Simple Random Sampling Method. The students were selected from the HS, UG and PG level. Secondary data was collected from research papers, reports and official websites etc. The data was collected qualitatively and analyzed to understand the present situation of Digital Learning among the students of Nalbari District.

1.7 Research Methodology:

Research Methodology is a way to systematically solve the research problem by logically adopting various steps, which is presented as follows –

- **Method of Sampling:** In this study, Quantitative Research method is used. The sample for the study is drawn through a Simple Random Sampling Method, which is involved Probability Sampling. Each student is chosen without any bias and an equal probability existed while choosing them. Each sample is selected independently of the other members.
- **Data Collection:** In this Study, Data were collected from both Primary Data and Secondary Data sources.
 - **Primary Data:-** To study the impact of digital learning on student, a structured questionnaire is used for data collection. This data collection was done by directly talking to Students, to get their opinion on this.
 - **Secondary Data:-** The Secondary data was collected through relevant research journals, Magazines and present available reliable on websites.
- **Sampling Unit:** In this present study, researcher has taken views from HS, UG and PG students in three leading colleges of Nalbari District.

- Sample Size: The sample in the study was restricted to 100 respondents keeping in the mind that research objectives should be fulfilled
- Research Instrument:
 - Questionnaire:-In survey a questionnaire was used to collect data from the students. In questionnaire closed-ended questions asked from the target population. Respondents were asked to respond to the statements in the questionnaire by the responses. If they feel the statement is strongly suitable for them.
 - Statistical tools:- The data was analysed with Statistical tool like- Percentage Analysis. Bar diagram. Pie chart.

1.8 Significance of the Study: The significance of this study lie in the fact that prior to this study that no such study has been done in the context impact of digital learning on the students on three leading colleges of Nalbari District during COVID-19 pandemic. So the result of this study holds significance in the particular area of study. The current study tries to identify the impact, perceptions and the problems faced by the HS, UG and PG students specifically From three leading colleges of Nalbari District, while switching to the digital learning mode of education. Thus, the study will help in understanding the problems and concerns of the students faced during digital learning and it will provide new direction to mitigate these glitches.

1.9 Limitations of the Study:

Though the study was conducted properly and the probability of errors is kept minimal, still some errors occurred because of certain limitations. The following limitations were found during the course of study- First of all, it was hard to convince the students, most of them were hesitated to furnish a detailed perception and this made the researcher not get much of data.

- Sample size was another limitation of the study. The sample size is being very small that is only 100 respondents, limited the scope of Research. Time constraints put boundaries to sample area and hence limited the extent of the study.
- The study was confined to three leading colleges of the Nalbari District, and as such the results may not be the same in other places.

1.10 Chapterisation:

The present study has been divided into 5 chapters. The Chapterisation for chapters is done as follows-

Chapter-1:

Introduction-The first chapter of the research deals with the general background of the study. This chapter includes- Introduction, Statement of the Problem. Objectives of the Study, Review of Literature, Research Gap. Design of the Study, Research Methodology, Significance of the Study. Limitation of the Study and Chapterisation.

Chapter-2:

Description about the Study Area.The second chapter describes about the Study Area; which includes- Introduction, Geographical Location, Physical Features, Cultural Prospective, historical & Religions and marks, Soil & Climate, Political & Administrative Structure, Population, Literacy & Education. Medical Service, economy and Agricultural & Industrial Position.

Chapter-3:

Conceptual Framework of the Study This chapter presents Conceptual Framework, which includes- Definition of Digital learning. History of Digital Learning, Education and Technology. Role of Digital learning, Types of Digital learning, Advantages of Digital

Learning, Disadvantages of Digital Learning and Impact of COVID-19 in Assam & the Educational Scenario.

Chapter-4:

Presentation and Analysis of Data This chapter explains about the interpretation and analysis of the collected data with the help of tools. It includes- Introduction, Data Analysis and Interpretation.

Chapter-5:

Summary and Conclusion The last chapter adopts with Findings, Suggestions. Summary Future Scope of the Study and Conclusion.

Chapter-2

Description about the Study Area

2.1 Introduction:

The word Nalbari derived from Nal” and Bari”. “Nal” denotes ‘variety of reed’ while Bari” denotes ‘garden’. In ancient times Western Assam was known as Kamarupa from earlier times to pre-modern period: which existed in harmony with Davaka of central Kamarupa was Assam. Divided into “Kamarupa Pithas” or geographical divisions; Nalbari was placed in Kamapitha division. The area congruent to Kamapitha, became Undivided Kamrup district of colonial and post colonial times until 1985, when Nalbari district was carved out. Nalbari’ means a place of reeds. The name was founded by the British Railway Engineers sometimes in AD 1890-9L. Nalbari is known as Navadivipa of Assam. The history of Nalbari is connected with king Jarashandha and Lord Krishna such as Haribhanga. Nalbari region was under the Ashuras, Danavas, Varmanas, Salastambhas, Palas, Bhuyans, Koch, Tai-Ahoms, Mughals etc. The famous earlier villages are: Khata, Bahjani, Baska, Dhamdhama, Barbhag, Sonkuriha, Tihu, Janigog etc. Religious shrines are: Sri SriSriBilleswar Maharudra, Balilecha mandir, Jaypal mandir etc. In early time, famous Sages like Vasistha, Atri, Kanva passed through this land to Guwhati. The Pandavas and Kauravas also came down to Kamarupa during Duryyodhanas marriage through this route only. There are good numbers of Sanskrit Toals in Nalbari. This region was once the hub of the activities of Haradatta and Biradatta revolutionary heros in the last days of the Tai-Ahoms. The story of Kumedan Bangal and Padma Kumari daughter of Haradatta still echoed this area.

In the early part of the twenties a railway station of the Assam-Bengal Railway Company had been established here. As the train started running through, certain traders and businessmen from outside the state came and interacted with the local people. Business transactions were started on the rail station road. Nalbari is one of the educationally advanced districts in Assam. Gurdon Govt. Higher Secondary School is the oldest educational institution of Nalbari District. It was established as middle school in 1887, which was formally declared as Nalbari High School in 1917. Later on this was named as Nalbari Gurdon High School. In 1941, it was declared as one of the town in Kamrup District with a town committee with a population of 3,578. In 1945, the Nalbari College was started in a temporary shed and in 1950 it was shifted to its present site which helped in the growth of the Bidyapur-shantipur area of the town into a densely populated area. The establishment of the PWD offices on the Palla road, led to the growth of the Gopalbazar area. In 1968, Nalbari was upgraded into a subdivision with headquarters at Nalbari and in 1984; it was made the district headquarters of Nalbari District, all of which led to the upsurge of development process with huge population migration, primarily of local people. By road, Nalbari is accessible through National Highway 27 in north and connected to National Highway 427 in south. The Nalbari railway station is within town center, and Guwahati International Airport is at distance of 60 kilometers. Nalbari District, an administrative district of Assam is situated in between

Kamrup and Barpeta District. For better administration, old Kamrup District has been divided into three Districts. Nalbari was declared a Sub-division of undivided Kamrup District in 1967. Rajendra Mohan Goswami, ACS was first Sub-divisional Officer in Nalbari. Nalbari Sub-division is formally declared as a District in 14th August, 1985. Sri Vinod Kumar Pipersenia, IAS, was first Deputy Commissioner in Nalbari. Nalbari District was further divided in 2003 for creation of Baska District in BTAD area. A sizable area comprising most of the upland forest area and tea garden area of original District has fallen into the newly created Baska District under BTAD area.

2.2 Geographical Location:

Nalbari District occupies an area of 2,257 square kilometers (871 square meters) comparatively equivalent of Indonesia's Norotai Island. Nalbari District is situated in between 26 degrees North and 27 degrees North latitude and 91 degrees East and 97 degrees East longitude.



Figure-1: Location of Nalbari District in Assam, India.

The north and west side of the district is bounded by Baksa and Barpeta Districts respectively. The south and east side of the District is bounded by Kamrup District. The District headquarter Nalbari is located about 75 kilometers away from the state Capital of Guwahati and is linked with both road and rail network. The district is characterized by almost plain topography with a gentle slope from north towards south, ending in newly built up char land and the river Brahmaputra. Nalbari District has been Sub-divided into single Sub-divisional, 12 Blocks and 110 Panchayats.

2.3 Physical Features:

The entire area of the District is situated at the plans of the Brahmaputra Valley. The tributaries of the Brahmaputra, Nona, Buradia, Pagaldia, Borolia and Tihu which are originated from the foothills of the Himalayan Range are wild in nature and have enormous contribution towards the agrarian economy of the District.

2.4 Cultural Perspectives:

Assam is the meeting ground of diverse cultures. The Assamese Culture is a rich and exotic tapestry of all these races evolved through a long assimilative process. The natives of the state of Assam are known as "Asomiya" (Assamese), which is also the state language of Assam. The state has a large number of tribes, each unique in its tradition, culture, dress and exotic way of life. Diverse tribes like Bodo, Kachari, Rabha, etc. co-exist in Assam; most tribes have their own languages though Assamese is the principal language of the state. As we know, Nalbari is a District of Assam though we all follow the same culture. The Jaapi is a traditional conical hat from Assam as well as Nalbari, which is made from tightly woven bamboo, cane and "Tokoupaat" (a type of large palm leaf). The word jaapi" derives from Jaap" meaning a bundle Tokou leaves. Today "Jaapi" is a traditional symbol of Assam. It is worn in a style of Bihu dance. Bihu is the main festival of Assam as well as Nalbari District. The origin of the word Bihu' is said to be from the Sanskrit word Vishu'. The Assamese celebrate three types of Bihu in a year- Rongali Bihu" or Bohag Bihu', Kongali Bihu' or Kati Bihu' and Bhogali Bohu' or 'Magh Bihu'. The annual music festival of Raas is a significant spiritual and cultural festival in Nalbari District. Raas festival is celebrated with much pomp and grandeur during November each year for almost 11 days at the Hari Mandir. The event epitomizes the expression of dancing in delight in reverence of Lord Krishna, symbolizing love, beauty and happiness. This beautiful festival transforms the little town of Nalbari into a celebratory event that draws visitors from far and wide. The premise of Hari Mandir is decked at the Main Puja Spot with a spectacular idol of Radha and Krishna, in addition to numerous temporary stalls decorated with idols representing a diverse range of events symbolizing Lord Krishna's life events. Most people visit Nalbari on a pilgrimage or during festivals of Buddha Purnima and Dhol Purnima when the tourist destination's buzzing with festivities and a mela too is organized. Not only has the festival become a part and parcel of Nalbari, it has got intertwined with its socio cultural life.

2.5 Historical and Religious Landmarks:

Following are the Historical and Religious Landmarks in Nalbari District-

• Hari Mandir:

It was built in 1965 within Nalbari town on land donated by Raybahadur Pratap Narayan Choudhury. The temple is dedicated to Lord Krishna. In 1968 the Puaj Mandab was built with financial help from Lt. Damahuram Mahajan. The new Math was constructed from 1976 to 1985. The temple is unique throughout Assam because of the annual Raas festival celebrated here in the month of November since 1946 with much pomp and gaiety.

Billeswar Devalaya:

Believe that the temple is over 500 years old. It is dedicated mostly to Lord Krishna are also worshipped. Legends state that a priest who lived here owned a cow, which regularly gave milk on a bush of "virina" (type of grass). When the king was intrigued about it and he

ordered the place to be dug up to find a Shiva Linga on the spot. Following the incident, a temple was constructed here but it was dedicated to Krishna. Ahom king and Lakshmi Singha rebuilt the temple, which faced the Wrath of natural disaster.

- Shripur Devalaya Temple:

This temple is said to have been built by Ahom King, Sib Singha (1718-1744). It is believed that a part of Goddess Parvati, when she was born on earth as Sati, fell here. Hence, the temple is dedicated to Goddess Parvati. The people celebrate Kali Puja and Durga Puja in this temple.

- Daulashal Temple:

This temple is situated at Daulashal, a village at the extreme south-west of the district. In ancient times a huge doul or temple and near it a canal (khal) and so the place was called is "Daulakhal" and later "Daulashal", The temple is dedicated to Lord Krishna and his brother Balaram and has been witness to many glorious chapters of Assam history in particular the Mughal invasions to Assam.

- Basudev Devalay:

This temple built by Ahom King Shib Singha (1718-1744). The local folklore says that once a fisherman was fishing in Jaymangal Beel and for seven days he could not remove the fishing net. On the seventh day, a local fourth Gada Kahar had a dream in which Lord Basudeb appeared and asked him to be released from the fishing net. Upon reaching the beel, Gada found two large stones in the fishing net. When Sib Singha heard this story he came to Balikoria and tried to take away the stones but failed and so he built a temple there. In 1759 his brother, Rajeshwar Singha donated 64 Bighas of land to the temple. And since past festivals like Douljatra, Janmashami, Sivaratri are being celebrated here.

2.6 Soil and Climate:

- Soil:

The Soil condition of District is a heterogeneous one. The Soil of the northern part of the district is clayey and where as middle part is loamy and sandy. The Soil of the southern part of the district is composed of sandy soil.

- Climate:

The climate of the district is sub-tropical in nature with warm and humid summer followed by cool and dry winter. The average annual rainfall of the district is 2,029 millimeter, which, however, shows spatial and temporal variations. Out of the total rainfall, 66.7% is received during monsoon period (June-September). The pre-monsoon period (March-May) is characterized by unpredictable and erratic rainfall (26.1%) resulting in delayed sowing/ planting of crops. The winter (December-February) is virtually dry with 2.15% rainfall resulting in low coverage and poor yield of Rabi crops. The post monsoon period (October-November) is unpredictable with low rainfall (5.10%).

2.7 Political and Administrative Structure:

The Nalbari Assembly Constituency is number 59 out of 126 in the Assam Legislation Assembly. This seat is a mix of urban and rural voters as well. The assembly constituency comes under the Mangoldoi Lok Sabha constituency. The Convenor, Sh. Manash Deka Bharatiya Janata Party for East, Delhi Pradesh did school education in this assembly constituency. The Deputy Commissioner is the head of the District Administration. He also acts as the Collector in case of Revenue matters, as a District Magistrate in case of maintenance of Law and Order and General Administration as a District Election Officer in case of conduct of Election, as a Principal Census Officer while conducting Census and so on. A number of officers like Additional Deputy Commissioners, Sub-divisional Officers, Extra Assistant Commissioner and others Assistant the Deputy Commissioner in looking after the

Administration of the District. There are 7 Revenue Circles and 7 CDs Blocks. In each Revenue Circle, there is a Circle Officer and in every Block a BOD.

2.8 Population:

According to the 2011 Census, Nalbari District has a population of 771,639. The total population is divided between rural population and urban population by 688,909 and 82,730 respectively. Male population is 396,006 female populations are 375,633. This gives it a ranking of 488th in India (out of a total of 640). The District has a population density of 763 inhabitants per square kilometer (1,980/square meter). Its population growth rate over the decade 2001-2011 was 11.74%. As per 2011 census, Out of the total population of Nalbari District, 89.28% people lives rural areas and only 10.72% people lives in urban areas. Nalbari has a sex ratio of 945 females for every 1000 males, and a literacy rate of 79.89%. Scheduled Castes and Scheduled Tribes made up 7.80% and 3.03% of the population respectively. According to 2011 Census, 63.71% of total populations are Hindu, 35.96% Muslim, 0.06% Christian, 0.01% Sikh, 0.13% Jain and 0.13% are not stated.

2.9 Literacy and Education:

The rate of total literacy of the Nalbari District, according to 2011 census, is 79.89% as against 80.95% in 2001, The rural literacy rate is 78.44%, while the urban rate is 91.46%, Male literacy is 85.58% consisting of Rural 84.38% and Urban 95.24%. Female literacy is 73.85% consisting of Rural 72.14% and Urban 87.48%. The total literacy rate of the state as a whole is 73.18%. educational opportunities in Nalbari are of high quality. It boasts of producing most number of toppers in School level. Nalbari is famous for Sanskrit education and known as “Nabadeep” of Assam for the presence of various Sanskrit education institutions. The first Middle School was established in Nalbari in the year 1887. In 1917, it was formally declared as Nalbari High School. Later on this school was named as “Nalbari Gordon High School”. With the passage of time, different schools and colleges were established at Nalbari District. Nalbari College, Nalbari; Nalbari Commerce College, Nalbari; MNC Girls College, Nalbari; Nalbari Sanskrit College, Nalbari; Barbhag College, Kamarkuchi; Baska College, Mashalpur; Barkhetri College, Mukalmua; Tihu College, Tihu; Barama College, Barama; Kamrup College, Chamata; Dhamdhama Anchalik College, Dhamdhama; Gyanpeeth Mahavidyalaya; Nalbari Law College, Nalbari; Sankardev Academy, Nalbari; DSR Academy, Nalbari; Spectrum Gurukul, Nalbari are some premier colleges of Nalbari. Along with 28 Higher Secondary Schools, 145 High Schools, and 276 ME and MV Schools, Nalbari have massive educational infrastructure, Following, are the three leading colleges of Nalbari District- “ Nalbari College, Nalbari: Nalbari College was established in the year 1945 and was affiliated to the Calcutta University. After the establishment of the Gauhati University in 1948 it came under this University. It is one of the oldest and largest colleges in Assam. It was the only college for higher education in the whole area from Mangaldai to Bongaigaon. Nalbari Commerce College, Nalbari: Nalbari Commerce College, Nalbari; is the only government commerce college in Nalbari district of Assam. The college was established in the year of 1979. It is a premier co- educational institution of higher education in commerce in Nalbari region. It is affiliated to Gauhati University, Guwahati. MNC Girls College, Nalbari: MNC Girls College is located in Nalbari, Assam. It was established in the year of 1979, It is a premier institution of higher education for girls in the region. The College affiliated to Gauhati University, Guwahati.

2.10 Medical Services:

Medical and Public Health Services at Nalbari District is a satisfactory. There are numbers of State Government Hospitals, Primary Health Centre, First Referral Units, CHC, THC etc. On the other hand in the heart of the town some Private Nursing Homes are also available. There are some registered diagnostic centre are also available. Nalbari District has 1 number of Civil Hospital, 4 numbers of Block Public Health Centre, 34 Mini Public Health Centre, 7

numbers of Community Health Centre, 5 numbers of Dispensaries, 121 numbers of Health Sub Centre and 6 numbers of Private Hospitals.

2.11 Economy:

The economy of Assam continues to be predominantly agrarian. Majority of the population (around 75%) of the state is depending directly or indirectly activities. The economy of the Nalbari District is in the same line with the economy of Assam, which is also mainly based on agriculture. Almost 80% of the population of the Nalbari sub-sets on agriculture. The entire area of the Nalbari district is situated in the plains of the Brahmaputra valley. The tributaries of the Brahmaputra, Nona, Buradia, Pagaldia, Borotia and Tihu are originated from the foothills of the Himalayan Rangc are wild in nature and have enormous contribution towards the agrarian economy of the district. Nalbari District has several small scale industries, Besides agriculture, there are various sectors that contribute to the economy of Nalbari District such as fisheries, animal husbandry, sericulture and handicraft industries.

2.12 Agricultural and Industrial Position:

The economy of Nalbari District is largely agricultural based. Around 89.0% of the total population of the District lives in villages and agriculture is the main occupation of the people engaging about 70% of the working population. There is no major industrial unit exists in the district. In the field of Agriculture: coconut, banana, mushrooms and seasonable vegetables can be cultivated on a moderate scale. Paddy is the major agricultural crop and mustard, potato and pulses are other major crops. In the char areas surplus production of milk could be scientifically manage through the establishment of a processing unit. The Nalbari District has several significant features. Almost every village has a fishery. Besides fishery, other veterinary projects like poultry, piggery, dairy and goat rearing are the major allied agricultural activities. These would be feasible and profitable. Sericulture, especially “eri” and “muga” rearing, is gaining popularity among villagers in some pockets in the district. Nalbari District is industrially very backward. There is no heavy industry. There are only three medium size industries. One Polyester Fabric Production Industry at present sick. Small industries like Handloom are found mainly in rural areas, especially in tribal areas. Sericulture is also an important subsidiary occupation of the tribal. There are some weaving enters also, Weaving is widely done by the women in the district to generate additional income for the family. Nalbari is famous for cane and bamboo product. There are many bamboo based and traditional crafts in various areas of Nalbari especially in the areas of Ghograpar, Barbhag and Pub-Nalbari. Nalbari is famous for “Jaapi” and the area of Tillana is known all over Assam for this cratt. These products are exported all over the state as well as outside that state also As regard industry, The District has one Industrial Estate and one Commercial Estate at Gopal Bazar, Nalbari, occupying 36B-2K-6L of land. 20 Industries are functioning at present from the Industrial Estate. The District also processes two more Commercial Estate at Tihu (2 Bigha Plot) and another at Bamunbari near Rampur (5 Bigha Plot) which are not in functioning condition at present. Over and above these Industrial Estate and Commercial Estate, a food processing industrial park is under implementation in PPP mode by AIDC, one of the sisters’ organizations of Industries and Commerce Department. This NEMFP occupies 50 Mega Acres of land of ears while Assam Syntex Ltd., Estate PSU under large scale sector at Nathkuchi. An IIDC and a Regional Food Testing Laboratory is also under implementation by AIDC over rest portion of land (30 Bigha 4839pprox.) of Assam Syntex Ltd. At Nathkuchi. NEMFP and IIDC Nathkuchi is expected to accommodate a number industries in it. One Permanent Skill training centre under Multi Disciplinary Development Program is also under implementation at Bartola in the District.

Chapter-3

Conceptual Framework of the Study

3.1 Definition of Digital Learning:

Digital Learning is defined as any type of learning accompanied by the use of technology, or instructional practice that makes use of technology. Digital Learning uses new technologies and methods to help students learn in a different way. This new form of education has been rapidly replacing the more traditional form of “face-to-face” lessons. The incorporation of Digital Learning can be as simple as the use of tablets and laptop in the classroom instead of the good old fashioned notebooks and paper. It can also be as involved as using complex software and equipment to facilitate areas of education previously unattainable to particular students. Today, Digital Learning encompasses a wide range of learning strategies and theories, including blended and virtual learning, which companies worldwide are embracing alongside the rise of remote and hybrid work.

3.2 History of Digital Learning:

The history of the modern computer age is a brief one. It has been about 50 years since the first machine that allowed students to test themselves on subject matters was invented in 1924. The first operational computer was put into use: the Mark 1 in 1944 at Harvard and ENLAC in 1946 at the University of Pennsylvania. By 1954, Burrhus Frederic Skinner had dreamed up a “teaching machine” that enabled schools to administer programmed instruction to their students. However, it was not until 1960 that the first computer-based training program was developed. Known as “PLATO”, the program was designed for students at the University of Illinois but ended up being more broadly used by students state-wide. Early use of computers in education was primarily found in mathematics, science and engineering as a mathematical problem-solving tool, replacing the slide rule and thus permitting students to deal more directly with problems of a type and size most likely to be encountered in the real world. Early use of computers in education was primarily found in mathematics, science and engineering as a mathematical problem-solving tool, replacing the slide rule and thus permitting students to deal more directly with problems of a type and size most likely to be encountered in the real world. At Dartmouth, in 1963, John Kemeny and Thomas Kurtz transformed the role of computers in education from primarily a research activity to an academic one. They did not like the idea that students had to stand in long lines with punch cards for batch processing. So they adopted the recently demonstrated concept of time-sharing that allowed many students to interact directly with the computer. The university developed the time-shared system and expanded it into a regional computing center for colleges and schools. At the time, most programs were written in machine language or FORTRAN. Kemeny and Kurtz developed a new, easy-to-use language, called BASIC. It spread rapidly and was used for the creation of computer-based instructional materials for a wide variety of subjects and for all levels of education. By the 1970s, Digital Learning started to become more interactive rather than simply feeding information to students. The 1990s saw an even bigger push toward Digital Learning. Schools were designed specifically to deliver online courses without companion in-person learning sessions. With its increased adoption, Digital Learning also became more affordable to develop and deliver. As time went on, Digital Learning started making its way into the business realm. By the first decade of the 2000s, it had become a popular way to deliver training to employees, The move to online learning and training made it possible for both new and seasoned employees to develop and improve their skills when and where it’s most convenient.

3.3 Education and Technology:

Education is the driving force of economic and social development in any country. India, like any other knowledge economy, depends on the development of its educational sector. Higher education drives the competitiveness and employment generation in India. However, the overall state of higher education is depressing in the country. There is a severe constraint on the availability of skilled labour. There exist socio-economic, cultural, time and geographical barriers for people who wish to pursue higher education. When it comes to employment and

further education, we are still challenged with the quality of education and training imparted at the higher levels. Whilst the industries keep questioning the employability of the fresher's, hardly any collaborative efforts are made by the industry to improve the quality of education imparted by the institutions and therefore make the students more prepared to take on more responsible roles in the industry. Innovative use of Technology can potentially solve this problem. Talking about technology, mobile phones are the fastest growing technology platform in the developing world. India is the largest market for mobile phones worldwide, with the majority being bought by illiterate and semi-literate users. A growing percentage of these phones feature advanced multimedia capabilities for photos, videos and gaming. These devices are a perfect vehicle for new kinds of out-of-school learning, which can occur at places and times that are more convenient than school. These factors create an extraordinary opportunity for complementing the formal 134 educational system towards enhancing skills in young Indians, which is the fastest way to open the doors for employment and also further education.

3.4 Role of Digital Learning:

Digital learning is replacing traditional educational methods more and more each day. With how rapidly classrooms are changing, it is best to forget methods you may remember from when you were in school and start thinking about newer teaching and learning techniques based on digital learning tools and technologies. The inclusion of digital learning in the classrooms can vary from simply using tablets instead of paper to using elaborate software programs and equipment as opposed to the simple pen. This could entail using sites, services, programs, teaching tools, and technologies like study aids built for at-home use. Even social networks and communications platforms can be used to create and manage digital assignments and agendas. Irrespective of how much technology is integrated into the classroom, digital learning has come to play a crucial role in education. It empowers students by getting them to be more interested in learning and expanding their horizons. There are some role of Digital Learning which are explained below-

> Digital Learning Makes Students Smarter:

Learning tools and technology enable students to develop effective self-directed learning skills. They are able to identify what they need to learn, find and use online resources, apply the information on the problem at hand, and even evaluate resultant feedback. This increases their efficiency and productivity. In addition to engaging students, digital learning tools and technology sharpen critical thinking skills, which are the basis for the development of analytic reasoning. Children who explore open-ended questions with imagination and logic learn how to make decisions, as opposed to just temporarily memorizing the textbook.

> Digital Learning Is Making Students Self-Motivated and More Accountable:

Students using digital learning tools and technology become more engaged in the process and more interested growing their knowledge base, they may not even realize that they're actively learning since they're learning through engaging methods such as peer education, teamwork, problem-solving, reverse teaching, concept maps, gamification, staging, role playing, and storytelling.

> Digital Learning Tools Involve Educators and Parents to a Deeper Extent:

Learning tools and technologies like social learning platforms make it easy for teachers to create and manage groups. The shift to digital learning can approximate the benefits of tutoring while freeing up time for teachers to address individual and small group needs. The opportunity to customize learning sequences for each student will make education more productive by closing learning gaps sooner and accelerating progress. Dynamic grouping workshops, and project-based learning can add lots of collaborative learning to the already present education model. Apart from educators, parents can use interactive activities to encourage their child's interest in learning since gamification makes the process much more

enjoyable and interesting. Parents can also explore online learning activities with their child which can serve as an extension to what they are learning in their classrooms. Digital learning tools and technology provide enjoyment for kids as well as numerous benefits in terms of developing a child's well-being.

► **Digital Learning Tools and Technology Is Rapidly Increasing Information Sharing:**

In recent years, the shift from print to digital has impacted how we learn. Just as printing press did six centuries ago, this transition is transforming formal education and increasing learning opportunities. Digital learning is not only allowing students to access more and more information but also ensuring that the information in question is customizable and suited to their personal needs. The opportunity to help every student learn at the best pace and path for them is the most important benefit of digital learning. Digital learning tools and technology enable educators to rapidly share information with other educators in real-time. The explosion of free and open content and tools has created an environment of sharing economy. By embracing digital devices and connected learning, classrooms around the country and around the globe can not only coordinate with one another to share insights but also boost learning, experience, and communications skills. The practice also allows educators to enjoy a level playing field. Schools can save money while ensuring equitable access to educational material as expensive private schools.

► **Increasing Students' Employability with Digital Learning Tools and Technology:**

Equipping students with the requirements of higher education and holding a career at a young age has become one of the most crucial responsibilities of school education. Digital learning solutions based on problem-based learning emphasize on learning methods that are constructive, collaborative and calls the students' attention to a real-world approach to learning.

3.5 Types of Digital Learning:

When it comes to Digital Learning, it doesn't need to be an all or nothing approach. There are three main models of Digital Learning, which are as follows-

> **E-Learning:**

E-learning is generally considered to be a completely digital approach. Students receive all of their instruction online, either via educational platforms or with the assistance of meeting software like Teams or Zoom. All of their material is digital, and they can usually access it whenever they like. They might have set class times, but in a lot of cases, they can study at their leisure but might need to meet deadlines with assessment.

> **Blended Learning:**

Blended learning is a combination of the traditional learning model with elements of E-Learning. Classes could take place in a physical classroom full-time or part-time. This is the most common model currently being used for primary and secondary education. Blended learning is often also referred to as hybrid learning", and can take on a variety of forms in online education environments. While some organizations may only use blended learning techniques on rare occasions, others might utilize it as a primary teaching method within their curriculum.

There are two key principles commonly associated with blended learning:

students who can share information and work with other students directly in a collaborative setting have a more enriched learning experience, and collaboration between students can be improved upon if group activities rely on information gathered from online resources or lessons. It's also been suggested that students who complete online coursework followed by interactive, face-to-face class activities have richer educational experiences.

> **Gamification:**

This could be seen as the sneakier version of e-learning, Gamification takes the elements of play that kids love in things like video games and uses them to achieve an educational goal. The great thing about gamification is that kids are learning but don't feel like they are necessarily in a class.

3.6 Advantages of Digital Learning:

Following are the advantages of Digital Learning-

> Affordable:

The best part of Digital Learning is, it is much more affordable compared to traditional learning. In digital classes, parents are free to buy uniforms or spend travelling expenses and can save extra money. Due to this advantage of online education, economically weaker students can fulfil their dreams. You should pay for university credits and save a lot of money with digital classes.

> Time Saving:

Unlike traditional learning where you have to commute, Digital Learning saves a lot of time. In digital classes, there is no commute involved as a student can learn and get a degree while sitting at the comfort of their home.

> Tech-savvy:

While it may not sound ideal, Digital Learning will force you to become more tech-savvy. This is because you will need to use technology for learning. However, this is a good thing as in today's age of technology majority of the jobs require tech-savvy employees.

> Self-paced:

Digital Learning is often self-paced where you can do your work in your own time, unlike traditional classes. If there are no teachers, so you can easily take your own leisure time in finishing your work.

> Improves Time Management:

A student has to learn how to manage their time efficiently. Digital classes make this possible as there are no teachers to guide the students physically in doing their work. This independence allows students to grow and improve their time management abilities.

> Easy Attendance:

Digital Learning makes it possible for students to give their attendance right from the comfort of their homes. So they can attend all digital classes without any absence.

> More Accessible:

Location-wise Digital Learning is much accessible. If a student wants to study at a particular university from another country or region but can't travel due to financial issues or some restrictions, then through digital education a student can get a degree from that particular university without having to travel.

> Less Competition:

3.7 Disadvantages of Digital Learning:

More As you see there can be less intense and less competition in Digital Learning compared to traditional classes. You have to memorize that the low level of competition makes students less stressed and more relaxed.

Following are some of the disadvantages of Digital Learning-

> Lose Concentration:

Without having proper care for students, it is very easy to lose concentration in digital learning. Also, virtual classes can be done through phone or laptop gadgets where students may feel it difficult to focus on their computer displays for too long. Moreover, the Internet itself offers countless distractions like social media websites, messengers, or anything else. This completely makes them go off track from subject studies without realizing it.

> Expensive:

While the fees paid by a student are much less than traditional learning, online learning requires a student to buy computers or devices. While this is affordable and possible for many, it is still impossible for many. Through this COVID-19 pandemic, we have seen and heard many stories of parents sacrificing their life savings and salaries to buy computers and smart phones just so their children can get an education through Digital Learning. So Digital Learning may be accessible but it's not readily affordable.

> Isolation:

While digital education has its perks many students feel a sense of isolation and become depressed. This is due to little to no human contact and socializing with peers. Both students and teachers alike are prone to loneliness in virtual learning.

> Health Issues:

Many parents are worried about their child's health as it is unhealthy to sit for hours in front of a computer screen. Looking at the screen for too long can also damage their eyesight. Not only that, back problems due to incorrect sitting positions may arise.

> Lack of Good Internet connection:

As we all know that digital classes are more flexible and accessible from anywhere conveniently with the help of a good internet connection. If you are failed to connect your phone or computer with good internet connectivity then you may miss a lot of important stuff because of buffering., Also. For a good internet connection parents need to spend money on a monthly or yearly basis which is a disadvantage for poor and middle-class families.

> Lack of Socializing Skills:

Since there is no socializing involved in digital classes, many students who study through digital mode can't acquire socializing skills, This may become a problem for students in the future. The lack of peer-to-peer interaction may also decrease the cooperative skills of a student.

> Prevention of Cheating is Difficult:

Unlike traditional learning where teachers can personally monitor students. Digital Learning makes it quite difficult for teachers to assess their students during exams. The teachers will have no idea if students cheat on the test or not as they are not physically there to assess them.

> Limited:

Digital learning does not apply to all disciplines and subjects. Major which require practical like engineering, medical science and other STEM subjects can't be implemented fully with digital classes. Moreover, some practical can't be learned virtually.

3.8 Impact of COVID-19 in Assam and the Educational Scenario:

With the nation-wide lockdown to prevent the spread of COVID-19, all the educational institutions of Assam remained closed physically till date. Efforts to stop the viral outbreak included working from homes, or closing many institutions where people could infect one another with COVID-19. Because of this situation all the educational institutions of Assam started to operate online. The first case of COVID-19 pandemic in Assam was reported on 31 March 2020. As the situation is worsening day by day, all the educational institutions ranging from primary to higher educational institutions have started operating online with variations of pace and durations by applying both synchronous and asynchronous mode.

Pre-COVID-19 Education:

Just before the COVID-19 pandemic, learners were primarily using digital content for their education in the form of electronic textbooks, journal articles, online presentations and lecture videos on a variety of websites or self-developed content. Online learning platforms have rapidly gained popularity in education, and in recent times online learning has been found to be the most commonly used educational supporting resource for the teaching fraternity, as well as for learners. Videos as an educational resource have been shown to be

effective and have grown dramatically in popularity as flipped classroom mode. This era of online education was emerged before COVID-19 and will likely be developed depending on how we continue to impart education. This pandemic has given us more exposure to online education. The majority of educational institutions have continued to impart education for their regular programs using a wide range of online platforms available.

*** Education through COVID-19;-**

The COVID-19 pandemic has served as an effective catalyst in expanding educational opportunities- particularly with respect to knowledge sharing through web-based technology. Although digital education platforms are not new, engineering and management remain skills-oriented professions requiring acquisition of expanded knowledge to be effectively complemented with technical-skills development. The latter process requires practical exposure through replication simulation of conditions experienced during real-time exposure. The coming years will likely see the maturation of several virtual learning technologies that will enhance the younger generation with more knowledge.

Age	No of respondent	Percentage of Respondent
Below 18	28	28%
Above 18	72	72%

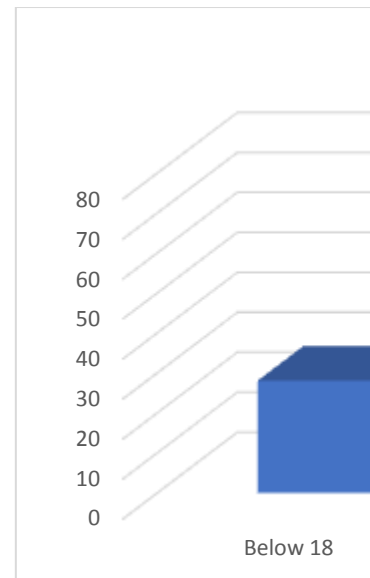
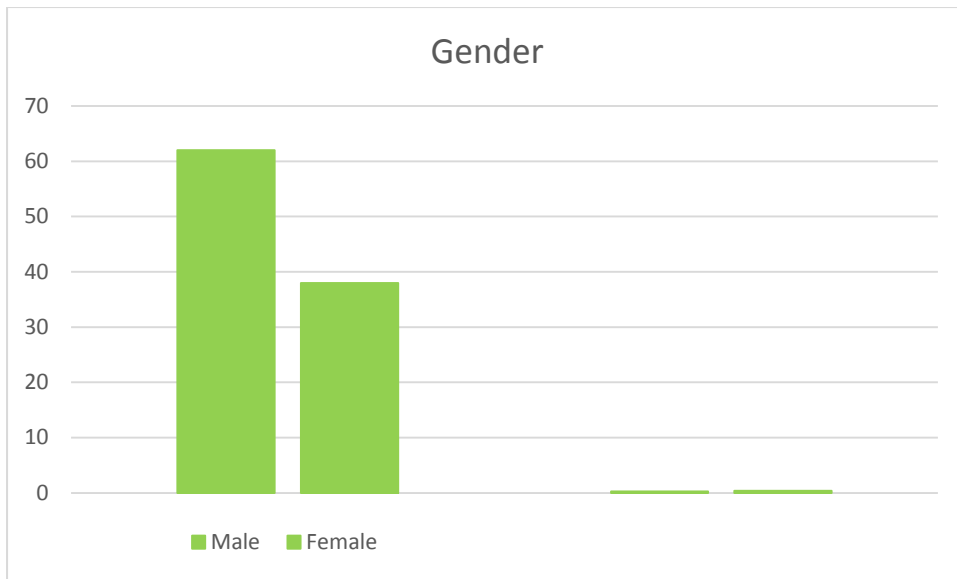


Figure:- Structure of Age of the respondent

Interpretation:-

From the above Primary Data Analysis of Age Structure of the Respondents, it can be analysed that most of the respondents are above 18. Out of 100. Respondents, 72% are above 18 and 28% of Respondents are below 18.



Structure of gender of the respondents

Interpretation:- From the above primary Data Analysis of Gender Structure of the Respondents, I have categorized as Male and Female. With the help of above Table, it can be analysed that the highest number of the Respondents Male. Ie.62% and 38% of Respondents are Female.

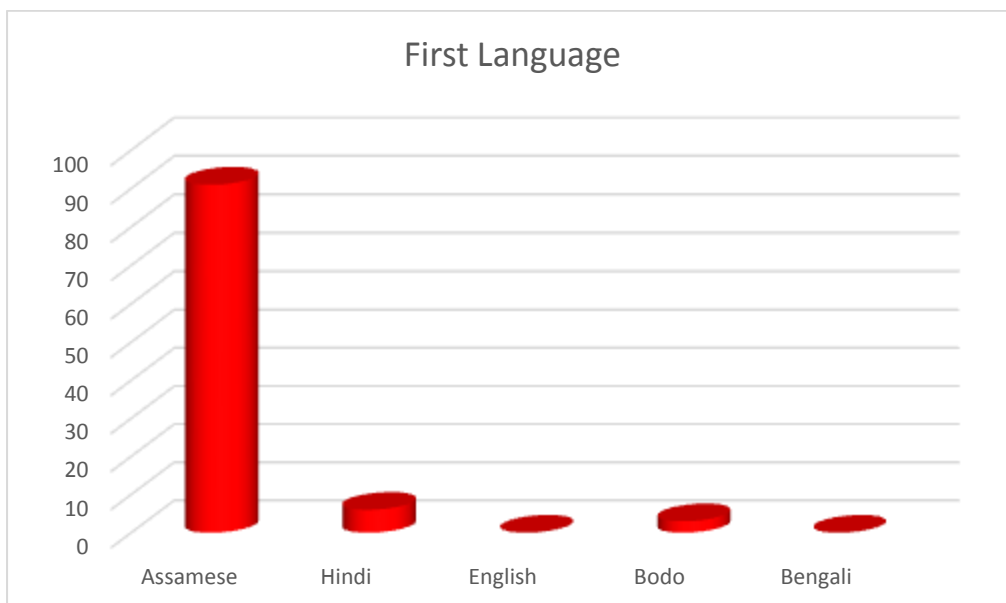


Fig- Structure of gender of the respondents

Interpretation:-

From the above Primary Data Analysis of first Language Structure of the respondent , we can analyze that most of the respondent first language is Assamese i.e.91% , 6 % of the respondents first language are hindi, 3% of respondents language are bodo and no number of respondents are belongs to English Bengali as their first language.

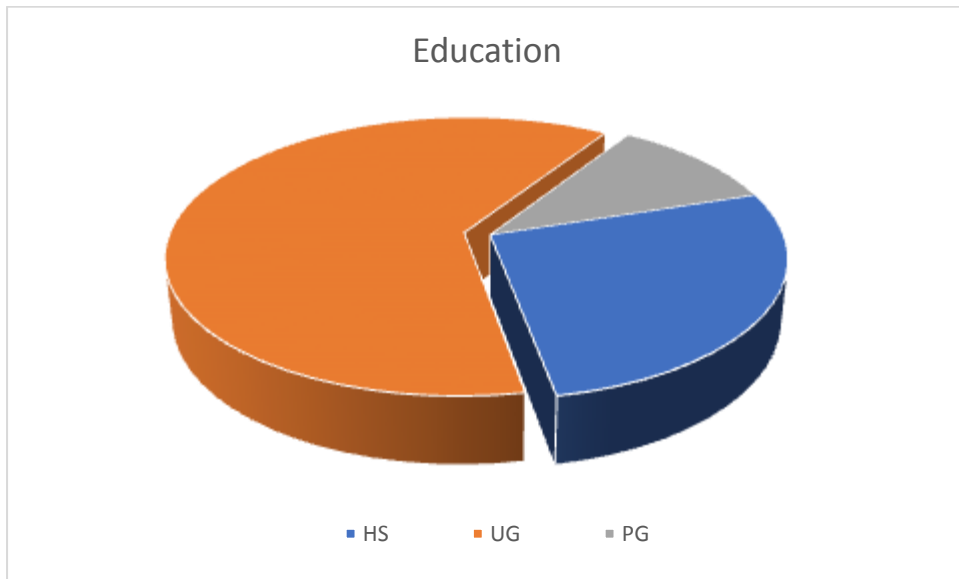


Fig- Structure of Education of the respondents

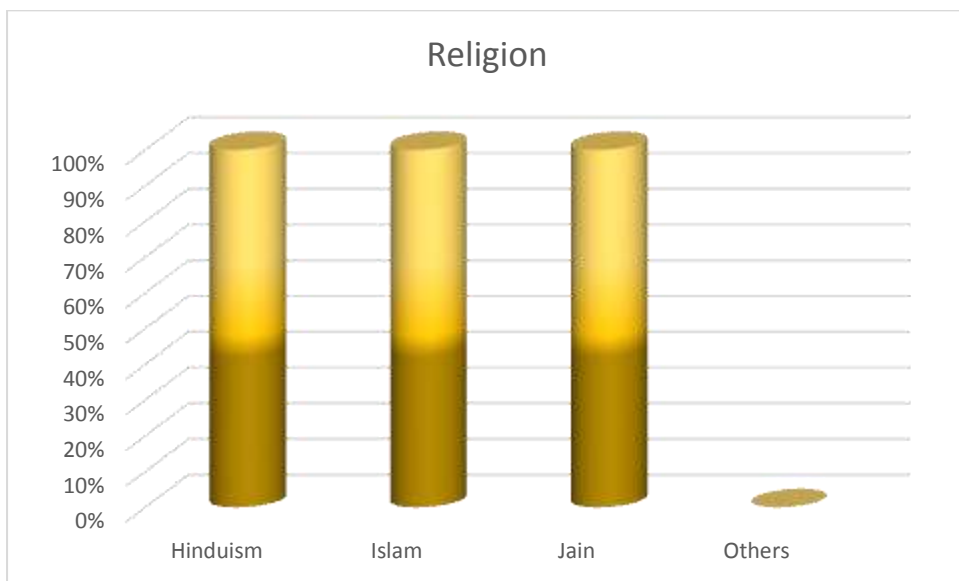


Fig- Structure of Religion of the Respondents

Findings:

Summary & Conclusion

The Findings of f t the Present study have been described as per the analysis and interpretation of the data in the following

Chapter-5

General Findings: General Findings includes the study related data analysis from "Part-A" section of the Questionnaire-About 28% of Students are belongs to the below 18 age group and 72% of Students are belongs to the above 18 age group. About 62% of Students are male and 38% of Students are female. Almost 91% of Students first language is Assamese, 6% of Students first language is Hindi, 3% of Students first language is Bodo and no number of Students have found from the first languages English and Bengali.

• About 27% of Students are from HS level, 62% of Students are from UG level and 11% of Students are from PG level. Almost 88% of Students are belongs to the Hinduism, 8% of the Students are belongs to the Islam, 4% of Students are belongs to the Jain Religion and no number of Students have found from other Religions.

* Specific Findings:

Specific Findings includes the study related data analysis from "Part-B" section of the Questionnaire- Students, the Learning Environment was very peaceful and for 13% Students, the Learning Environment was extremely peaceful at home while they were learning. . About 5% of Student's Family were not at all helpful, 15% of Student's Family were slightly helpful, 18% of

Student's Family were moderately helpful, 37% of Student's Family were very helpful and 25% of Student's Family were extremely helpful while they were studying online.

- Almost 52% of Students preferred 2 Online Classes, 31% Students preferred 3 Online Classes and only 17 of Students preferred 4 Online Classes in a Single Day.
- Almost 41% of Students could understand the Theoretical Concepts, 27% of Students felt difficult to understand the Theoretical Concepts and 32% of Students felt needed few more classes to understand the Theoretical Concepts clearly through the online mode of Digital Learning.
- About 86% of Students could have Proper Interaction with the Teachers during the classes and 14% of Students could not have Proper Interaction with the Teachers during the classes.
- About 45% of Students were faced the network issues during the Classes, 12% of Students were faced the electricity issues during the Classes and 43% of Students were faced the main problem of having not enough data during the Digital Classes.
- About 8% of Students overall experience was much worse on learning, 10% of Students overall experience was somewhat worse on learning, 35% of Students overall experience was about the same on learning, 36% of Students overall experience was somewhat better on
- All 100% Students' Institution was Providing Digital Learning.
- About 75% of Students had Proper Internet Speed at home and 25% of Students had not Proper Internet Speed at home.
- About 87% of Students used Smart Phone, 13% of Students used Laptop for Digital Learning and no number Students belongs to used Tablet for Digital Learning.
- Almost 38% of Students used Zoom Application, 62% of Students used Google Meet Application and no number of Students used other Application for Digital Learning.
- About 47% of Students used Digital Technology for everyday, 11% of Students used Digital Technology for thrice a week, 12% of Students used Digital Technology for twice a week, 30% of Students used Digital Technology for once a week and no number of Students belonged to the group "never".
- About 80% of Students are spent below 2 hours, 15% of Students are spent 2-4 hours and 5% of Respondents are spent above 4 hours each day on an average for Digital Learning.
- About 25% of Students felt that class material are extremely helpful, 36% of Students felt that class material are very helpful, 22% of Students felt that class material are somewhat helpful, 10 of Students felt that class material are not so helpful and 7% of Students felt that class material are not at all helpful which was provided to them.
- Almost for 7% Students, the Learning Environment was not at all peaceful; for 26% Students, the Learning Environment was slightly peaceful; for 31% Students, the Learning Environment was moderately peaceful; for 23% learning and 11% of Students overall experience was much better on learning from home. Almost 71% of Students could follow a proper routine during the online mode of Digital Learning and 29% of Students could not follow a proper routine during the online mode of Digital Learning.

- Almost 80% of Students have been able to adopt themselves to this new mode of Teaching and Learning process and 20% of Students have not been able to adopt themselves to this new mode of Teaching and Learning process during COVID-19 pandemic. Almost 47% of Students believe that Digital Learning Method can replace Traditional Learning Method, 24% of Students don't believe that Digital Learning Method can replace Traditional Learning Method and 29% of Students are not sure that Digital Learning Method can replace Traditional Learning Method or not.
- About 34% of Students prefer Digital Learning Method over Traditional Learning Method and 66% of Students do not prefer Digital Learning Method over Traditional Learning Method.

5.2 Suggestions:

Some useful steps for smooth functioning of Digital Learning are as suggested below:

- Online platforms with enhanced safety and safeguarding measures, especially for digitally learning tools should be ensured. The devices must have the latest software updates and antivirus programs otherwise the security of personal data may be compromised as one can hack the digital devices.
- High speed internet connectivity should be ensured in order to improve smooth access for all including learners of middle and low-income families.
- Educators should monitor good online behaviours of learners while conducting digital classes. Parents should ensure that children's devices have the latest software updates and antivirus programs. They should work with children to establish rules for how, when, and where the internet can be used.
- Social networking platforms should enhance online platforms with more safety measures, especially while using online learning tools.
- Government should take necessary steps to train all stakeholders of education on digitally learning platform to tackle such crisis of any pandemics. Government should create awareness on Digital Learning with safety measures for learners and take measures to create awareness on cyber security.
- Online learning is not affordable for all including the poor and disadvantaged groups of the society. So, necessary steps should be taken by Government/ educational institutions to minimize this gap between privileged and unprivileged learners.
- Learners and educators must be familiar with Web-based interactions such as email, discussion boards and chat rooms before joining digital classes.
- Government/ educational institutions should adopt the policy to provide free internet and free digital gadgets to all learners in order to encourage Digital Learning as a result of which people would get engaged themselves during lockdown and remain safe from pandemics.

5.3 Summary:

India is facing a pandemic of COVID-19. In the absence of proper medicine and vaccine for the treatment of COVID-19, the Government of India has imposed the country lockdown from 25 March, 2020 to avoid chain/ community transmission of COVID-19 in humans. Consequently, all the educational institutions including schools, colleges, universities and vocational institutions were also closed during the lockdown period. As a result, Traditional Learning Method switched to Digital Learning Method in India to compensate for the educational losses and adopted the process of a Digital

Learning platform to support online education. A Digital Learning platform can be a LMS or LCMS. It can also be a virtual classroom tool or a Virtual Learning Environment. While each platform varies in function and features, all Digital Learning platforms can support all types of learning i.e. E-learning,

blended learning and gamification. With the Internet and digital technology becoming an integral aspect of our lives, education too, has gone online, mandating specialized technology solutions to support Digital Learning.

The present study focuses exclusively on the impact level of Digital Learning on Students. The aim of the study is to find out their perceptions and challenges faced on Digital Learning. These perceptions are represented by 100 students from three leading colleges of Nalbari District, who were asked to respond anonymously to a questionnaire in the month of December 2021. The results of the present study show that the most of the Students prefer Traditional Learning Method over Digital Learning Method. The results also specify the advantages and disadvantages of Digital Learning. The study points out key information about Digital Learning from the students' perspectives, which should be considered to understand the ongoing changes of the educational process and to solve its specific problems.

5.4 Future Scope of the Study:

Being a cross-sectional study, the participants' perceptions may change over time. Therefore, the future research can use a longitudinal study to handle this limitation. Further, the data was collected from one type of respondents only i.e. the students. Therefore, the results of the study cannot be generalized to other samples. The future research can also include the perspectives of teachers. The current research is only limited to theory classes therefore, it can be implemented to check students' performance in practical classes. The study is done on the students of three leading colleges in Nalbari District only; thus, if the data is collected from various Districts, it can give better comparative results to understand the student's perspective. This study is limited to check the performance of students, so in the future, the performance of teachers can be checked with similar kinds of conditions. There may be some issues and problems faced by the students, like the limited access to the internet or disturbance due to low signals. Some of the students may face the home environment issues such as disturbance due to family members, which may lead to negative performance. The above-mentioned points can be inculcated in the future research.

5.5 Conclusion:

Digital Learning is the most common method of distance learning today. During the lockdown period for Covid-19, Digital Learning is the best platform to keep learners engaged and safe by maintaining social distancing. Govt. of India has initiated different Digital Learning platforms to continue educational activities during lockdown period which are also been recognized by UNESCO and World Bank. Digital Learning Method utilizes various applications of the internet to distribute classroom materials and help learners and educators interact with one another. Using the various technologies available for Digital Learning, educators can provide a more interactive distance learning experience by delivering real-time, synchronous video conferencing. Digital Learning is considered as future learning process and this platform has a potential of overall change in pedagogy of teaching-learning in the modern world. However, necessary steps must be taken to train all stakeholders of education on Digital Learning platform, Government/ educational institutions should adopt the policy to provide free internet and free digital gadgets to all learners in order to encourage Digital Learning as a result of which people would get engaged during lockdown and remain safe from pandemics. Digital Learning is the best method of learning at this time of lockdown due to the outbreak of COVID-19 and further in-depth study may be undertaken on impact of Digital Learning during lockdown period.