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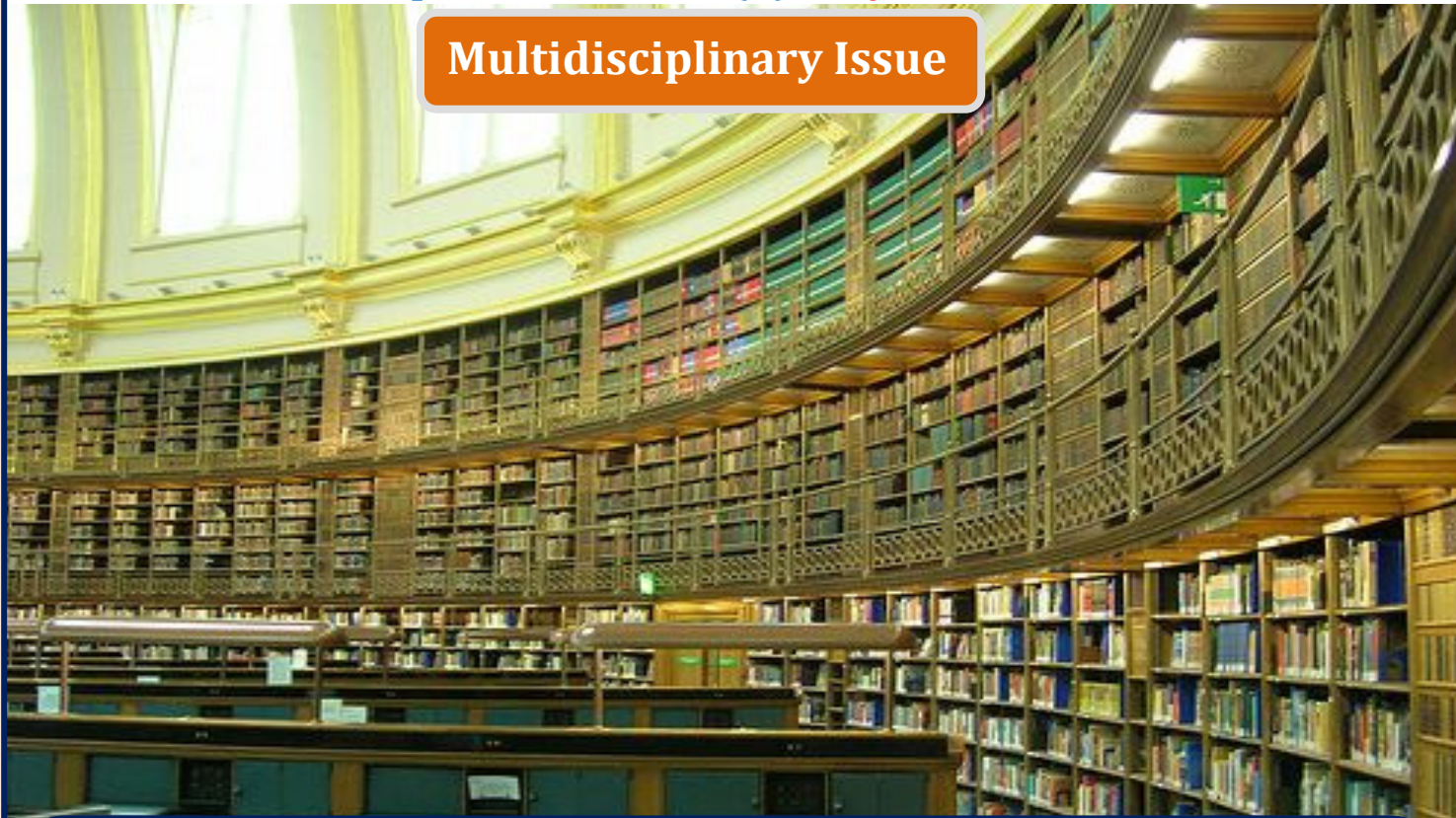
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RESEARCH JOURNEY

International E-Research Journal

PEER REFEREED & INDEXED JOURNAL

Special Issue 266 (A), May 2021

Multidisciplinary Issue



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Utilisation Patterns of E- Journals Used by the Students of Engineering Colleges in Konkan Region in Maharashtra State

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Abstract:

Today we are in the modern age because of all work are going on through information technology and all of work being done through the automation and computerization so current situation is totally based on computerization and automation. Electronic journals are available online and that electronic journals are play very important role for engineering college students and teaching staff, scientists and researchers. The present article is focus on utilisation pattern of electronic journals use by engineering college students in konkan region. Actually konkan region is start from Chanda Wada, Kalyan to Banda Sindhudurg Konkan. Approximately 300 plus engineering colleges are providing the engineering education to 10,000 plus students.

Key words: Electronic Resources, Digital Resources, E-Consortia, E Journal, online resources etc.

Introduction:

Today information is known as an important and vital resources for overall development of the nation. There is lots of influence of technology in overall setting of the libraries today. Recent technology development is a magic tool to set up an electronic and digital library we can call it as electronic library and in this scenario electronic journals our play very important role for enhancement of academic career of the students and teaching staff. E Information is very important for engineering college students to make and being the update knowledge about the electronic invention and development in electronic field students have to be update and fully informed about the various recent aspect and development in the field of engineering techniques engineering discipline day by day in the light of this the present research paper is focusing on how the engineering college students are using electronic journals online for those day to day information seeking behaviour pattern. Present research papers is try to understand the thirst of electronic Journal and for knowing Updated knowledge online. One of the basic aspect of improving the quality of total scientific research work is to facilitate and support the process of creating accessing and using more information and the knowledge. The world of knowledge has changed remarkable in the last few decades.

Further, e- journals can meet the instant desire of users to have an access to information. These can be used for efficient retrieval and meeting information needs. Thus, libraries are moving towards e-journals and e-services, which are found to be less expensive and more useful for easy access in long run.

Electronic journals, though in the arts and humanities the level of provision of online journals still lags behind as compared to the sciences. Day to day, the number of e-journals in the engineering field is increased year by year and is welcomed by the overall community.



The web has influenced the development of new modes of scholarly communication, including various discussion forums, websites and home pages. Although these channels are gaining popularity for communicating and exchanging research results, the scholarly journal is regarded as the most preferred medium. The peer review process and archiving of research results for long-term availability have helped the scholarly journal to attain a firm position. Due to digital publishing technologies and the internet, scholarly journals have undergone many changes. Digital technology has given birth to the electronic form of the journal, the e-journal. The e-journal is also known various synonymous terms, such as online journal, paperless journal, and virtual journal. A journal can be called an e-journal if its contents are produced and stored in electronic form; if these contents can be scanned in a database and retrieved online, it can be called an online journal. Today these terms are familiar to the student and teacher community.

Following is research methodology and synopsis of research paper as below.

Statement Problem of Research Study:

”A case study on utilisation patterns of E- journals used by the students of engineering colleges in Maharashtra state with special reference to Konkan region”

Objectives of Study:

The main objective of the study is to find out the use of e-journals by the students of Engineering Colleges in Konkan region. The other objectives are as follows:

- To take an account of the electronic journals in engineering college libraries in Konkan region.
- To find out the awareness of users' about availability of electronic Journals.
- To study the frequency, purpose, utilization and influence on academic need of e-journals and frequency of using E-journals.
- To find out effect of E-journals on academic efficiency and satisfaction level of users about infrastructure to support the access of E-journals.
- To suggest suitable recommendations to improve facilities and services related to the use of e-journals.

Need of Study:

The present research work is aimed to identify the use patterns of Electronic journals by the students of an Engineering College. This study would be used to determine use of electronic journals and databases and to assess the characteristics associated with the use of electronic resources in an engineering college.

Further this study is to determine the extent to which students at engineering colleges are aware and make use of e-journals.

To identify the benefits derived from the use of e- journals by students being essential concept this study would be helpful to promote the use of e-journals at all level.

Hypotheses of Study:

In order to examine the above-mentioned objectives of this study, the Following hypotheses will be tested for fulfilling the above mentioned objectives.

- Among all resources, electronic journals are more in use by the students in engineering colleges' libraries.

- Electronic journals are not playing a vital role in influencing the technical efficiency of the students under the study in engineering colleges' libraries.

Scope :

In order to realize the above objectives, the study will be restricted to the students of engineering colleges in Konkan region., who are pursuing their Doctor of Philosophy (Ph.D.), Master of Philosophy (M .Phil.), Post-Graduation (M.E.), Under-Graduation (B.E.). The study deals with an in-depth study of e-journals provided and using by the 67 engineering colleges in Konkan region. The researcher have been considered the electronic journals, online e consortia under present research study. The Konkan region starts from Chanda, Wada- Kalyan to Banda-Sindhurg district it includes all engineering colleges of Mumbai and sub urban Mumbai regions. The following is list of the electronic journals, online e consortia under present research study. There are various types of database are available at online consortia such as

1. Institute of Electrical and Electronic Engineering (IEEE) (<https://www.ieee.org/>)
2. American Society of Mechanical Engineers (ASME) (<https://www.asme.org/>)
3. Elsevier Publisher database (<https://www.elsevier.com/en-in>)
4. Springer publisher database (<https://www.springer.com/in>)
5. UGC INFLIBNET N LIST Consortia (<https://nlist.inflibnet.ac.in>)
6. National Digital Library of India (<https://ndl.iitkgp.ac.in>)

Research Methodology:

Library science is related with collection of knowledge resources, and its arrangement and dissemination to the users. Hence have arises basic two factors are i.e. Reading material / information resources and secondly its users. Therefore it is related to information between readers / user and knowledge as well as information.

Thirst of human being has its long back history hence to study the background about institute like Libraries and information centers. Historic method could be adopted for research process. As study in this area is related to data collection could use the survey method. Being a scientific approach about the study area. For such studies experimental method is Possible.

Taking in to consideration the title / Topic selected for study by researcher here Survey method is applied for research process. Methodology itself under the principles of selected method i.e. Survey method a descriptive questionnaire would be preferred by the research which will be self-explanatory. It would content about 30/33 questions selected to use pattern of researcher as well availability of research and difficulties of user about an elate researcher.

In selected sixty seven engineering colleges in Konkan region nearby ten thousand plus students are taking education in prominent subject like, Civil, Mechanical, Computer, Electronics and Electrical out of there are approximately respondents 1005 (teaching staff and students) would be selected as sample using random sampling. Questionnaire would be distribution personally by researcher. Response would be collected with for sought by Google form link, Postal communication as well as personally visit.

Scope and Limitations:

The major limitation of the study is scope of the study i.e. only 67 professional colleges in Konkan region have been considered under study. Another limitation of the study is sample

size i.e 3350. The third limitation of the study is, some of the college libraries do not have many e-journals and good infrastructure to access those e-journals.

Review of Literature:

It is need of every research aspect to have detail study of theoretical aspect of any research problem. it throes light on previous background the problem selected for research, as well as if throws light on the plan of search to conducted . Hence researches of literature are an instrument for research process to be carried for present study previous discussion is series there in detail. Previous research studies on electronic journals expressed the need for electronic journals to follow the usefulness of print journals although recognition depended on the way they would edge with the user's working environment.

Agarwal Neera (2015) ^{'1'} On the International open access day on 14th October 2008 CSIR. NISCAIR mode two of journals available in the open access domain today all 18 CSIR-NISCAIR journals are open access journals. The result point out that open access has benefited the journals.

Burnhill (2009) ^{'2'} describes a project to pilot an e-journals preservation registry that is being carried out by a UK national academic data centre and the international standards body for serials. Funded by JISC for the UK, various open issues include whether this should be regarded as an international initiative and whether it should help address related concerns in the library community for information on post-cancellation access.

Balnaves and Chehade (2009) ^{'3'} presents an innovative approach to e-journal archiving for special libraries. The approach differs from current, peer-to-peer approach by implementing a central metadata server and a simple easy to deploy desktop archiving agent. Furthermore, limitations imposed by copyright restrictions are the principal impediment that libraries face in implementing e-journal archives, and the centralized metadata approach can help libraries distinguish journals for which local archiving is allowed.

Burnhill (2009) ^{'4'} explains the idea for a registry of archived scholarly publications has featured in various digital preservation and archiving discussions. The UK Joint Information Systems Committee launched an e-journals preservation registry service pilot (nicknamed PEPRS) in August 2008 to investigate, build and pilot an online facility that would enable librarians and policymakers, principally in the UK but also worldwide, to ascertain the archival provision for e-journals, especially of scholarly work published in e-journals, and to identify the gaps in such provision.

Bartsch and Tydlacka (2009) ^{'5'} examines why students may also believe that full-text databases have superior content. In addition, psychology students were asked what percentage of relevant psychology articles was available online and in print at their library and a neighboring institution. Students greatly overestimated how many articles were available online. The paper further discusses when students will exclusively choose full-text databases and what librarians can do to help combat the problem of exclusively using full-text databases.

Ball (2009) ^{'6'} shows that unimaginable to provide information, particularly scientific information, without e-books. They have become part of today's combination of media, which includes printed books and journals, e-journals, e-books, and databases. When e-books first appeared in the market, librarians very quickly formulated their key requirements, the most important requirement is functionality: it must be possible to look through a book chapter by chapter, and also to get a quick overview of a comprehensive monograph. Usage arrangements,

including concurrent usage and use for interlibrary loans, are also important. The use of uniform technical standards increases the acceptance of e-books.

Borrego (2007) ^{'7'} explains the qualitative study of the impact of electronic journals on the information behavior of academic researchers at Catalan universities shows that academic researchers now read more, and more widely. However, their reading is becoming more superficial; they are compelled to improve their discrimination skills in order to decide what to read in more depth. The electronic accessibility of journals means that researchers now make fewer library visits. Web browsing and table of contents (TOC) e-mail alerts are replacing physical browsing, and searching is a very popular option for keeping up to date with developments. Internet search engines, especially Google and Google Scholar, are becoming important sources of information for researchers. However, they face problems in managing their personal scientific information.

Cassella and Calvi (2010) ^{'8'} examines the open access combined with Web 2.0 networking tools is fast changing the traditional journal's functions and framework and the publisher's role. As content is more and more available online in digital repositories and on the web, an integrated, interconnected, multidisciplinary information environment is evolving and Oldenburg's model disintegrates: the journal is no longer the main referring unit for scholarly output, as it used to be, for Scientific, Technical, and Medical disciplines, but scholars' attention is now more focused on the article level. New journals models are thus evolving. The first part of this paper discusses these new experimental journal models, i.e. overlay journals, inter journals and different levels journals. The second part directs readers' attention to the role commercial publishers could play in this digital seamless writing arena. The authors consider that publishers should concentrate much more on value-added services for authors, readers and libraries, such as navigational services, discovery services.

Das Anup Kumar (2015) ^{'9'} NISCAIR is an academic and research institution this institute has entered in to open access publishing also it maintain different open access portal vise online. Periodicals Providing open access to all 17 research journals and 3 popular magazine.

De Groote & Dorsch , (2001) ^{'10'} at the University of Illinois reported that print journal usage decreased significantly since the introduction of online journals. This decrease occurred regardless of whether a journal was available only in print or both online and in print. Interlibrary loan requests also significantly decreased since the introduction of online journals. The decrease in use of the print collection suggests that many patrons prefer to access journals online 'Piloting an e-journals preservation registry service (PEPRS).

De Groote and Dorsch, (2001) ^{'11'} Electronic journal databases improve the efficiency of the user. Users spend less time searching for the resources and journal articles. Computer literacy of users does not play an important role in determining online journal usage.

De Groote and Dorsch (2003) ^{'12'} This suggests the ease of navigation and search facilities provided by online databases for retrieving journals Patterns of database use in academic libraries, particularly by time of month, day of the week, and time have been reported

Govindaraju , Nemani (2010) ^{'13'} govindaraju (6) found by his survey that the use of electronic resources is found to be significant among the users of the Andhara university. This is quite natural and expected in the present day implementation environment. Some of the resources such as e-book, e- encyclopedias, e-dictionaries are less used. He also felt that to

further maximize use of the e- resources, wide publicity and imparting trainings were found to be necessary.

Guru Prasad (2009) ¹⁴ analysis most scientists have access to full-text e-journals. NISCAIR In most cases, this facility is provided, right at the desktop. In this paper, we present a case study of full-text e-journal use patterns among the scientists and engineers at the National Aerospace Laboratories (NAL), a constituent of the Council of Scientific and Industrial Research (CSIR). The facility at NAL is provided right at the desktop through the NAL-CSIR-NISCAIR e-conglomerate. National Institute of Science Communication and Information Research (NISCAIR) provides e-access to more than 4040 world-class e-journals to all science and technology personnel of the CSIR fraternity. This CSIR-NISCAIR initiative allows any scientist in any CSIR Laboratory to access this electronic information to keep abreast of the technological developments in his / her area of specialization. The analysis of data of the full-text e-journal use patterns covers the period 2005 to 2007. The major findings highlighted are: (a) the mean number (per-month) of full-text downloads for the above three years was found to be different through Kruskal Wallis test of "One Way Analysis of Variance" at 1% level of significance and (b) when the Chi-Square test was applied to test whether there is independence between the years and the publishers, the calculated value of Chi-Square was 845, which is highly significant. Hence we conclude that for the full-text downloads data, the years and the publishers are not independent. This Chi-Square test was carried out for only those publishers (8 in number) for which the data was available for all the three years (2005-2007).

Haridasan and Khan (2009) ¹⁵ presents the fact that e- resources are a significant part of library collections. A large amount is invested in the development and management of e-resources in the libraries. The study aims to identify the acceptance of e-resources in the National Social Science Documentation Centre (NASSDOC) library in New Delhi, India and determine their usage, performance, degree of user satisfaction, and barriers faced in the access of e-resources. The major findings of the study indicate that respondents are aware of the e-resources (such as e-books, e-journals, e-encyclopedias, e-theses, CD-ROM databases, e-mail, internet and the OPAC). Large numbers of research scholars and faculty members are using these e-resources for their research work. Many faculty members strongly agreed with the necessity for computer and internet literacy to access information. A majority of users were satisfied with the e-resources available at the NASSDOC library.

Kalam, APJ Abdul (2013) ¹⁶ The aspect being introduced is that of Ecology. Globally, the demand is shifting towards development of sustainable systems which are technologically superior. This is the new dimension of the 21st Century knowledge society, where science, technology and environment will have to go together. Thus, the new age model would be a four dimensional bio-nano-info-eco based.

Kanadiya and Akbari (2009) ¹⁷ presents the electronic journals have now been recognized as major link in scholarly communication. The timely publication, easy delivery, incorporation of multimedia contents, hyper linking and search facilities etc. are some of the features which have attracted interest of both library and scholarly communities. It discusses along with advantages, the burning issues and challenges to the present and future library and information professionals.

Kattimani and kambale (18) made a study on awareness of internet and online information resources. His study is confined only to the honey well library, Bangalore. Data

collected from the administrative staff, supportive staff and software engineers. The response rate is 80%. The study revealed that about 80.2% of the library users have quality awareness on internet information resources.

Kumbar and Hadagali (2009) ^{'19'} analysis UGC-info net E-Journals Consortium launched by UGC is one of the biggest and ambitious programmes in the history of higher education in India. The main objective of this programme is to facilitate the research and academic community of the country by providing them nascent, authentic and scholarly literature from all parts of the world with the help of state-of-the-art technology. This article deals with the usage of UGC-Infonet e-Journals Consortium by the faculty members and research scholars of Karnatak University, Dharwad.

Kulkarni, Sandhya Umesh (2011) ^{'20'} It includes both online data and offline data, Database, E-journals, E-books, E-news, E-documents, multimedia collections: Data/GIS, E-references, Subject Guides, Web-search tools etc. are various types of e-resources. Thus e-resources play vital role in the field of Library and information science.

Kulkarni, Shridhar (2011) ^{'21'} Open access journal and self-archiving, the two main approaches of open access publishing are highlighted. The strengths and weaknesses of open access models and different flavors of open access are revealed along with brief history of open access movement and Indian scenario.

Kumar Ashok (2014) ^{'22'} this articles gives an Idea of DESIDOC Journals of Library and information science. The growth or this journals form 1985. The current development information science technology to the information researches The journals use of dabble system of reviewing over all contents of this journals is quantity type.

Conclusion

Researcher has studied selected problem thoroughly and through vast literature searched as well as practically. For the justification of problem Researcher had collected response of students of engineering colleges in Konkan region. Through the research process he had drawn following conclusions:-

E-journals are essential reading material for engineering faculty students. E-journals are timely published and updated with time and space. E-journals facility through library is made available through all seven engineering college libraries. Students use E-journals apart from library. It is generally from cafes or residence. Proper training is needed for promotion of use of E-journals through library. Accessing cost of the E-journals should be affordable to the student's community.

E-journals are the basic aids to improve profession competence 54.17% students have responded in this respect. E-journals help students in making update themselves and its percentage is 64.17%.

Students are aware about various databases and mostly they are familiar with INDSET Consortium. Response to this is 49.58% and it is at highest number.

Regarding feature of E-journals students are hopeful. They are knowing its Excellency in future and its response is growing from 40 to 60 in number. Students are computer literature at large number hence they are able to access E-journals. Most of the students use computer either for internet search facility an email. Most of the students use internet 2-3days a week and its percentage is 30%. Normally 70.88% students spend less than 5 articles in a week through e-



journal. Most of the students preferred INDEST database for their use and its percentage is 49.55%.

Suggestions:

1. To make aware students about E-journals and its use, library should organize special training programme for first year students.
2. To make aware about new technology used in the library a special library literacy programme be arranged for all faculty students.
3. Library authorities should try to subscribe more and more no. of database for student's perusal.
4. Facility of accessibility to students should be made available at hostel and at residence of the students.
5. More number of digital resources be added in the library. To promote library use and it should be digitized with proper security measures.

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Legal Issue of Mass Promotion To Students in India

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Abstract:

The carrot of promotion given in front of the students to gain political momentum effectively divides the students into two classes. Branding one of them as rejection, freelancers or worse. The realities of the job market are harsh, but the inherent disadvantage of running as a promoter makes them worse. As the example shows, for the employer you do not exist as the person who accepted the mass promotion. Your talents, aspirations, dreams and desires are no more, and you become another brick in the wall of encouragement. A wall on which the other rises to a height when you are not. No human being should go through this but those who are gambling for their own benefit can give a large number of classes to the students for this future if they succeed in canceling the entire exams. 'Encouraged by COVID-19 Circumstances' Students are already marking the beginning of a new class division on marksheets!

Introduction:

After the University Grants Commission (UGC) announced guidelines for final year students to take exams, the discussion around the exams tended to get worse. Intensification for mass promotions intensified, digital smear campaigns, spamming exploded on synced social media sites, and confusion for students became the new norm.

Nation Historically our nation has fought against many socio-political divisions. The spirit of our struggle comes from the legacy of our struggle for freedom and social equality. But even after our proud move over the last seven decades, there are lots of some bad elements trying to exploit our nation's fault-lines. And I believe that blaming between encouraging and non-encouraging will lead to an unplanned class division. The results of which no entity can now predict.

Just as coronavirus cases refuse to signal its retreat, so too many student organizations from some political parties are unable to get massive promotions for students. Student communities are helpless for political wolves trying to earn student risk. NSUI, a student body affiliated to the Congress, is pushing for these efforts while student unions from other political parties are playing a more lenient role. Due to the dementia surrounding the epidemic and the lack of visibility, students across India are overwhelmed with fear. The above student organizations are trying to dispel this fear in order to sub-serve their own political agenda. Aside from mass promotions, they are also as absurd as the demand for 10% bonus points. Proponents of her case have been working to make the actual transcript of this statement available online. Proponents of her case have been working to make the actual transcript of this statement available online.

Objects of the study

1. To study legal issue of mass promotion to student.
2. To study the impact of mass promotion on the quality of education

Major finding :

If we look at the period 1973-74, the anti-corruption student-led movement 'Navnirman Andolan' flourished in Gujarat. The examinations of the year 74 were made voluntary and Mass Botany was implemented. Those who went in and took the exam got marks according to which there was no promotion. The story of two batchmates of L.E. tells a story of Morvi's College Ledge, which was the center of the makeover movement. Whose father was a principal in another college, explained to him about the dangers of promotion and he took the exam, did not stay second and got a badge. After completing his education, he later applied for a job with Tata Motors in Pune. It was explicitly rejected because it was a 'mass promotion'. PSU rejected the encouraged scholars in favor of others and even though foreign education was not as prevalent as it is today, those who wanted it suffered the same fate. In the end, the one who took the easy way out literally chose 'Way Out'.

Exams are the main learning factor, students learn holistic lessons of patience, discipline and leadership. But we do know that there has been an outbreak of a deadly virus that has stopped everything. Students worldwide are very stressed about their exams in a situation that is rarely flexible between epidemics.

Now there is a new thing that is trending called the mass promotion. There may be two points on this issue some are in favor of mass promotion and some are against mass promotion of students. Some teachers and students are also against it as it reduces the quality of education. Is against the one who works hard to get good marks. If you get a promotion, all you have to do is just tag your degree and mass promotion and you will be easily fired when you interview for a job because recruiters look for potential candidates, not their educational disabilities. . The first priority for them is those who take the test even in this epidemic.

Ask yourself a few questions before asking for a mass promotion. Do you trust a doctor / surgeon who has been given a mass cure without examining his or her actual skills? Would you hire an engineer to design bridges and buildings for you? Or a financial analyst who will manage your lifetime money through hard work?

Do you trust any of them who have been bullied?

Or you will trust him who is a decent skilled worker without any kind of promotion in his degree.

Everyone knows that Jammu and Kashmir students are deprived of 4G internet, it is a big loss for us, and students are expressing frustration over learning through internet but still everyone is using social media and using 2G internet There is a lot of effort being made to support random campaigns like massive promotions, rallies against high officials which is very useless. Everyone is using Instagram, Facebook and WhatsApp and many other social apps, is it ratable? But another application used on Google's classroom or for Internet connectivity education purposes? We can watch webseries using 2G on Netflix, Amazon Z5 but neither study nor test on 2G.

To be honest, I am also a college student, I gain more knowledge on the internet and YouTube than in the classroom. You can also see the attendance of college students. People who demand massive promotions have less attendance than they need.

Yes I very much agree that half of the course is not covered. But passing a student without an exam is not the solution.



Education does not mean grades, but knowledge is a way to acquire knowledge and skills.

If one road is closed, there are certain ways. We can choose other alternative routes. Students should request the authorities how they would manage to study without books, start giving solutions, make choices to teachers and seniors and start asking for help instead of raising voice for mass promotion.

Conclusion

- Collective promotion was a necessity of the situation but it will really affect the performance of the child as it promotes every student without aptitude so once weakened the filter of catching and correcting them is removed and it also puts the hard working students at risk because somewhere they are low Feeling motivated and lazy students on the other hand can become lazy due to staying at home and massive promotions.
- After all, I would say because it needed a situation so that's okay!
- Talking about the quality of education, I would say that both online education and mass promotion will somehow or other deteriorate the quality of education.
- There could be multiple solutions to this problem if we start looking for it all together
- The World Health Organization also said that the world should learn to live with Covid-19.
- So in the end I must say that skipping the exam and expecting success in return is like trying to cultivate the land without stretching.

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Rule of Law

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Abstract :

The fundamental rights of the British people are protected by what they call the 'rule of law'. According to Dicey's law, rule has three meanings:

First it means that 'no man is punishable or can be legally harmed in body or property, except for a breach of the law established in the ordinary courts of land. This theory suggests that no one in England can be punished arbitrarily. All those accused of a crime should be prosecuted in the ordinary court of law and no one should be arbitrarily deprived of his liberty and property. The case is to be tried in open court and the accused has the right to be represented and defended by the council of his choice. The verdict is to be delivered in open court and the accused has the right to appeal to the higher courts. These rules of judicial procedure reduce the responsibilities of the executive arbitrariness and guarantee the protection of the best people of their life liberty and property.

The second rule of law is equality before the law. "We have not only a man above the law, but every man here, whatever his position or position, is subject to the common law of the land and is within the jurisdiction of the general tribunals," Daisy observed. It implies that every citizen in England, rich or poor, high or low, is subject to the same law and the same courts of law. If a public official does something wrong to a person or exceeds the powers prescribed by law, he or she can usually be caught in ordinary court.

Third, the rule of law means to begin with the English principle of the Constitution: "The result of a judicial decision to determine the rights of private individuals in special cases brought before the courts." This principal emphasized the contribution of the judiciary to the protection of the freedom and rights of the British people in England, the rights of citizens go beyond judicial decisions rather than the Constitution.

The rule of law is the result of centuries of struggle by the British people for the recognition of their fundamental rights. What is supreme in Britain is the law.

Keyword : Rule of law, Supremacy of law.

Introduction :

In 1885, Professor A.V. DC developed this concept and proposed three principles or postures of the rule of law in his classic book- Law and Constitution. ”

Professor A.V. According to DC, in order to achieve the supremacy of law, three principles of postulates must be followed which are as follows:

Â·Supremacy of law, Â·Equality before law and Â·Predominance of Legal Spirit

The rule of law has a huge role to play in the development of Indian democracy. At the time of drafting the constitution, the framers had two options namely USA and England. Some of the provisions were adopted from USA and some of them were adopted from England. The rule of law was adopted from England by our constitutional father and many provisions were included in the Indian Constitution. The Indian Constitution is considered supreme and no one is

above the Indian Constitution. The rule of law is also implicitly given in the preamble and such a constitution is contained in Part III of the Indian Constitution.

In case of violation of such rights, one can approach the Supreme Court or the High Court under Articles 32 and 226 of the Indian Constitution. The Indian Constitution is rich in principles of law i.e. justice, equality and freedom. Any law enacted by the Central Government or the State Government must comply with the Indian Constitution. If any law made by the Legislature contradicts the provisions of the Constitution, such law shall be declared null and void.

Under Article 3 of the Indian Constitution, the Supreme Court has the power to issue writs in the nature of habeas corpus, amnesty, prohibition, quo warrants and certiorari. The power of judicial review is also vested in the Supreme Court to prevent any ultra-virulent law that may uphold the rule of law.

Object :

1. To study Doctrine of Rule of Law.
2. To study Judiciary on rule of law.

The traditional meaning of rule of law as given by A V Dicey means three things:

1. Supremacy of law - It means absolute supremacy of law as opposed to arbitrary power of the govt. A person can be punished only for the violation of a law and nothing else.
2. Equality before law - Subjection of all classes to the ordinary law of the land. No one is above the law.
3. The constitution is the result of rules defined by the courts. Although this rule does not apply to all the countries where the constitution was result of a careful planning.

Now coming to your question, the above views are also true in the current notion of constitutionalism. Constitutionalism means the principle of limited government. It is important to note that the country may have a constitution but may not have constitutionalism. China has a constitution but no constitutionalism, because they have a full government. With no limits.

If we take the example of India, the Constitution has a provision of fundamental rights (one third of the Constitution) which is the biggest test of the government. It also provides for equality before the law (Art. 14) and the supremacy of law (the constitution is the law of the land) where no law can go against the constitution. Apart from this the Supreme Court has from time to time expanded the concept of rule of law and tried to include some concepts which may not come strictly under the concept of rule of law but nevertheless fulfill its purpose. Such as - (a) Right to a healthy environment (b) Right to information that informs you about government matters. (C) Right to fast pay (d) Right to legal advice. Etc. These are examples of some modern approaches to the rule of law that are nothing more than indirect support for the presence of the rule of law in our Constitution. As society evolves, it will continue to expand.

Role of Indian Judiciary:

There are a majority of cases where the notion of rule of law was discussed and came to light. Some of the cases are as follows.

ADM Jabalpur vs Shivkant Shukla

This case is also known as "Habis Corpus case". This is the most important case when it comes to the rule of law. The question before the Hon'ble Court was whether there was any rule of law in India other than Article 21 of the Indian Constitution. It was in reference to the declaration of emergency where the implementation of Articles 14, 21 and 22 was suspended.

Mon Raj vs Haryana State

In this case it was held that the absence of arbitrary power is a condition of the rule of law on which the entire constitutional framework depends.

Union India v India v. Raghbir Singh

In this case it was planned by the court that it manages the lives of the people and controls the functioning of the state to a significant degree, flowing from the decision of the higher courts.

Chief Settlement Commissioner, Punjab v. Omprakash

In this case, the Supreme Court has observed in our constitutional system, central and most characteristic is the concept of the rule of law, which means, in the present context, the right of law courts to scrutinize all administrative proceedings by legal norms. Administrative or executive action does not meet the standard if the deprived person considers the matter.

Keshavanand Bharti Vs. State of Kerala

In this case, the Supreme Court recognized the concept of the rule of law as one of the most important aspects of the basic constitutional principle.

Maneka Gandhi Vs. Union .F India

In this case the Supreme Court declared that Article 14 strikes against arbitrariness.

Gadakh Yashwantrao Kankarrao Vs. Patil at Balasaheb

In this case, if the designated ration is to preserve the rule of law as the essence of democracy whose electoral purity is essentially concomitant, it is the duty of the court to appreciate the evidence and formulate the law. This will serve a higher purpose and will not allow acceptance of declining electoral standards, much less support, even simplification. The rule of law must prevail for democracy to survive, and for the proper governance of the country the best available men must be chosen as representatives of the people. This can be achieved by men with high moral and ethical values, who win elections not by a negative vote of the abolition process based on the comparative performance of candidates, but by a positive vote obtained on their own merits.

Secretary, Karnataka State and Ors. V. Umadevi

The Constitutional Bench of this Court has enacted the law in the following terms: "Therefore, it is clear that adherence to the rule of equality in public employment is a fundamental feature of our Constitution and because the rule of law is paramount. Or the court will definitely be disqualified in view of the need to comply with the requirements of Article 14 read with Article 16 of the Constitution.

Conclusion :

The main feature of "rule of law" is that the laws be decided by a fair, representative, and mutually-agreed process, are written down, apply fairly to everybody (including the people who make the laws), and thus are known in advance (not applied retroactively to behavior that has already occurred when it wasn't illegal to do so), such that people can plan and can organize their lives to conform to the law **without fear of arbitrary, capricious, and unjust**



punishment. It is a prerequisite, indeed the defining feature, of a free society. If people know what the limits of permitted behavior are, they can openly and freely do anything they want within those known and prescribed limits.

The contrasting situation, called “the rule of men,” arises when the people who make the laws think they are **above** the law; it used to be said, “the King can do no wrong” BY DEFINITION. It also means that this can-do-no-wrong autocrat can CHANGE HIS MIND at any time, for a good reason or even for an arbitrary, capricious, or foolish reason, and make something illegal which had not been before, and punish people for doing something that was not illegal when that person did it. Thus, people in such a society CANNOT plan and cannot organize their lives to conform to the law, since it can change at any minute with no notice, and thus **cannot live without fear of arbitrary, capricious, and unjust punishment.** If people DO NOT know what the limits of permitted behavior are, then instead of openly and freely doing anything they want within those known and prescribed limits, they must cower in fear and refrain from doing ANYTHING unless the despotic government has specifically PERMITTED them to do it — for which they are expected to kowtow and be grateful — or unless the despot has COMMANDED them to do it.

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- **Rule of law** political philosophy WRITTEN BY [Naomi Choi](#) Assistant Professor, Political Science, University of Houston. Her contributions to SAGE Publications's *Encyclopedia of Political Theory* (2010) formed the basis of her contributions to Britannica.

AI Wave in Library : How to Make Reference Services More Interactive

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Abstract:

Incorporate the potential of library systems to integrate AI techniques into AI in library and information science. Cataloguing, indexing, information collection, reference, and other activities were made easier for librarians by intelligent systems. Speech recognition, machine translation, and librarian robots are only a few examples of AI applications. The aim of this paper is to map various Artificial Intelligence applications to libraries. Expert systems, natural language processing, pattern recognition, and robotics have all been listed as topics that can be applied to libraries. The advantages and disadvantages of artificial intelligence have also been discussed.

Keywords: Artificial Intelligence, Library Services, Reference Services, Voice Assistants, Natural Language Processing, Pattern Recognition

1. Introduction:

On most mobile platforms as well, assistants are available; Google's Assistant is built into Android phones and can be placed as a separate unit While certain features are disabled, the software on the iPhone. Amazon Alexa has Amazon Models of Android and iOS applications, and Microsoft and Amazon job Apple has Apple to add Cortana to Amazon devices and Alexa to PCs. Their assistant has been excluded from non-iOS devices, but Siri is available on all Apple devices. Appliances, such as iPhones, Macbooks, iPads, and Apple Watch. As well as Stabilizing the voice assistant market, it is possible that there will be additional Integration and collections of characteristics around the leading voice assistants can become Comparable.

The human brain, a complex network of neurons, is still a mystery in its sense. Neurobiologists are performing numerous experiments to understand its functionality, but we have achieved our goal partially. This effort and influence of technology have made us think towards merging human intellectual capabilities into machines leading to Artificial Intelligence (AI).

2. Reference Services:

The library is a location where thousands of material, such as books, journals, journals, theses, media and others, are kept in different ways. In an educational institution, learners will typically go to the library and get all the data they have to meet the demands to finish their task and thesis. Even though in the library, not all students know how to find the correct, specific and accurate material. Some students believe that they can directly see the right information through the internet. They do not realize that the library can have access to reliable, accurate and exciting sources of information. Also, the library preserves material that is rare and cannot found online.

Any of the users are not afraid to ask the librarians for assistance in locating the books or any other materials they like in the library. In the course of completing their mission, the students

must refer to the reference department. Therefore, this is where the duties of reference librarians can be used entirely.

Reference services are the services offered in a library by the reference department that allow the library user to access the appropriate material. The reference department provides library members with recommendations on library books, advice on library holdings and programs on a range of sources and different categories of content. The reference department simply requires the user to address the user's queries and to help the user find the details they need from the library.

3. Artificial Intelligence (AI)

AI is the science and engineering of machine intelligence, brilliant computers. Yeah. Services. It is associated with the research and production of computer systems that show some Intelligence: programs that develop new ideas and assignments, systems that can be useful for thinking and drawing Assumptions about the world around us, devices that can comprehend or interpret a human language and understanding a visual scene and structures that execute other kinds of feat involving human forms of features about Knowledge.

It is the use of computers and the use of goods and resources dependent on computers to execute various library operations and functions, or in the provision of various services and the development of output products. Automation means a degree of automation where robots with little to no human interaction are left to execute rituals and responsive tasks or operations. This doesn't really mean that the lower the amount of human interaction, the higher the degree of automation. Automation excludes human beings. On the opposite, sari deprived human beings of repetitive duties, allowing them more time for tasks that require their knowledge.

4. AI Applications in Reference Service:

- **Artificial Intelligence in Reference Service:** A library's primary activity is reference service, and the Expert System may serve as a stand-in for a reference librarian. The following are some examples of Expert Systems that have been used in Reference Services.
- **REFSEARCH:** It is a device that provides patrons with suggested references to look up answers to specific questions. The framework can be used to teach students how to use a reference library or as a computerised tool for practising librarians and information specialists.
- **Research:** It is a device that provides patrons with suggested references to look up answers to specific questions. The system can be used to teach students how to use a reference library or as a computerised reference library for working librarians and information experts.
- **Pointer:** The computer assisted reference software, which guides users to reference sources, is one of the earliest implementations of computer systems in the field of reference service.
- **Online Reference assistance (ORA):** is a system that uses many tools, including a videotext-like database, computer aided guidance modules, and a knowledge-based system, to stimulate the services of an academic reference librarian for low and medium-level queries. It is a 24-hour-a-day, seven-day-a-week response service that is currently used by large corporations.
- **Answer man:** This is a knowledge-based interface that assists users with topic-related reference queries. It employs a set of menus to narrow down the topic of the questions as

well as the type of tool required. It can be used as a consulting framework or as a user interface for external databases and CD-ROM reference tools.

- **Plexus:** is a referral method that is mostly used in public libraries. It teaches about the reference method, retrieving information from all areas of study, reference sources, and library users.

5. What Can Voice Assistants Do

Although, Voice assistant currently available has unique features, they share certain similarities and are capable of performing the following basic tasks:

- Search information
- Send and read emails, make calls and send and read messages via e-mail;
- Respond to basic requests for information ("What time is it? What is the weather report? How often are ounces in a cup?
- Set clocks, alerts and entries for calendars;
- Set notifications, keep notes, and measure simple math;
- Linked services such as Amazon, Google Play, iTunes, Pandora, Netflix, and Spotify power media playback;
- Command of devices allowed by the Internet of Things, such as heating systems, lights, alarms, and locks; and
- Jokes and tales to share.

In addition to these tasks, other features, also called "skills," can be introduced by voice assistants, which extend their capabilities by communicating with other programs through voice commands. Amazon Alexa has Music playing skills, ordering your regular drink from your nearby Store, and using connected account data to request an Uber or Ola. Google's Assistant has better qualities, but lags behind Amazon in the sheer number of available skills, mainly due to later release. Such skills are built by third-party creators, similar to how mobile apps are made. Google Assistant also integrates with a range of tools that enable users to improve their own abilities. Using web server services such as Tasker and IFTTT (If This Then That), users may learn skills that allow them to automate posts on social media, switch devices on and off and hundreds of other options. For example, saying "Good morning" to Assistant might launch a range of actions designed to speed up the morning route of the user.

6. AI Voice Assistants in Reference Services

Voice technology is now an essential component of everyday life that influences how people live, function, and enjoy themselves. AI foundations are based on smartphones, voice-powered personal assistants such as Alexa, Siri and Google Assistant, streaming video networks, ride-sharing, and navigation applications. Smart speakers in use today are designed to help individuals easily and reliably execute activities.

In the modern information economy, the business world is evolving and libraries of all kinds are experiencing dramatic changes in the digital age. Libraries had a long history of the exchanging and networking of resources. The exponential growth of emerging technology has significantly extended these efforts.

For a librarian, the logical question to raise is what can be assisted on smart devices through library and university services? Let's take a brief look at how voice tech can assist libraries in this article and discuss a library-related Alexa skill that is now available.

Several of the questions are repetitive at a library reference desk, such as how to print, where the study rooms are, etc. The use of a voice app helps the library user ask questions 24/7 on a readily available website and enables the library to have clear responses to regular questions. discover how library patrons ask questions, speech excerpts can also be text mined, and this data can be used in promoting or upgrading library websites.

Some libraries add smart speakers or inform their customers about their future activities and schedules for patrons. A bit further, let's delve. Simply stated, the realisation of the science fiction fantasy of voice assistants is Speaking to our machines and interacting with them. Siri by Apple, Microsoft's Both tech agents are Cortana, Amazon's Alexa, and Google's Assistant, which Run-on purpose-built tablets or smartphones for speakers. Con-The machine con- He is always listening to a keyword to wake him up. When the main word is heard, it will Records and sends the user's voice to a specific server that processes.

It interprets and interprets it as a directive. The server can, depending on the command, Provide relevant input to the voice assistant to be read back to the user, play the user-requested media, or complete tasks with different linked services and devices. The number of providers supporting voice commands is increasing, and manufacturers of Internet-of-Things devices are now building voice control into their goods.

The Siri assistant from Apple has been around the longest, launched as a standalone App in 2010 and packaged in 2011 into iOS. Shortly afterward, Microsoft followed— Since 2013 with Cortana. With its Echo-connected, Amazon launched Alexa with In 2014, home speaker, and 2016, Google's Assistant was revealed alongside With its home speaker and even embedded in the Android Google app— Smartphones that are focused. Each assistant has special characteristics of its own but the key roles are the same.

Privacy and Privacy:

Although voice assistants have exciting and helpful attributes, they also have interesting features. Several particular concerns. One of the key problems with these voice-activated goods is Engineering is defense. It can be requested by someone with access to a voice-activated system Questions, compile details about the device-related accounts and resources, and ask it to execute activities. This poses a serious security risk, Since calendar material, emails, and other extremely private information can be read out by these machines.

7. Pros and Cons – Voice Assistants:

Ever since Apple launched Siri on the iPhone, voice assistants have been a part of life. After this, led by Google Assistant, Amazon brought us Amazon Echo and Alexa smart speakers. Samsung Bixby and Microsoft Cortana are there too.

8. Conclusions:

The scope and precision of speech recognition technologies and voice recognition Over the past few years, assistant tech has exponentially evolved. Presently, Apple, Amazon, Google, and Microsoft voice assistant apps that are available allow users to ask questions and issue commands to computers in Word of natural heritage. This technology has many potential future



applications, from smart homes to localization to companionship and support for the technology, from the aged. There are still some questions, however, with the currently accessible Items for voice assistants. Controls on privacy and protection would need to be They are improved before using voice assistants for something that requires With secrecy. These items should be supervised by librarians and prepared to Provide help with these machines to their patrons. Often, they should Explore the options for using voice assistants to include library materials When the program matures.

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ICT Based Smart Education in College Libraries

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Abstract :

Today's world is technological world. The use of internet with ICT has made a transformational effect in the field of education. The use of ICT has fundamentally changed the practices and processes of teaching learning process. The main function of Library is to make systematic development of the collections, store, and organize information and knowledge in digital form and provides web based library services to the readers and access to online learning materials. This paper describes how the library helps to better education with the addition of ICT and how it can contribute to enhance the effectiveness of the faculties. The finding of the research shows that the faculties are having high level of knowledge in ICT. Most of the faculties using ICT sources and services to collect research work information. ICT sources very supportive, innovative and help to improve their activities of assessment and organization.

Keywords: Smart education, library, digital, ICT, sources and services

Introduction:

Technology is in all places that is why modern-day world is known as technological world. Technology performs an essential position in nearly each and every element of human life. Technology takes our existence handy and comfortable, when technological know-how is used for the cause of accelerating or facilitating instructional practices and procedures regarded as instructional technology. ICT is a constructing block of training of training system. ICT is a digital suggest of capturing, processing, storing, communicating and retrieving information. Today's studying surroundings applied sciences are supplying new selections to college students and instructors to attain their dreams with increased ease.

The studying procedure is effortlessly more suitable when technological know-how is used. Now a day's all school rooms are outfitted with computer, DVD player, overhead projector, LCD, video display screen etc. Use of these equipment's, they assist to reinforce the instructing mastering system and making teaching. It is additionally regarded as web-base studying which grant several sorts of data in the shape of text, audio, images, animated movies etc. high quality and quite rote learning. Education machine of the country based totally upon the instructor coaching institutes of the country. These establishments are carrying the duty to produce advantageous instructor who can make contributions in the improvement of society and country as well. Teacher is predicted now not solely to be a realized student they additionally work as a knowledgeable professional. To be a profitable expert he ought to be tremendous in his teaching. The use of technological knowhow in schooling is now not constrained to the use of laptop or different digital devices. Internet has emerged as an integral part of laptop which totally revolutionized the way of instructing gaining knowledge of process. We can't omit the



significance of laptop and the net in the subject of trainer education. The improvements that ICT has introduced in educating mastering technique consists of E-learning, e-communication, networking and convenient get right of information etc.

Information Communication Technology (Ict)

The term 'ICT' describes the use of computer-based technology and the internet to make information and communication services available to a wide range of the users. The term is used broadly to address a range of technologies, including telephones and emerging technology devices, and central to these is internet, which provides the mechanism for transporting data in a number of formats including text, images, sound and video.

Information and conversation applied sciences (ICTs) are a numerous set of technological equipment and assets used for creating, storing, managing and speaking information. For academic purposes, ICTs can be used to guide educating and mastering as nicely as lookup things to do consisting of collaborative studying and inquiring. One of the important functions of the ICTs in greater training is educating and studying primarily based on these new technologies. ICT assist to enlarge get right of entry to to education, make stronger the relevance of training to the increasingly more digital workplace, and elevate academic best make instructing and mastering into an energetic procedure linked to actual life.

The faculties prime factors of educating obligations are study room teaching, tutorial advisement, tutorial software evaluate and route duplication review, direction development, all of them can be categorised as curriculum improvement process. ICT sources assist to enhance institutional effectiveness, it is apparent that their utility in help of instructing and studying need to be critically considered. ICT enhance instructing effectivity of reminiscence retention, expand motivation and usually deepens understanding, promote collaborative learning, such as position playing, crew trouble fixing things to do and articulated tasks Majority of college contributors are principal catalyst to promote the integral modifications and to equip college students with the capabilities they are predicted to have upon graduation. ICTs can enhance the nice of schooling by way of the way of extend motivation, facilitate simple competencies and education to the faculties. ICTs equipment blended text, sound, and colorful, transferring pictures can be used to grant difficult and proper content material that will interact the scholar in the gaining knowledge of process.

Role of Ict in Higher Education:

Today, ICT play a tremendous role in the higher education. As information and communication technology (ICT) plays a greater role across society including public and private education, countries around the world are more than ever in need of high quality internationally comparable statistics on ICT in education. The ICT tools help to implement the principle of life-long learning, increase a variety of educational services and method, promoting equal opportunities to obtain education and information, develop a system of collecting and disseminating educational information, promote technology literacy of all, especially for students, develop distance education with national contents and to promote the culture of learning at educational institutions, preferably schools.

Some of The Ict Based Modern Education System:



Digital class room: Nowadays technological know-how has emerged as vital section of study room based totally teachings. Today in many schools, faculties and universities in India rather of blackboard projector displays are used for teachings. Hand writings of instructors are changed by using electricity factor presentation. Student ride a exclusive variety of set up in trendy technological know-how based totally classroom. Gadgets like capsules and laptops are used to take down notes. Animated content material are created on quite a number topics and in extraordinary languages so that college students can have higher perception of a complicated issue in a easy way.

Online learning:

Many schools and universities in India are integrating on-line Learning Management System or LMS platform into their internet portal. Students can remotely login to get admission to route fabric and additionally attend stay instructions with teachers. Pre-recorded lectures, movies can be uploaded on the LMS platform making it effortless for college students to go via it a couple of times. LMS adoption is nevertheless negative in many parts of India the place college students do no longer have the get entry to to computer systems or broadband internet. However, authorities is presenting computer systems to faraway areas and developing content material that consumes much less information and can be easily accessed on internet.

Mobile App:

According to a document launched with the aid of Counterpoint Research, India has grown to be the 2d largest clever smartphone market in the world after China with greater than 220 million energetic users. This provides a massive possibility for handing over e-learning content material via cell apps. Today instructional cellular apps are handy on famous structures like Android and iOS. Developers are growing instructional apps primarily based on unique subjects. They are simplifying complicated standards with convenient to recognize illustrations and animations, puzzles video games etc. With the expenditures of drugs and clever cellphone coming down people from villages and far flung areas can additionally make use of this apps to analyze and replace their skills.

Live instruction:

Certain curricula may additionally require specialised instructors. By the usage of stay broadcasts, these instructors can continue to be in one region and supply training to many college students in different locations. This kind of specialisation will increase as college students go into greater tiers of education, for instance closer to superior tiers in medicine. Video content material delivery: Pre-recorded content material such as lectures, documentaries and different video content material perhaps delivered in a keep and ahead mannequin so that the cloth can be seen when needed.

Student-to-student interactions (video-conferencing):

Students can also study simply as tons from every different as they do from teachers. So communications technological know-how can be used to join students.

Remote access:

In some countries, standardized assessments are used to consider college students on a stage enjoying field. These assessments need to be delivered securely and on-time to meet

checking out schedules. In Indonesia, this is a daunting mission genuinely due to the fact of geography and populace size. Digital transport ought to be the solution.

Up-to-date materials:

Basics seldom change. However, genuinely all textbooks need to be updated. Textbooks are luxurious to purchase, keep and deliver. Digital transport solves this problem when coupled with e-readers.

Self-learning:

Computer-based education or self-paced getting to know is frequent in greater training and exchange oriented learning. Kiosks to help this may additionally be placed shut to under-served areas the place populations already work.

Objectives:

- To understand the ICT knowledge of the faculty members
- To understand the ICT sources and services available in the library
- To understand the satisfaction level of ICT facilities by the faculty members

Research Methodology:

Faculty members working in the Autonomous Arts and Science College, affiliated to University of Madras can be selected for the study. Totally 250 questionnaires are distributed to the respondents of five colleges and 230 were completed and utilized in this research. The collected data's were analyzed by using necessary tools.

Table 1: Friedman's test for the respondent's knowledge in ICT tools

	Mean Rank	Chi-square value
Internet	4.26	568.717** (p<.001)
e-mail	4.37	
MS-Word	4.91	
MS-Excel	5.19	
Power Point Presentation - PPT	5.28	
CD/DVD-R/RW	5.21	
Scanner/Printer	4.88	
Web Camera	6.63	
Pen Drive	3.01	

**** Significant at 1% level**

The result in the above table shows that the null hypothesis is rejected at 1% level. The knowledge levels of respondents on various ICT tools are not equal and different. The mean ranks show clearly that the faculties are having high level of knowledge in Pen Drive, Internet, e-mail and less knowledge in in the ICT tools of Web Camera, Power Point Presentation and CD/DVD-R/RW.

Table 2: One sample t-test for respondent's opinion to evaluating internet sources

Statements	Mean	SD	t-value	p-value
Navigation	4.02	0.549	86.696**	<.001
Link quality	3.67	1.127	26.852**	<.001
Site access and usability	3.89	0.913	36.109**	<.001
Author authority	3.81	0.939	32.360**	<.001
Documentation and sources identification	3.78	1.175	25.826**	<.001
Content balance and accuracy	3.94	0.910	38.118**	<.001
Validity content	3.71	0.998	27.464**	<.001
Information Structure and design	3.94	0.995	34.738**	<.001
Content relevance and scope	3.47	1.330	14.832**	<.001

**** Significant at 1% level**

In the above table, t-values of the variables under respondent's opinion to evaluating internet sources are significant at 1% level. This shows that there is significant difference between the mean responses given by the respondents towards the variables under respondent's opinion to evaluating internet sources and the test average score (=3). The Navigation, site access and usability, content balance and accuracy and information structure and design are the most evaluated factor in using internet sources.

Table 3: Respondent's opinion about ICT sources available in the college library

Sources	Mean	SD
Online documents	3.77	1.05
Electronic journal and news letter	3.44	1.17
Thesis and dissertation	3.79	1.03
Online index of print	3.72	1.04
Dictionaries of all types of e-journals	3.78	1.06
Audio and Video materials	3.74	1.15
Directories	3.76	1.16
Training materials	3.74	1.08
Document Delivery	3.86	0.75
Reference sources	3.9	0.71
Library catalogue	3.93	1.15
Subject database	4.33	1.07
Software achieves	3.49	1.37
Data achieves	3.8	0.93
Table contents	3.8	1.17
Technical reports	3.93	0.94

Printers	3.73	0.96
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Source: Primary data

Faculties employed in Autonomous Arts and Science colleges have recorded their perception towards ICTSources. Their perceptions were recorded and represented through mean and standard deviations in the table 3. Subject database followed by Library catalogue, Technical reports, Reference sources and Document Delivery are the vital sources used by the faculties. Data achieves and Table contents, Dictionaries of all types of e-journals, Thesis and dissertation, Online documents, Directories, Audio and Video materials are Training materials are the sources used by the respondents most of the times.

Table 4: Respondent’s opinion about the ICT services available in the college library

ICT services	Mean	SD
Current Awareness Services(CAS)	3.75	1.066
Selective Dissemination of Information (SDI) services	3.67	1.168
Multimedia service	3.73	1.133
CD/DVD service	3.42	1.517
Online Database search	3.76	1.128
Online Public Access Catalogue (OPAC)	3.76	0.957
Library websites	3.82	1.125
Internet services	3.6	0.979
Social networking	3.73	1.092
Photocopy (Xerox) service	3.69	0.985
Printer/Scanner service	3.83	0.857
Training/Demo/lecture on e-source	3.72	0.935
Electronic Surveillance System (EAS)	3.65	1.097

Source: Primary data

In the above table 4, it is inferred that the faculty members of Arts and Science colleges are using most of the ICT services very well like sources. Current awareness service, library websites, printer/scanner services and online database service are the most important ICT service used by the faculty members. SDI, OPAC, Multimedia, social networking, photocopy services are the other sources that are used by the respondents in the Arts and Science college.

Table 5: One way ANOVA test for Awareness about library sources

	Category	Mean	SD	F-value
Age	Below 30 years	3.99	0.911	18.321** (p=.000)
	31-40 years	3.98	1.048	
	41-50 years	3.46	0.897	
	Above 50 years	4.05	1.019	
Gender	Male	3.77	1.075	11.471** (p=.000)
	Female	3.91	1.012	

Designation	Assistant Professor	3.84	1.055	3.214* (p=.039)
	Associate Professor	3.94	0.973	

*Significant at 5% level

** Significant at 1% level

To test the significant influence of respondent's demographic variables (age, gender, designation) on Awareness about library sources among faculties employed in Autonomous Arts and Science colleges, one way ANOVA is applied to ascertain the influence of respondent's demographic variables on Awareness about library sources.

The obtained 'F' value is **18.321** and it is significant at 1% level. This shows that the respondents of above 50 years of age are getting more awareness about the ICT sources available in the library and the respondents in the age group of 41-50 years are getting less awareness about the ICT sources.

The obtained 'F' value is **11.471** and it is significant at 1% level. This shows that the respondents of female are more awareness in the ICT sources than the male respondents.

The obtained 'F' value is **3.214** and it is significant at 5% level. This shows that the respondents of Associate Professor are more awareness in the ICT sources than the Assistant Professors.

Table 6: Respondent's opinion about Purpose of using ICT sources and services

	Yes		No	
	N	%	N	%
To prepare for lecture notes	184	80	46	20
To prepare for examinations	161	70	69	30
To collect research work information	192	83.48	38	16.52
To Collect General Information	173	75.22	57	24.78
To read newspapers, magazines and journals	188	81.74	42	18.26
To prepare for seminar/conferences	147	63.91	83	36.09
To carryout projects	166	72.17	64	27.83
To use for recreation/Entertainment	152	66.09	78	33.91
To check e-mail and browsing	169	73.48	61	26.52

Source: Primary data

It is observed that most of the faculties (83.48%) using ICT sources and services to collect research work information, 81.74% of the respondents used for to read newspapers, magazines and journals, 80% of the respondents utilized ICT sources for preparing lecture notes, and 75.22% of them using ICT sources for collecting general information.

Table 7: One sample t-test for respondent's level of ICT usage in daily activities

Statements	Mean	SD
Supportive	3.85	1.050
Communicative	3.6	1.205
Significant	3.61	1.194

Assessment Activities	4.12	1.064
Organizational Activities	3.84	1.100
Innovative	3.92	0.875
Informative	3.56	1.310
Improve activities	4.02	0.854

**** Significant at 1% level**

From the table 7, t-values of the variables under respondent's level of ICT usage in daily activities are significant at 1% level. This shows that there is significant difference between the mean responses given by the respondents towards the variables under respondent's level of ICT usage in daily activities and the test average score (=3). It is observed that the respondents more satisfied to level of ICT usage in daily activities. They felt that the ICT sources very supportive, innovative and help to improve their activities of assessment and organization.

Table 8: One sample t-test for the respondent's satisfaction level in ICTsource and service

Statements	Mean	SD	t-value
Level of Computerization	2.97	1.053	34.097** P=<.001
Level of Communication	2.18	1.382	18.903** P=<.001
Networking (LAN/WAN/MAN)	1.53	1.008	46.436** P=<.001
Internet connectivity	2.35	1.193	17.353** P=<.001
CD/DVD databases	3.43	1.469	9.214** P=<.001
Reprographic (Xerox) service	4.05	1.453	14.175** P=<.001
Printer/Scanner service	3.06	1.230	27.493** P=<.001
ICT Trained library staffs	3.23	1.525	27.744** P=<.001
Library staff help to use of ICT tools	3.68	1.461	14.724** P=<.001
Library automation	4.14	.998	36.501** P=<.001
OPAC/Web facilities	3.52	1.543	10.727** P=<.001
Document delivery services	3.30	1.341	7.072** P=<.001
Electronic bulletin board service	2.85	1.245	28.100** P=<.001
Digitization of unique materials	3.01	1.327	20.491** P=<.001
Scan journal articles	2.95	1.560	3.664** P=<.001
Provide article indexing	1.78	1.283	19.629** P=<.001

**** Significant at 1% level**

One sample t-test was used to test the various Satisfaction level in ICT among faculty members of Autonomous Arts and Science colleges. Satisfaction level in ICT is measured through sixteen different factors. It is observed that the respondents satisfied about the usage of ICT sources and services. CD/DVD databases, Reprographic services, library automation are the main sources of using ICT.

Table 9: Respondent's opinion about the performance of library in ICT development

Classification	Number of Respondents	Percentage
Excellent	37	16.09
Good	86	37.39
Fair	94	40.87
Poor	13	5.65
Total	230	100

Source: Primary data

Table 9 presents the respondents opinion about the performance of library in ICT development. It could be noted that, 40.87% of the respondents were of the opinion that fair, 37.39% of the respondents opinion that the performance of ICT in library was good, 16.09% of them feel excellent and 5.65% of the respondent feel poor of the library development in ICT.

Conclusion:

Library in nutshell is the disciplined and linked store house of universe of knowledge. The present thrust of digital tool in everywhere has made it possible to visualise data and information. This has opened a new vista for smart libraries. As discussed, the academic libraries of today are required to brace for the rapid change in order to become relevant in this age where any information may be obtained from multiple sources. The use of ICT has fundamentally changed the practices and processes of teaching learning process. The libraries are provided available education and research data's to faculty, researchers, students, and others at the institutions and worldwide. The finding of the research shows that the faculties are having high level of knowledge in Pen Drive, Internet and e-mail. Library catalogue, Technical reports, Reference sources and Document Delivery are the vital sources used by the faculties. Current awareness service, library websites, printer/scanner services and online database service are the most important ICT service used by the faculty members. Most of the faculties using ICT sources and services to collect research work information. ICT sources very supportive, innovative and help to improve their activities of assessment and organization.

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Challenges of Digital Education in Rural Karnataka

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Abstract:

The impact of covid-19 pandemic is observed in every sector around the world. The education sector of India as well as the world are badly affected by this pandemic. Due to lockdown, around 32crores learners stopped to move to schools and colleges. Over 1.5 million schools across India closed. After the first wave in march 2020, Covid-19's second wave in march 2021 once again forced to shutdown the schools, colleges and universities. As per the present situation, there is an uncertainty when schools and colleges will reopen. Therefore, all Government and private colleges and schools have started online education. This system is working properly in cities and urban areas but students in rural areas are facing many problems in adopting it. In this paper, we are studying the effectiveness of the online classes in rural areas and the challenges that they are facing and the suggestions for improvement.

Key words: Challenges, Digital education, digital devices, Rural students

1.Introduction:

The emergence of Corona Virus disease (COVID-19) has led the world to an unprecedented public health crisis. Emergency protocols were implemented in India to control the spread of the virus which resulted in restrictions on all non-essential public movements (Saha et al. 2020). With the closure of educational institutions, the need for a rapid transition from physical learning to the digital sphere of learning emerged (Kapasia et al. 2020). Online learning has been observed as a possible alternative to conventional learning (Adnan and Anwar 2020). As per UNICEF estimates, over 25 crore Indian children have been negatively impacted by the closure of schools. A UNICEF report finds that pandemic has further widened the existing inequality in the education sector across the world. Digital Education has been envisaged as a panacea to tackle all the existing issues that come in the way of imparting education in Rural India. There has been a shared belief that access to digital education can overcome the problems of shortage of teachers in rural schools, access to quality education, lack of innovative methods and techniques in teaching-learning process, high drop-out rate and paucity of quality learning material. The National Education Policy 2019 also focused on online learning as an alternative to regular classroom interaction between teachers and students. While digital education seems to be a possible solution for effective dissemination of education and training in rural India, the current COVID-19 crisis has laid bare the stark digital divide that still exists in our country, especially from the point of view of access to digitally-enabled education. This highlights that the digitalization of education in the semi-urban and rural regions of India remains a challenging feat to achieve and we still have a long way to go. There have been challenges in execution and effectiveness of online classes especially in the case of students in the rural areas.

Students studying in urban institutions and staying in hostels or paying-guest accommodations, have returned to their native villages since the onset of the lockdown. In villages, they face

challenges to access the online courses conducted by their institutions mainly due to poor data connectivity, lack of access to laptops and smartphones, and power issues.

2.Review of Literature:

It is expected that the continued spread of the disease, travel restrictions and the closure of educational institutions across the country would have a significant effect on the education, social life, and mental health of students (Odriozola-gonzález et al. 2020). The students from the less privileged backgrounds have experienced larger negative impacts due to the Covid-19 outbreak (Aucejo et al. 2020). Reduction in family income, limited access to digital resources, and the high cost of internet connectivity have disrupted the academic life of the students. Moreover, 1.5 billion students across the world are now deprived of basic education (Lee 2020) leading to a serious psychological impact on their health. Moreover, changes in daily routine including lack of outdoor activity, disturbed sleeping patterns, social distancing have affected the mental well-being of the students. (Cao et al. 2020)

3.Objectives:

- 1) To study the effectiveness of the online classes in rural areas of Karnataka
- 2) To know the challenges to online classes in rural area
- 3) To identify the suggestions

4.Methodology:

This study is based on primary and secondary data. The secondary data collected from various publications, articles etc. The primary data is collected from UG and PG students of Govt First Grade College Kamalapur, Dist: kalaburagi, Karnataka, through Telephonic survey.

5.Results and Discussion:

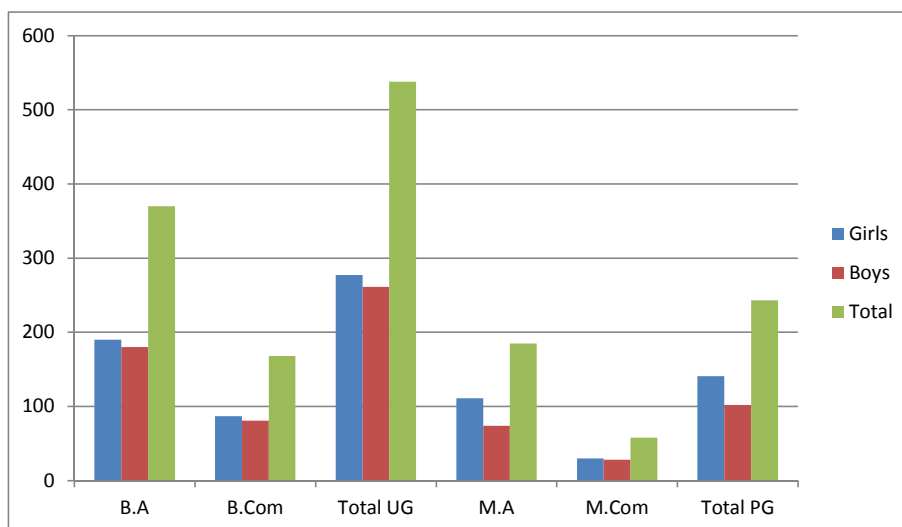
The study was conducted at Govt First Grade College Kamalapur, to know the effectiveness of Online classes and its challenges. The College is located at the taluk headquarters 35 kms from district headquarter, Kalaburgi. The college has 781 students, with 418 girls and 363 boys. The following table shows student strength. The students are from villages located at an average distance of 20 kms from the college. The Institution is offering both Postgraduate (PG) and Undergraduate (UG) courses. PG courses offered in this college are M.A. in Sociology, Economics, Kannada, English and Hindi and M.Com., with currently 243 students in all. As for UG courses, the institution is offering BA, and BCom with 538 students in all. Following the corona crisis and the resultant lockdown, the GFGCK too resorted to internet based reach out to their PG as well as UG students. We conducted a survey of 18 faculty members and 781 students in April-May 2021 with the objective of gaining insights into the effectiveness of online and internet based teaching and the challenges faced by both faculty and students. The survey revealed that the methods used by faculty to reach out to students included – sending reading notes over email and whatsapp, youtube videos, jnana nidhi (a youtube channel) 250 above videos uploaded, whatsapp videos and website. Sharing reading notes turned out as the most used method by faculty. The faculty used collaboration tool ZOOM and GOOGL MEET for their own internal meetings and classes.

Genderwise Students Strength

Table No-1

Class	Girls	Boys	Total
B.A	190	180	370
B.COM	87	81	168
Total UG	277	261	538
M.A	111	74	185
M.Com	30	28	58
Total PG	141	102	243
Grand Total	418	363	781

Source:GFGC Kamalapur Dist: Kalaburgi



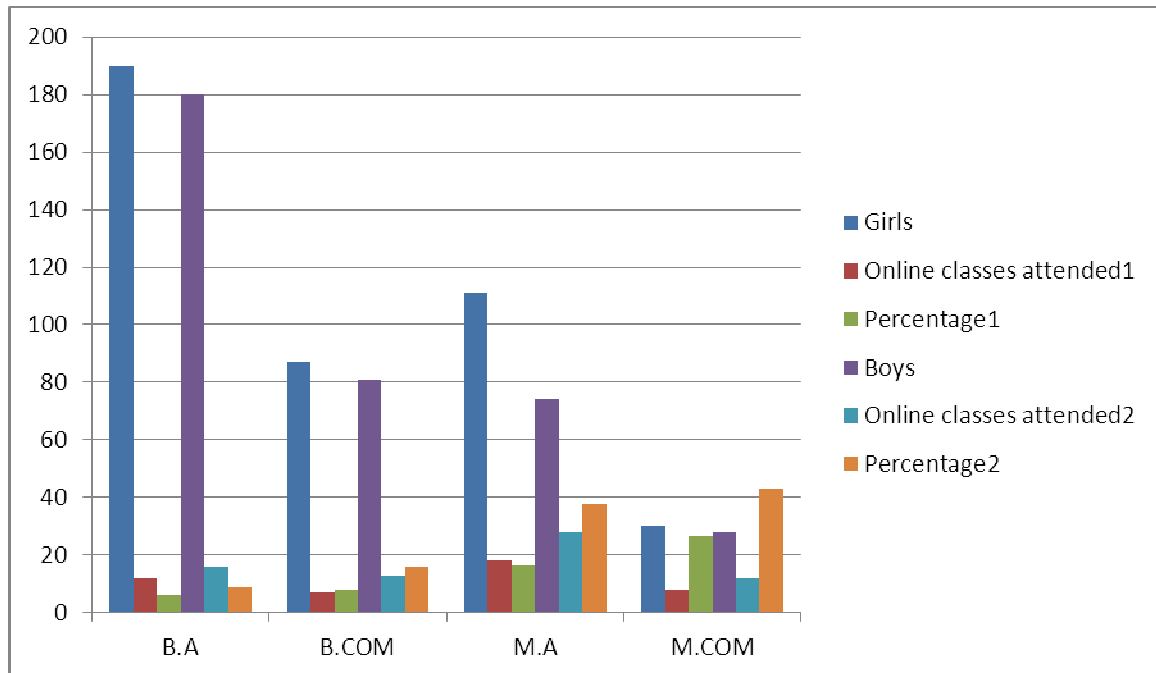
From the above table, we observe that in both UG and PG girl students strength is more than Boy students. In UG, Girls strength is 51% and Boys strength is 48.5% similarly in the PG Girls strength is 58% and Boys strength is 42%.

Gender wise Online Classes Attended

Table No-2

Class	Girls	Online classes attended	%	Boys	Online classes attended	%	Total
B.A	190	12	6.3	180	16	8.8	370
B.COM	87	07	8	81	13	16	168
Total U.G	277	18	16.21	261			538
M.A	111	08	26.66	74	28	37.83	185
M.COM	30			28	12	42.85	58
Total	141			102			243
Grand total	418			363			781

Graph 2



From the above table, we observe that both in UG and PG, less students are attending online classes when compared to regular offline classes. It is also noted that more number of boys are attending the online classes when compared to girl. In the offline mode nearly 80 to 90% of students have attended the classes and participate co curricular activities, like yoga, NSS, Sports etc. More students use the Language Lab, participate quiz, Group discussion etc.. The various reasons for less participation are listed below.

6. Challenges faced by rural students:

- 1) **Unavailability of smart phones:** Most of the families have only base model mobiles, they don't have smart features like internet connection. In some families which have smart phones, it is with the head of the family and not available for the students.
- 2) **Unavailability of laptops:** All the students except the First Year do not have laptops. The Department of collegiate education have provided laptops to the First Year students only.
- 3) **Shortage of money to purchase data:** Due to lockdown, Majority of the rural families don't have any earnings so, they don't have enough money to purchase data.
- 4) **Lack skills and Infrastructure:** A significant proportion of the rural population continues to fall short of the required internet bandwidth and knowledge to recognize devices and digital terminologies. Another major issue involves the absence of supporting infrastructural facilities such as a stable flow of electricity and unavailability of high-speed internet.
- 5) **No Access to proper devices and cost of data:** While talking about digital learning, it important to observe the accessibility of accurate devices for each student to avail digital content. In rural areas, only a nominal section of people have the privilege of accessing laptops and computers. The data packages and their prices also tend to restrain both

teachers and students from going ahead with live classes. Though, subsidizing learning data plans by telecom companies can be an attempt to bridge this existing gap.

- 6) **Inadequate Skills:** The inadequacy of skills among the teachers of the rural areas to operate digital platforms is another key factor affecting the advancement of digital education. As the teachers lack the necessary training to use digital platforms, they are averse to adopt these educational methods.
- 7) **Language Barrier:** Almost 85% of the population living in India does not speak English. The lack of access to standardized content in Hindi and other regional languages causes a slow rate of further online course adoption.. The syllabus also needs to be re-contextualized from a blended learning approach.
- 8) **Gender Inequalities:** The penetration of online learning amongst the female population in the rural parts of India is even more taxing. Just like most domains, the availability of internet and literacy in rural India is primarily available to men.
- 9) **Poverty is the main barrier:** It is essential from the govt to provide the basic facilities that is Tab and Internet facilities

7.Suggestions

- Government must provide internet facilities to students of rural areas at subsidised rate. To promote this, the Government can offer tax benefits to providing companies.
- There is need to create awareness among students about online classes from the beginning.
- Govt must ensure uninterrupted power supply to villages at least for 4hours daily at fixed time.
- Tabs, Smart phones must be given to rural students through private public participation, like Public TV programme,
- State Governments can arrange online content delivery training for teachers.
- Innovative solutions can be initiated to create the process of online education more interactive and vigorous.
- The rural areas of the country can be better equipped with the essential infrastructure provided by the public-private initiatives.
- The successful gambits under the CSR (Corporate Social Responsibility) of corporate bodies fostering digital education in schools of rural areas need to be further promoted.
- Schools in rural areas should be provided with digital learning kits, and substitute sources of energy such as solar power should be installed in these schools.
- Learning must be made joyful with innovative methods and through more student interactions.
- Blended learning classes should be made compulsory for teachers and students

8.Conclusion :

The digital education barriers in Rural India can be eliminated through the provision of affordable and accessible e-learning modes. Content Standardization, Facilitating all the vital amenities and services in government schools through PPP (public-private partnership) model, up-skilling the teachers by providing them with customized teacher-training programmes on online education, blended learning in schools as well as the advancement of initiatives in digital



learning space by NGOs & CSR wings of organizations need to be considered to propel digital education in rural India. Other than that, all stakeholders should come together and provide an ingenious pedagogy, accessible educational devices, proper infrastructure and a quality ecosystem for the expansion of digital learning in rural India. Collective efforts of civil society organisations, policymakers and the government are required to create a user-friendly digital interface so that teachers and students find it conducive for uninterrupted learning..

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Women Empowerment in An Economically Depressed Zone of Indian Sundarbans.... Issues in Perspective

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Abstract:

This study aims to analyze the status of women empowerment in an economically depressed zone of Indian Sundarbans located in the coastal part of the Bay of Bengal in West Bengal, India. The region is presently exposed to such problems as coastal erosion, frequent embankment failures, submergence and flooding, cyclones and storm surges making the region increasingly vulnerable. In addition to this, the enormous growth of population in the region (280.41% since Independence upto 2011) has resulted to major degradation and unsustainable resource exploitation practices. . The research approach used here is both quantitative and qualitative based on both secondary and primary data from the region. Indepth interviews during primary survey at the household level have revealed the effectiveness of different Government programs for empowering women in the region and to bring down the disparity level especially in the education and employment sectors for raising the overall coping capacity of the inhabitants. From the study and analysis done based on secondary and primary information in the present paper, the preliminary observations reveal that the gender gap and the disparity level at the educational and employment sectors has reduced remarkably since 2001 owing to major developmental programs taken by both State and the local Government . The region has also experienced a sharp rise in the participation of women in Panchayats and Zilla Parishads in the recent years. However, the cases reported related to crime against women is still high and the number of missing girls in increasingly rising in the region owing to the depressed economic conditions of the villagers under the climate change situation.

Keywords: Women Empowerment, Coping Capacity, Climate Change , Natural vulnerability, environmental degradation, Population pressure.

Introduction:

Presently half of the world populations are women and for capacity building or to ensure sustainable socio-economic development in a certain nation women have to take part in large numbers for the nation building process. This has been increasingly felt not only by developed economies but also by the developing Nations that women empowerment is absolutely necessary for bringing in overall progress and development of a country.to achieve development across all sectors the equality to women in every sphere viz. political , social and economic has to be ensured. Empowerment is the process through which women achieves increased control and engagement in decision making. This inturn help a woman to attain equality with men in various spheres like social, cultural, economic, and political. In contrast to the general belief that development is gender neutral, statistics show that women lag far behind men all over the world and India in not an exception to this. Since 1995, the focus on human development has therefore been to highlight the gender dimension and continuing inequalities confronting women. The

Reserve in 1989.

Central Queries framed for the Study :

To assess the status of women empowerment in the any region, the gender disparity in terms of education and employment are very important criteria to be studied. In addition to this, the participation of women in the political sphere also signifies the level of achievement of this section in the locality. Keeping this in mind, the present study has framed the objectives as provided below

- 1) What is the level of gender disparity in the region in terms of sex ratio, literacy rate, work participation rate? Is the region lagging far behind when compared to the State or district level regarding the achievement of women in educational and employment sectors? Is it also varying across the inland and coastal blocks of Indian Sundarbans? If so, what are the probable reason behind the same ?
- 2) Is the rate of crime against women in the region increasing?
- 3) What is the role of women in the political domain of the region? How far the SGSY scheme is successful in the region for empowering the women ?

Methodology followed :

To study the women empowerment issues under climate change situation In Indian Sundarbans an in-depth study of the various complex topics is needed to be studied which in turn needs years of investigation. The present study has relied chiefly on secondary information to collect relevant data on women's progress in education and employment sectors. Statistical analysis has been done to find out the disparity and gender gap in different sectors viz. education and employment based on Census data 2001 and 2011 across different inland and coastal blocks. A spatial comparison is made between three regions I, II and III within Indian Sundarbans. 19 community development blocks have been categorized under the three regions as conceived in the present paper based on inland and coastal locations (as shown in Fig 1 above). Region I comprise of all six community development blocks under North 24 Parganas District. Region II consist of 8 inland blocks under South 24 Parganas District while the rest 5 blocks viz. Sagar, Namkhana, Patharpratima, Kulatali and Gosaba having Bay of Bengal as their southern boundary are categorized as coastal blocks of South 24 Parganas District under Region III. Relevant thematic maps have been prepared under GIS environment using QGIS software 3.1 v.

In this paper, the major analysis has been done finding out the gender gap in terms of adult literacy rate, and work participation rate. The gender gap has been calculated on the basis of ratio of female to male share for the variables considered (following the methodology gender gap computed in Human development Report of South 24 Parganas District, 2009) while the level of diversity has been computed based on Sopher's Index values under the above mentioned indicators across various blocks (spread in the three regions) having both inland and coastal locations under North and South 24 Parganas District .

Sopher's Disparity Index (Sopher DIs,1974) is a well-accepted measurement technique to identify the disparity between rural-urban literacy group by using the following formula (Kundu & Rao, 1986; Mulimani & Pujar, 2015; Biswas, 2016).

$$DI = \text{Log} (X2 / X1) + \text{Log} (100 - X1) / (100 - X2)$$

Where, DI = Disparity Index X2 = Percentage of Urban Literates. X1 = Percentage of Rural Literates. i.e. $X2 \geq X1$.

Disparity Index technique is useful in measuring relative disparity between two variables. The value of DI is zero in case of perfect equality. Thus, greater the value of DI, the higher the extent of disparity and lower the value, the lower the disparity (Raju, 1991; Biswas, 2016).

Results and Discussion :

For analysing the status of women section in this fragile zone of Sundarbans, the present study has focussed on recent trends of sex ratio, and the achievements of women section in the educational and employment sectors in Sundarbans.

Trends in Sex Ratio:

Owing to different planning programs and measures taken for the Sundarbans to empower women’s position in Indian Sundarbans, the available Census Reports of 2001 and 2011 have indicated that the average sex ratio for Sundarbans has increased from 947 in 2001 to 967 in 2011. The corresponding figure for the State of West Bengal is 934 in 2001 and 947 in 2011. Both North and South 24 Parganas district that have 19 community development blocks under Sundarbans have also registered an increase in sex ratio from 2001 to 2011(as shown in table 1 below).

Similar to state and district level data the intra-comparison done at the block level also indicates that the sex ratio for almost all 19 community development blocks has improved from 2001 to 2011. However in 2011, majority of the blocks of South 24 Parganas was having sex ratio below the average Sundarban fig. of 967 excepting Canning II block (Fig. 2 a and b). This is very striking because even in 2001, both inland blocks like Canning I and II, Basanti, Kakdwip were having sex ratio much above the average Sundarban figure of 944. One of the reasons for declining sex ratio may be due to outmigration of women in large numbers from different Sundarban Blocks to Kolkata Metropolis for accessing higher education in colleges and universities and also in search for jobs.

Table 1
Sex Ratio in India, West Bengal and Sundarbans, 2001 & 2011

Source : Census of India , 2001 and 2011

Primary Census Abstract , North and South 24 Parganas District, 2001 and 2011 .

	West Bengal State	North 24 Parganas	South 24 Parganas	Sundarbans	Region I under Sundarbans	Region II (under Sundarbans)	Region III (under Sundarbans)
2001	934	926	937	944	944	943	948
2011	947	949	949	967	1003	957	953

Fig. 2a

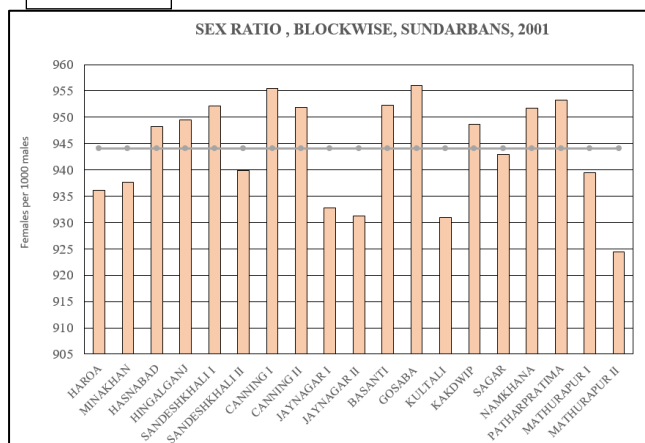
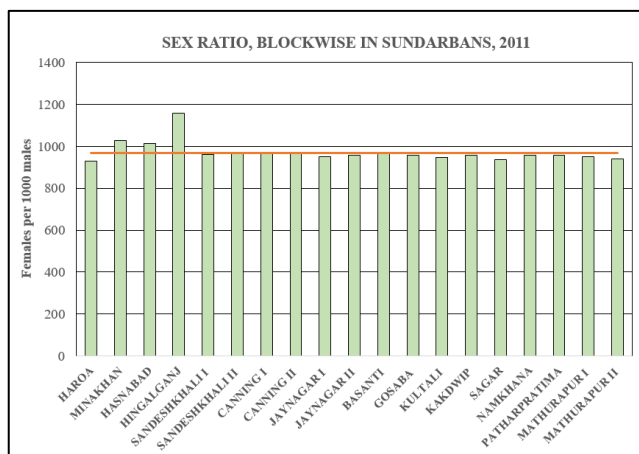


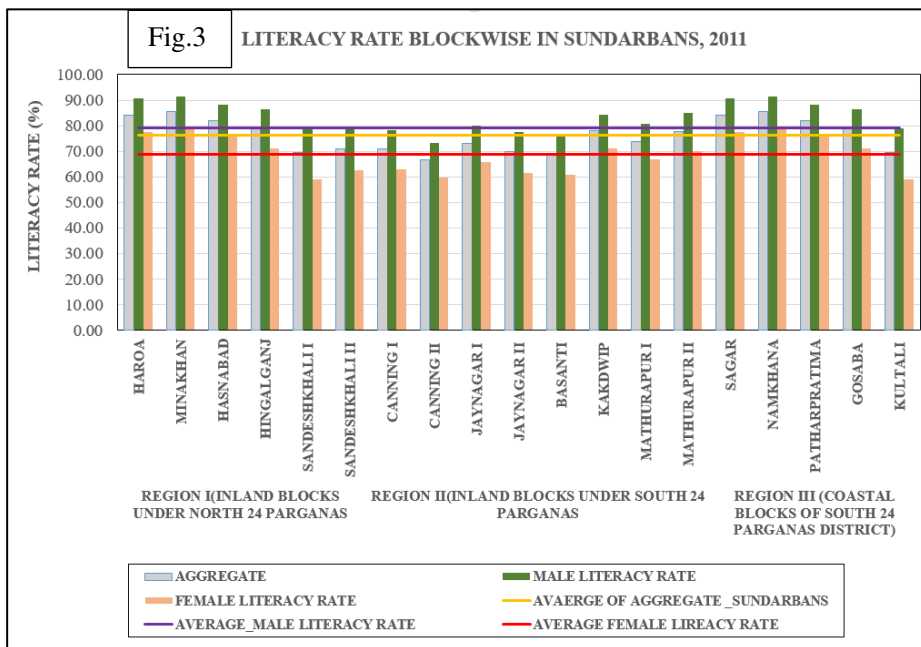
Fig. 2b



Trends in Female literacy rate and Female Work Participation Rate

In terms of literacy rate, Sundarban blocks have shown a marked improvement in 2011 from 2001 both for male and female literacy rates in almost all inland and coastal locales across all the three regions . In the adjacent figure (Fig.3)

it is observed that in the inland blocks like Haroa, Minakhan, Sagar and Namkhana the male literacy rate have reached almost 90%. The female literacy rate is also more than 70% in all these blocks. In addition to these four blocks, six more blocks viz. Hasnabad, Hingalganj, Kakdwip, Mathurapur II (inland locations) , Patharpratima,



Gosaba (coastal locations) were also having the female literacy rate above the average female literacy rate of Sundarbans i.e. 67.15%. In 2001, the male and female literacy rate figs were 76.28%. and 52.82% respectively .

Furthermore in terms of girls enrolment figs in formal educational institutes at all levels viz. Primary, upper primary, secondary and higher secondary levels , the South 24 Parganas district and North 24 Parganas district were well above the average figs of the state as has been shown in table 2 (below). Here, the block level figs for Indian Sundarbans could not be computed because of non-availability of data on enrolment figs of girls at the block level.

Female Enrolment Rate at Different Levels of School Education

Table 2	Primary	Upper Primary	Secondary	Higher Secondary
India, 2014-2015	46.82	42.63	38.96	38.31
West Bengal, 2014-15	49.36	56.96	50.72	35.07
North 24 Parganas District, 2012-13	48.56	54.14	50.27	48.79
South 24 Parganas district 2013-14	49.70	54.07	59.20	51.63

Source :Statistical Abstract West Bengal 2015 and District Statistical Handbook , North and South 24 Parganas 2014 .

Efforts have been taken to find out the gender gap in terms of literacy rate at the block level following the methodology of Planning Department South 24 Parganas, West Bengal where the ratio of female share to male share is considered for a certain variable to compute the gender gap. This has been observed both for 2001 and 2011 Census data that there has been a marked

improvement in gender gap (in favour of female literacy rate) from 2001 to 2011 in all the three regions that includes all the inland and coastal blocks of Sundarbans .

The diversity index on female literacy rate has been done with the help of Sophers Index (whose

formula has been discussed in the methodology section above). A general observation on the computed gender gap values and diversity index values region-wise shows that wherever the gender gap is relatively more there the diversity is less (fig. 4). However, when the correlation was done on the basis of all the 19 Sundarban blocks for both 2001 and 2011 (Fig 5 below) on female literacy rate , it was found that a very weak relation exists between the gender gap and diversity index values for both 2001 and 2011 and the t (test statistic) values in the cases of both 2001 and 2011 have been found to be insignificant. This indicates that the diversity index values (computed By Sopher's Index Formula) are not responsive to gender gap values computed as female share to male share in terms of literacy rate and the gender gap values has a very little role to play in the variation of diversity values across the Sundarban blocks .

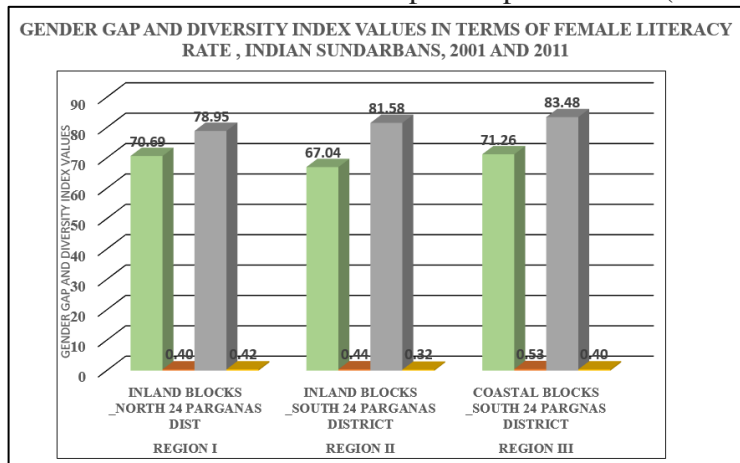


Fig. 5a

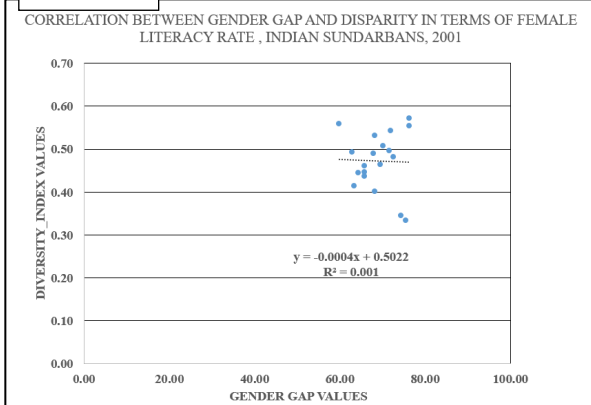
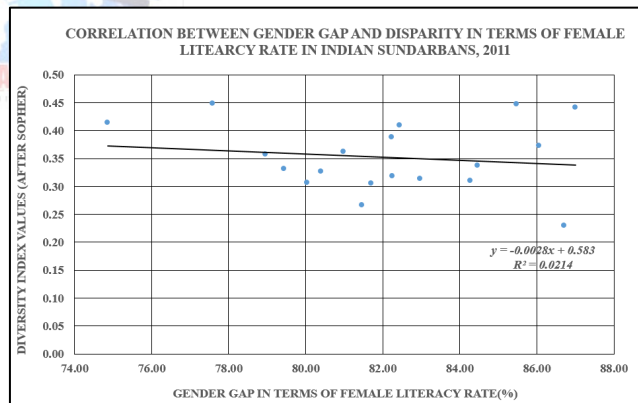


Fig. 5b



Statistical Results Of Regression Of Gender Gap With Diveristy Index Values On Female Literacy Rate In Indian Sundarbans, 2001 And 2011 = Table 3

Variables	R	R ²	'T' values	Level of Significance	Level of Confidence
Gender Gap and Diversity Index values on Female Literacy Rate,2001	0.03122776	0.001	0.12882	Not significant	-
Gender Gap and Diversity Index values on Female Literacy	0.146287388	0.0214	0.60972	Not significant	-

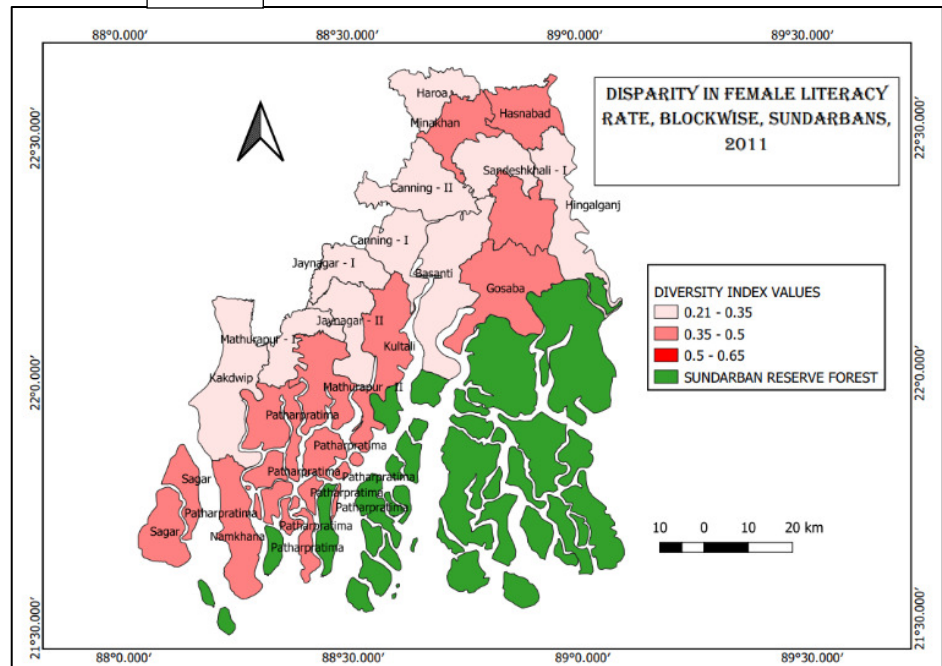
Rate,2011					
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Computed by the author

Note : Level of significance and Confidence values are consulted following Students 't' table from Sarkar, A,2013

Fig.6

The spatial analysis done in Indian Sundarbans on the basis of disparity of male female literacy rate based on 2011 Census data further reveals that in 2011, the blocks which were chiefly inland and very near to metropolis there the disparity between the male female literacy rate is relatively low (as computed by Sopers' Index



formula) compared to such coastal blocks like Sagar, Namkhana, Patharpratima, Kuttali. Minakhan and Hasnabad though having inland locations close to Kolkata metropolis the disparity between male female literacy rate is falling under the moderate class relatively high than other inland blocks. However in terms of dropout ratios of girls in the age group of 5-14 years in 2004-'05 (as found from Human Development Report of South 24 Parganas,2009) Canning I and II, Mathurapur I, Basanti blocks which have inland locations and are close to Kolkata metropolis , they have relatively greater percentage of girls dropout than the male counterparts compared to the coastal blocks of Sagar and Namkhana. The dropout ratios at the block levels for girls could not be estimated here due to unavailability of data after 2004-'05 (the latest reports are found from Human Development Report of South 24 Parganas,2009 after which no publication has taken place at the block level covering these aspects)

Trends in Female Work Participation Rate

Female work participation is a driver of growth and progress and therefore, the participation rates indicate the potentials for a country to grow at a more rapid pace in the future. As per census 2011,in the workforce the participation rate for females was 25.51% against 53.26% for males at the national level and 18.08% female workforce participation against the 57.07% males at the State level. The male-female gender gap is slowly reducing both at the National and the State levels. Indian Sundarbans has also registered a rise in the female work participation rate from 2001 to 2011 (21.59% in 2001 to 23.03% in 2011) where the share of female main workers has increased much more than the share of female marginal workers (Fig.7 below). This is a positive indicator regarding the development of this very backward economic zone within the state since the involvement of greater number of women as main category

workers will ensure them a fixed wage at the end of the day against their labour and they can engage themselves for atleast 180 days in a year. This in turn will raise the living standards of the family and the poor inhabitants can develop a better coping capacity to withstand the natural changes that are frequently occurring under climate change situation like cyclones, floods, embankment failures, salinization of agricultural fields etc.

In the adjoining figure (Fig7) it is observed that apart from Hasnabad (inland blocks under Region I), Sagar and Namkhana (coastal blocks under Region III) all other blocks have experienced a growth in the female work participation rate from 2001 to 2011. The falling trends in these three blocks may be due to rising educational enrolment of young women and also may be because of lack of suitable employment opportunities. The share of female main category workers have also increased substantially in all the inland and coastal blocks within one decade from 2001 to 2011. However, slight fluctuations can be observed in the share of marginal workers in both the decades. Among all Sundarban blocks, in Canning I, Basanti, Mathurapur I and Kultali there has been an increase in the share of female marginal workers in 2011 compared to 2001.

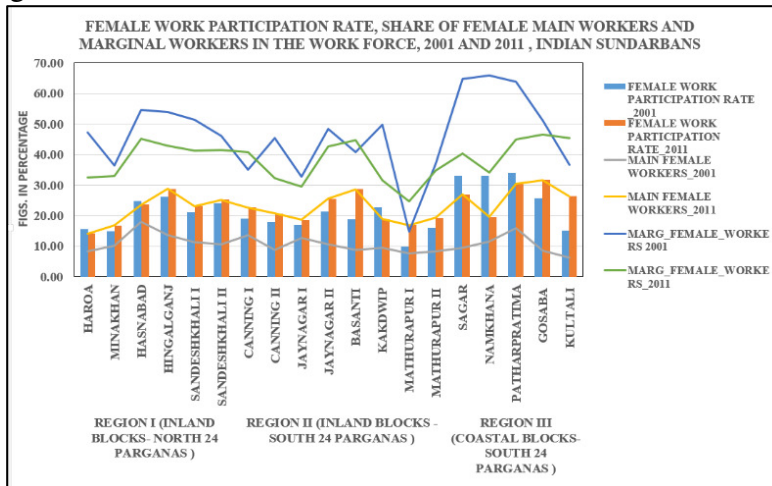


Fig. 8a

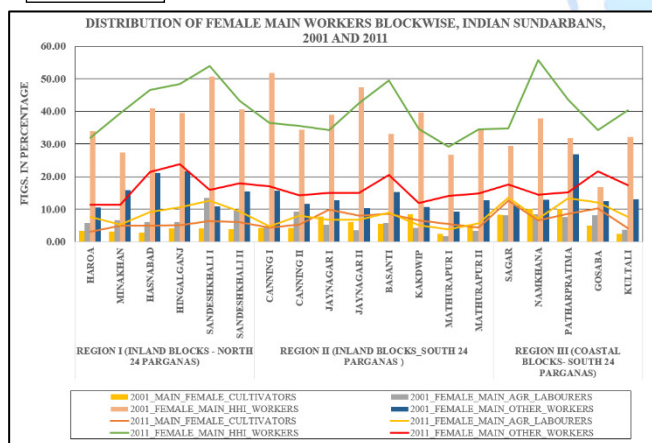
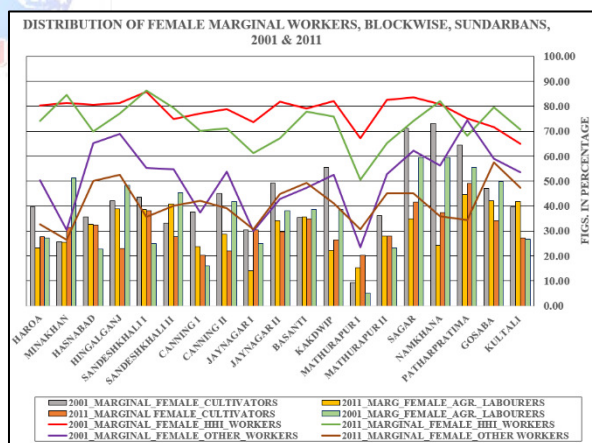
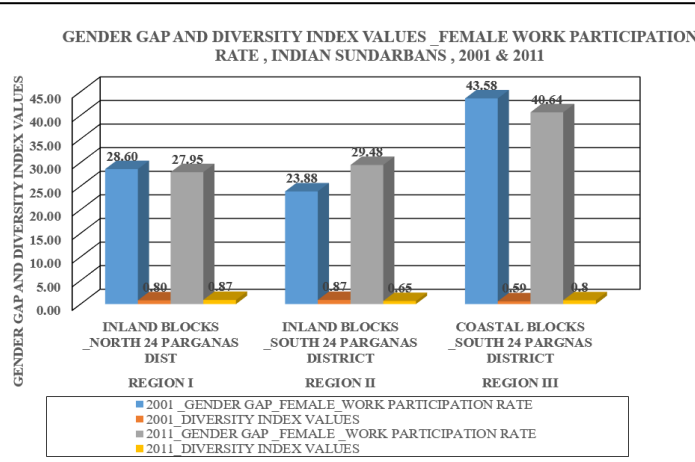


Fig.8b



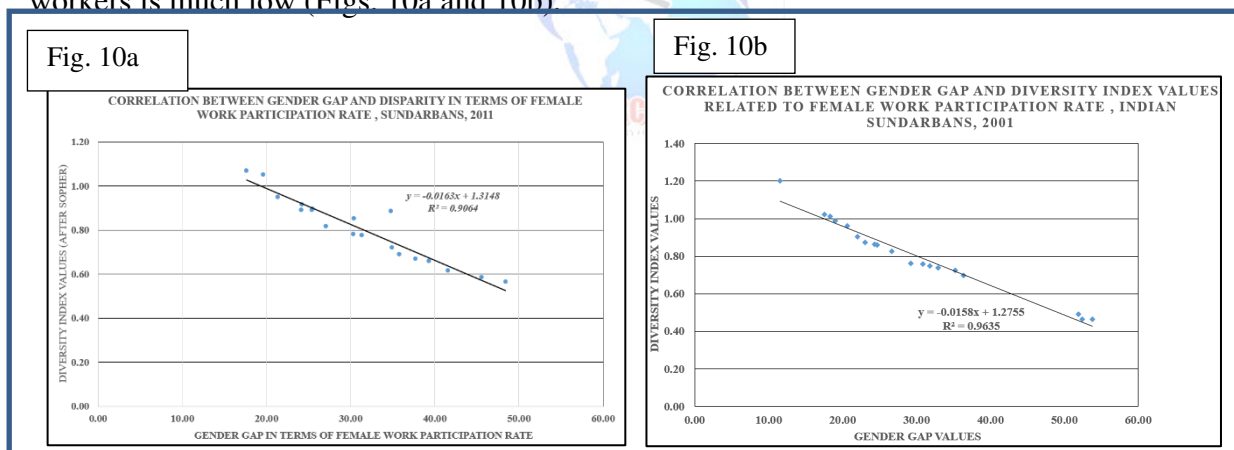
Figs. 8a (above) further indicates that the share of female cultivators and female agricultural labourers among the main workers is much low compared to female household industry workers. The share of female other workers (that includes such professions as construction workers, bricklin workers, hotel workers, females engaged in marine) in all blocks is also quite impressive in all inland and coastal blocks.



This holds good for both the years 2001 and 2011. On the other hand, among the marginal female workers (shown in Fig. 8b) the share of female cultivators and female agricultural labourers in 2001 was much above the household industry workers and other female workers in majority of the blocks like Haroa, Hasnabad, Hingaljanj, Sandeshkhali I (under Region I), Canning I and II, Jaynagar II, Kakdwip and Mathurapur II (under Region II) and Sagar, Namkhana, Patharpratima, Gosaba and Kultali (all the coastal blocks under Region III). In Minakhan block, majority of the female workers are engaged in aquaculture farms and so belongs to other workers category whose share is maximum along all other occupations. Similar observation is also made in case of Sandeshkhali II blocks where majority of the female marginal workers (above 50% are engaged in brickkilns which have come up in the locality in large numbers in the last two decades because of rising salinity in the region. Large number of agricultural fields have got converted to brickkilns to earn the subsistence living by the local inhabitants. The same trend is found in 2011 also where the share of female agriculturists (that includes both cultivators and agricultural labourers) is much more compared to female household industry workers and female other workers.

Similar to female literacy rate for female work participation rate the gender gap (as the ratio of share of female to male workers) and diversity index values (using Sopher's index) have been computed. The values so obtained for the two variables across three different regions of Indian Sundarbans is shown in Fig 9.

The salient observations made for both 2001 and 2011 indicates that, there exists a strong negative correlation between gender gap and diversity index values. This means that among the blocks wherever the gender gap values (computed as ratio of share of female to male workers) is high, the diversity (computed on the basis of Sopher's Index formula) among male and female workers is much low (Figs. 10a and 10b).



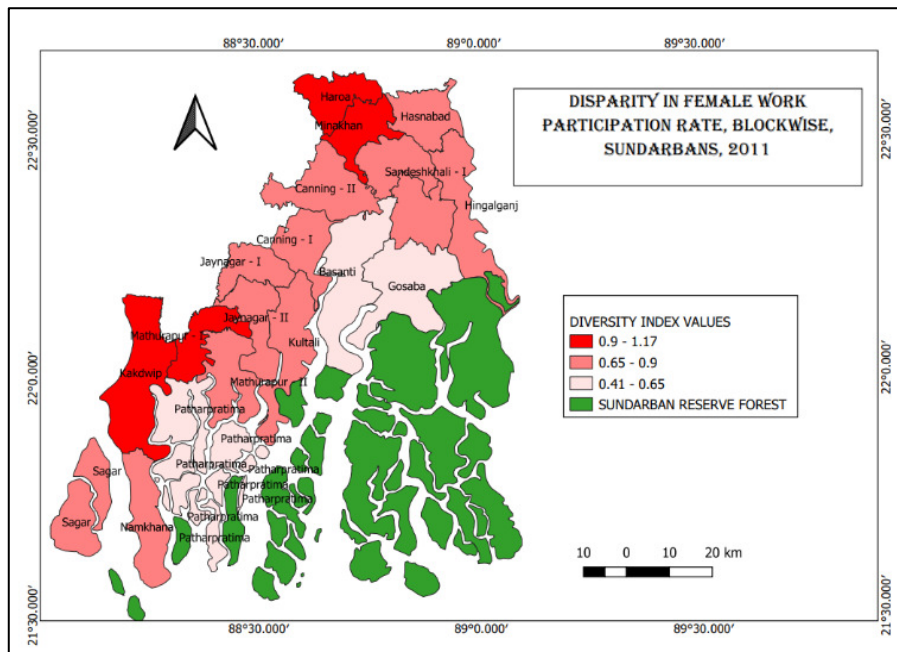
The statistical results so obtained based on these variables is provided in table 4 (below) which indicates that a very strong negative relation exists between the gender gap and diversity index values for both 2001 and 2011 in terms of female work participation rate and the *t* values in the cases of both 2001 and 2011 have been found to be significant at 0.01 % level (with 99% confidence value). This indicates that the diversity index values (computed By Sopher's Index Formula) are very much responsive to gender gap values computed as female share to male share in terms of female work participation rate and the gender gap values has a significant role to play in the variation of diversity values between males and females share in the work force among different Sundarban blocks.

Statistical Results Of Regression Of Gender Gap With Diversity Index Values On Female Work Participation Rate In Indian Sundarbans, 2001 & 2011 = Table 4

Computed by the Author

Note : Level of significance and Confidence values are consulted following Students 't' table from Sarkar, A,2013 = Fig.11

The spatial distribution as is found in Fig. 11 further indicates that the male female work participation disparity values (computed based on Sopher's Index formula) is relatively high in case of Haroa, Minakhan, Mathurapur I and Kakdwip Blocks as per 2011 Census Figures .The male-female disparity is quite low among the coastal blocks like Patharpratima and Gosaba and in inland blocks of Basanti . The rest of the blocks have moderate disparity vales in terms of male female share within the work force.



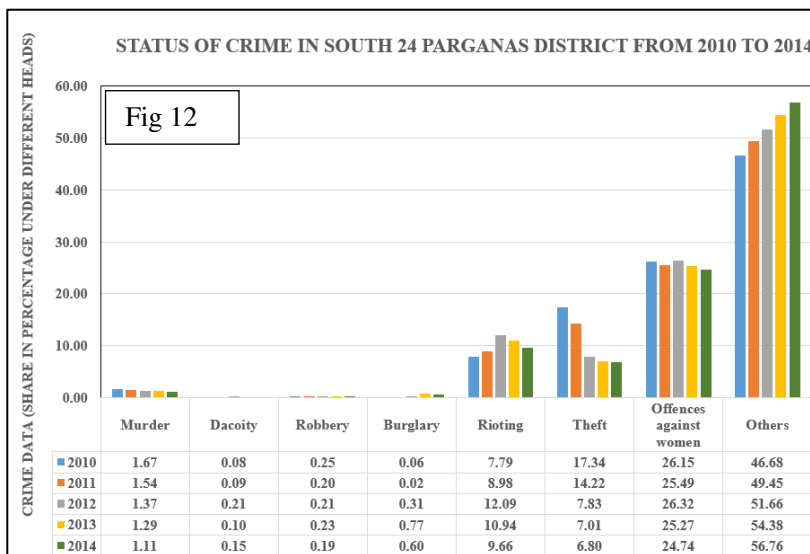
The rest of the blocks have moderate disparity vales in terms of male female share within the work force.

Status of Crime and Violence Against women in Indian Sundarbans



Variables	R	R ²	'T' values	Level of Significance	Level of Confidence
Gender Gap and Diversity Index values on Female Work Participation Rate,2001	0.981580358	0.9635	21.18380107	0.01	0.99
Gender Gap and Diversity Index values on Female Work Participation Rate,2011	0.952050418	0.9064	12.83058578	0.01	0.99

As has been reported in the Human Development of South 24 Parganas District, 2009 in terms of IPC Crime rates West Bengal has a relatively better position compared to the national average in 2006. However in terms of women trafficking the position of West Bengal State was worst even in 2006 among all Indian states. South 24 Parganas district has been identified as one of the major area where such illegal trafficking is taking place. So far as cases related to crime against

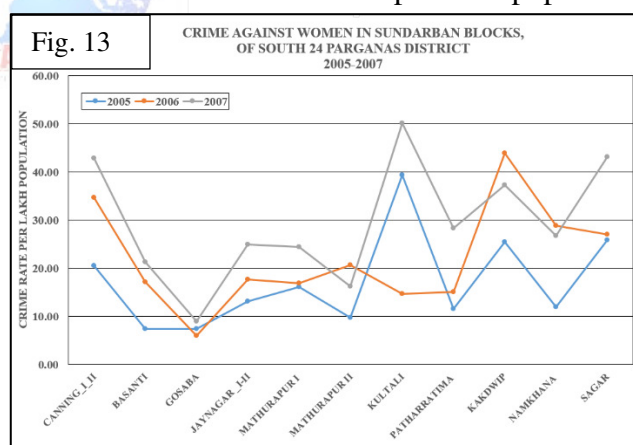


women (CAW) is concerned, the share of this district (where 13 blocks of Indian Sundarbans are included among 29 blocks of South 24 Parganas) is quite high in the State . The cases related to CAW include kidnapping and abduction, rape, homicide for dowry, torture/cruelty both mentally and physically, molestation, sexual harassment, importation of girls upto 21 years of age. From 2010 to 2014 also the cases related to CAW has been found to be quite high among all other crimes in South 24 Parganas district.

As per the latest data available at the block level (Source Human Development Report, South 24 Parganas, 2009), it is further observed the incidences of CAW per lakh population is very high in the inland blocks of Canning I and II blocks located very near to Kolkata metropolis. Kultali, a coastal block along with Sagar under Region III were also having rising cases under CAW in the years 2005 and 2007.

Position of women in Gram Panchayats, Panchayat Samitis and Zilla Parishads in Indian Sundarbans

As has been stated in Human Development Report, South 24 Parganas, 2009, the analysis of women’s participation remains incomplete if the socio-economic profile of the women representatives at Gram Panchayat level, Panchayat Samitis and Zilla Parsihad, posts held by the women in decision making and motivating the commoners are not known. Due to unavailability of data regarding the participation of women under each tier of Zilla Parsihad, Panchayat Samiti and Gram Panchayat levels, it has not been possible in the current paper to discuss the women position in the political arena and decision making process for the Sundarbans Region for the recent years. However from the secondary information available it is inferred that 33% seat reservation is maintained at each tier for representation of women from all the sections viz. general and or SC/ST groups.



Position of women in SGSY scheme

Swarnajayanti Gram Swarojgar Yojna (SGSY) launched in April 1999 as a long-term rural self-employment with an objective to organize small economic activities involving members primarily from BPL households is performing in very impressive manner in different inland and coastal blocks of Indian Sundarbans for the last two decades. This scheme was launched chiefly to engage women communities in large numbers from BPL households. In the Sundarban blocks, the key activities performed under SGSY scheme are cutting, tailoring, embroidery, poultry and duck, fish net making, jute rope making, zori work, food processing, jam jelly making, home nursing social forestry and shola works. In reference to block level performance of SGSY groups from 2003-2007 as revealed by Human Development Report, 2009 of South and North 24 Parganas, (where women occupies 90% of the members list), it has been found that Patharpratima and Gosaba in spite of having coastal locations and far from Kolkata Metropolis are the best performers while the inland blocks like Canning II, Jaynagar I, Basanti, Mathurapur I which are located very near to Kolkata are almost nil. The North 24 Parganas inland blocks are also lagging behind the South 24 Parganas blocks in terms of performance of economic activities by SGSY groups formed by women. The involvement of women in SGSY activities in large numbers will certainly empower the women in very vulnerable regions of Indian Sundarbans who can earn a substantial income for the family and in turn can enhance the coping capacity of the inhabitants to withstand different natural and social calamities in the future.

Conclusion :

Empowerment of women is basically a scientific approach for enhancement of social, economic, cultural and political positions of women in the society. Research studies have shown that women are more likely than men to expand a large proportion of their household income in the welfare of their family members especially children in their education which may in turn earn a secured future. Indian Sundarbans, a rural fragile and economically depressed zone in West Bengal which is undergoing major natural and social changes under climate change situation has experienced major progress of the women folk in the last two decades because of several positive drives and initiatives taken up by the Government front. Large number of women participation has been observed both in the educational sector (at all levels viz, primary, secondary, higher secondary and at college level) and employment sectors in the last two Censuses of 2001 and 2011. The gender disparity has also declined in almost all inland and coastal locales in terms of both education and employment. However, to ensure women empowerment in this fragile region the State Government needs to take adequate measures for reducing the crime incidences related to CAW. It is further expected that the incidences of missing girls which is rising in the region at present (especially after the incidences of natural calamities like Amphan Cyclone, Aila cyclone etc.) may decline if the Government takes enough initiatives for feasible poverty alleviation programs in the threatened and fragile Indian Sundarbans region.

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Digital Library is Boon for Modern ICT Library User

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Abstracts: -

Digital libraries, also known as online libraries, web libraries, digital repositories or digital collections, are online databases of digital objects that are text, static images, audio, video, digital documents or other digital media formats or accessible library website. Objects may contain digital content (such as printed content or photos) and original digital content (such as word processing program files or social media posts).

Key-Words: -Digital Library, Online Library, Software, ICT Library, Users

Introduction: -

In addition to storing content, digital libraries provide the means to organize, search, and retrieve content in a collection. The size and scope of digital libraries vary widely and can be maintained by individuals or organizations. Digital content can be stored locally or accessed remotely via a computer network. These information recovery systems can exchange information with each other through exchange and consistency. The early history of the digital library is not well documented, but many leading thinkers have been involved in the emergence of this concept. Pioneers include Paul Outlet and Henry La Fontaine's "World". The effort began in 1895 to gather and systematically classify world knowledge in order to achieve world peace. A century later the idea of a digital library was greatly realized in the rapid development of the Internet. Millions of people have access to books and documents on the Internet.

The two contributors who expanded the idea to current technology were Vanner Bush and J.C.R. Liglider. Bush backed research that led to the bombing of Hiroshima. After seeing the disaster, he wanted to build a machine that would show how technology can lead to understanding rather than destruction. The machine will have a desk with two screens, switches and buttons and a keyboard. He named it "Memx". This way, individuals can quickly access saved books and files. In 1956, the Ford Foundation funded Glider to analyze how technology could be used to improve libraries. Nearly ten years later, his vision is in his book, The Library of the Future. He wants to create a system that uses computers and networks so that human knowledge can meet human needs and feedback will be automatically applied to machines. This system consists of three components, the knowledge corpus, the questions and the answers. Legality called it the cognitive system. The focus of the initial project was to create an electronic card list called the Online Public Access List (OPAC). In the 1980s, as a result of the success of these efforts, OPAC transformed traditional card lists in many academic, public and specialty libraries. This allows libraries to make more effective collaborative efforts to support resource sharing and expand access to library materials outside of a library.



Digital Archives

Physics archives are different from physics libraries in many ways. Traditionally, archives are defined as:

Include a primary source of information (usually letters and documents produced directly by individuals or organizations) rather than secondary information in the library (books, journals, etc.). Organize its content into groups rather than individual projects. There is personal content. The technology used to create the digital library is very revolutionary for archives because it violates the second and third of these general rules. In other words, "digital archives" or "online archives" usually contain more important resources, but they can be described individually (or grouped by groups or packages). In addition, since they are digital, their content is easy to reproduce and can actually be reproduced from elsewhere. The Oxford Text Archive is generally considered to be the oldest digital archive of the major raw materials of educational physics. The difference between archives and libraries lies in the nature of the objects they hold. The library collects a limited collection of individually published books and serials or personal items. Books and magazines owned by the library are not unique because there are so many copies that any given copy is generally as satisfying as any other copy. Items in archives and manuscript libraries are "unique records of corporate systems and personal and family documents."

The basic characteristic of archives is that in order to preserve the amount of information and provide information that is understandable and useful over time, they must maintain the context in which the record is created and the network of relationships between them. The basic feature of archives is their hierarchical structure, which reveals the environment through archive links. Archive interpretation is the basic mechanism for describing, understanding, retrieving, and accessing archives. At the digital level, archive descriptions are usually encrypted archive descriptions in XML format. EAD is the standardized electronic representation of archive descriptions. This allows unions to access detailed archive descriptions and resources in repositories around the world.

Considering the importance of archives, a unique systematic model has been defined, which is called the Nested set (Nestor) for the object sequence, built around its unique components. Nestor is based on the idea of expressing the hierarchical relationship between objects by adding attributes between sets, as opposed to the binary relationship between nodes used by wood. Nestor was used to systematically extend the 5S model to define digital archives as a special case of digital libraries, which may take into account the special functions of archives.

Features of the Digital Library: -

The benefits of the digital library are now widely recognized by business interest groups and public organizations as a convenient and quick way to access a wide variety of books, archives and images. Traditional libraries are defined by storage space. Digital libraries have the ability to store additional information because they require very little space to store digital information. In this way, the cost of maintaining a digital library is much lower than that of a traditional library. The physical library staff has to spend a lot of money to pay for book maintenance, rent and other books. Digital libraries may reduce or discount these fees in some cases. Both types of libraries require assorted input to allow users to find and retrieve information. Digital inventions may be more willing to follow technological innovations, provide



users with improvements in electronic and audiobook technology, and expose new communications such as wikis and blogs. Traditional libraries may think it is enough to provide online access to their OPAC list. A key benefit of digital transformation is increasing user access. Due to their geographical location or organizational affiliation, they may increase the use of individuals who are not traditional patrons of the library. There are no physical boundaries. Users of digital libraries do not have to go directly to the library. As long as there is an internet connection, people all over the world can access the same information.

The main advantage of a digital library that is available 24/7 is that people can access information 24 / 7.

Multiple access. Many companies and customers can use the same resources at the same time. For copyrighted material, this may not be the case: the library may be licensed to "lend" one copy at a time; This can be achieved through a digital rights management system in which the loan period expires or the lender makes it inaccessible once selected (equivalent to turning the resource), making the resource inaccessible.

Information retrieval. Users can search the entire set using any search term (words, phrases, titles, names, titles). The digital library can provide a very user-friendly interface that allows you to access its resources after clicking.

Store and protect. Digitization is not a long-term security solution for body collection, but it does provide access to copies of items that will be downgraded due to reuse. Digital collections and natural digital objects bring many safety and security concerns, while analog products do not. See the "Questions" section at the bottom of this page for examples.

Location. Traditional libraries are limited by storage space, while digital libraries have the ability to store additional information because they require less space and space to accommodate digital information, and media storage technology is more economical than ever.

Added value. Some properties of the material can be improved, mainly the quality of the image. Digitization improves readability and removes visible imperfections such as stains and discoloration. Can be easily contacted.

Software The Public Digital Library has a number of software packages that are worth noting; please refer to the Digital Library software. Institutional repository software can be found in Institutional repository software, which focuses primarily on the acquisition, preservation, and access of local documents, especially locally produced educational achievements. The software may be proprietary software. For example, the Library of Congress uses Digi board and CDS to manage digital content.

The design and implementation of the digital library is structured so that computer systems and software can use this information when serving information. These are called semantic digital libraries. The semantic library is also used to interact with different communities from numerous social networks. DJDL is a semantic digital library. Keyword based search and semantic search are the two main types of search. Semantic search is provided with a tool that creates a team to expand and improve key-based searches. The ideological knowledge used in DJDL mainly revolves around two forms. Material ontology and concept search system based on ontology. There are three types of oncology, neurological oncology, social cognitive oncology and title oncology associated with this search.



Metadata :

In traditional libraries, the ability to find works of interest is directly related to their listing status. From printing a list of digitally processed electronic works from the library's current collection to copying or moving records to electronic format, complex digital works require a lot of work. New tools and technologies need to be designed to deal with ever-growing electronic publications and to allow effective automated semantic classification and search. Although full-text search may be used for some projects, there are several common directory searches that cannot be performed using full-text:

Conclusion: -

Traditional library changing very fast because of ICT impact of technology. Hypermedia library changed into virtual library and virtual library changed into metadata library. So that ICT library became a paperless library and paperless library became a hybrid library. So Modern library is hybrid library. So that digital library is boon of ICT library user.

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Facets of Feminism in Indian Novels

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Abstract-

Tennyson has rightly said - man for the field, woman for the hearth. This is the situation that women have gone through for ages and are still stuck in with. These words reflect the society trends. Women can get exhausted of being a doormat and wish to be somebody else. When these women try to be someone else the society does not accept them. They feel women's assertion of their individuality is that they wish to be the man of the house.

Whenever there is a fluctuation in power eyebrows are raised. Sharing of power, granting self respect and dignity to the better half is thought of as leading to confusion and awfully unmanly. Women have decided to overthrow these patriarchal customs to create a space for themselves and live on their own terms. Let us view the upcoming feminist in the Indian novels.

Introduction –

Even today though women occupy half of the world they are still treated as the excluded. This patriarchal society is not yet ready to accept the new woman. The new woman can take good care of the hearth while working on the field. Such women do not get the needed support from the family and a time comes when she has to choose between her field career and hearth. Men want the benefits of the working women but they do not give her the credit for her work nor do they divide the repetitive tasks of the household. The patriarchal men enjoy the power of economic independence and with no other duties of kitchen or children rearing go about exploring the pleasures of the body and self. Those females who succeed in following their will or who protest against the patriarchal values to achieve what they want are called as feminist. According to Arundhati Roy a *feminist* is a person who negotiates to a position where she wishes to be.

Facet of an Indian family -

In Anita Desai's, *Fire on the Mountain*, we have Nanda Kaul, the ideal wife of a University Vice- Chancellor. She is trapped in the ideal role model of an Indian wife set by the traditional patriarchal society. She is too busy in putting on the show of an ideal wife. She feels she enjoys this status. She is so busy serving the guests, cooking for the family that she has no time to spend with her children or for herself. She sacrifices her time, desires, wishes and digests all humiliations and frustrations to live up to this mirage. She enjoys putting on the show of a perfect wife before the society even if it meant being a puppet in the hands of her husband. All guests and people praise her for her efficiency.

She lives a loveless life and her needs are completely neglected. She is not allowed to take any important decisions in the house. She wears a silk sari before the guests because her husband wants her to. Her husband keeps her busy with kids, her duty towards family and in preparing meals for the guests. So that she hardly gets time to discuss his extra marital affair. Nanda Kaul also does not fit it right to question him about it. But actually she is afraid. She engulfs her fears in silence. She is afraid to raise her voice against her husband's illicit relationship going on right under her nose, in the next bedroom. Lest her voice may become a

cause of havoc in her house, she may lose her position and she knows well society will not listen to her. Her duty of housewife does not give her time to form an emotional bond with her children nor does it give her any time for herself. Her duties tie her to the house and leave her exhausted.

Housework is such which is repetitive, time consuming, tedious, exhaustive and unpaid for, hence useless. All the tediousness in it can be lessened with a pinch of love, affection, a few helping hands, sharing of hardships, caring, praise, appreciation and recognition for the work done in the house. All in the house enjoy at her expense. She is the envy of all guests, the dutiful ideal wife. We view Nanda Kaul's frustrations in her silence and workaholic attitude. This is the fate of many Indian women to live a life in oblivion.

Suffering leads to rebellion or panic-

As a revolt against the silent wounds given to her by her family and society she decides to live a secluded life by herself in a small village. She takes refuge in Nature to heal her wounds. She wants to be away from such society which keeps a biased attitude, a different code of conduct for men and different for women. She wishes to have nothing to do with this society. But living in the same society and not being affected by it is impossible.

She turns a blind eye to the demands for shelter of her friend, a social worker who stops a child marriage. Her rape and death expose the brutality of patriarchal society. The patriarchal society erases what comes in its way. This harsh truth forces Nanda Kaul to come out of her make belief world. She realizes the futility of marriage and her selfless sacrifice. Today she was alone not by choice but because her children did not need her services anymore.

The terror of the powerful patriarchal forces, the helplessness of women to stop its exploitation, her guilt for not having lend a helping hand to her friend and her silent sufferings, all crowd upon Nanda Kaul at once. This panic takes her life away. They are too much to bear for her.

One cannot live in a make belief world all the time. We must face the truth bravely. Being lonely, neglected and having lead a loveless life are not matters of shame. Women are yet to learn not to be a puppet in the hands of society and tradition. They should instead struggle to make it a better place to live in by changing its attitude towards them.

Deprivation, isolation leads to demolition –

We have a feminist Maya in Anita Desai's, *Cry the Peacock*, who sulks for having being deprived of her husband's love. She feels alienated and isolated to such an extent that she decides to eliminate life itself. She commits suicide. But before that she pushes her husband from the terrace and kills him out of retribution.

The novel gives us an insight into the psychology of a woman. Instead of giving in to the circumstances we should try to change them. The four wall of the house combined with loneliness and loveless life can make one neurotic. Demolishing oneself is no solution to such tyrannical forces. To fight them women should weave a life of their own, get involved in the things of one's liking, pursue ones hobbies. Most importantly, pursue an ambition, career and education. You can achieve a thousand things if your mind is stable. Knowledge has the power to see things in new light, change our attitude and pave new paths of enlightenment.

Education a tool of escape –

We have Virmati in Manju Kapur's *Difficult Daughters*, who has to spend her time nursing her ever pregnant mother and her ten younger sisters and brothers. She divides her time between

household duties and studies. She looks upon education as an escape from the family life and later successfully pursues a career. Her education leads her to freedom. Education gives this feminist a job which brings in self respect, dignity and make her economically independent.

Fight for equal dignity –

In Sahgal's, *This Time of Morning*, Rashmi returns to her parent's home to decide whether to divorce her husband. Her mother Mira is shocked and cannot understand her. But Kailas, who is realistic in his approach, rightly perceives that Mira belongs "to a fast-disappearing race of women for whom endurance was a test of character"(Sahgal, *This Time of Morning* 33-34), where as Rashmi longs for a "torrential release from ancient grooves and bonds, ancient pain and suppression." (Sahgal, *This Time of Morning* 34)

When Ammu of Arundhati Roy's novel *The God of Small Things*, realizes that she has simply changed masters, she decides to divorce him. Her husband is a heavy drunkard and an outrageous liar. He neglects his job and tries to trade Ammu's body, to keep it. He beats her up and their twins. It is then Ammu realizes she had taken a wrong decision of running away with him. She decides to correct it by giving a divorce to him. She returns with her twins to her father's house, unwelcomed.

Feminist attempt not to replicate mistakes of parental generation –

In Indian novels we see that the protagonists do not wish to live the way their elderly have lived. Ammu had already witnessed the futility of marriage in her parental home. Her father battered her and mother and her to satisfy his ego and overcome his failure. Thus Ammu refuses to repeat her mother's mistake of being a punching bag in the hands of her husband. By opting for a divorce she buys back her freedom and ensures her twins safety. She is ready to make new mistakes but not repeat those of her mother, to whose consequence she is a witness. She does not give up trying new methods to find happiness and of trying to retain her freedom as well. She is a feminist.

Rebellious females or feminists –

The trouble with the new generation is that they are by now well aware of the futility of marriage, not that they lack patience. They wish to mould their future by taking decisions of their life. They recognize tyranny and do not wish to fall prey to it. They are not afraid of rebelling against it. When they see exploitation they can't stop themselves revolting against it. They have become a feminist, but society is not yet ready to accept this attitudinal change.

Conclusion - After viewing the state of women in marriages, how it affects them and how it changes them, subdues and enslaves them, immature persons of new generation like Aru of Deshpande's *A Matter of Time*, who have not experienced the interplay of feelings in it, firmly declare their intention of never to enter into marriage.

While feminist like Rashmi in about similar situation firmly declares that her life is her own and so she shall face the challenges which it poses courageously. Thus we must have confidence in ourselves and then with the help of enlightenment we should courageously face our life.

The young women of today are becoming aware of the biased attitude of the society. They have started asserting their individuality by challenging the taboos and destructive social norms. They are moving towards becoming a feminist. They also have to fight personal hesitation and



reluctance on the way. They are determined to be in a position where they wish to be. Despite some achievements in educational, professional and legal fields, these feminist have yet to go a long way for their acceptance as equal beings in the prejudiced society where discrimination is practiced against women right from the birth.

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Effect of Covid – 19 on Indian Economy and Supply Chains in India : A Study

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Abstract:

At present time world is facing from the coronavirus disease known as Covid-19. The first case of the coronavirus was reported in the December, 2019 in the Wuhan city of China which is known as the major transportation hub of China. After the spread of Covid-19 many countries have shut down their sea ports and airports. They have banned the import and export activities. Also, China is the major distributor of the raw materials which affect the manufacturing activities across the globe due to lockdowns. India is the developing country due to the Covid-19 spread the cases reported in the India government has lockdown the country for 41 days which affected the manufacturing activities and majorly it affects the supply chains and economy of the country. In the present paper we have discussed the effect of Covid-19 on Indian economy and on supply chains in India. There are total of 18 critical barriers are found out which affected the supply chains in the India. It is expected that this study will help the researchers to develop the conceptual models to overcome from this issue.

Keywords: Covid-19; Indian economy; supply chain; manufacturing industries; barriers

Introduction:

Manufacturing plays an important role in the development of nations by contributing to the GDPs [1]. Manufacturing industries are the major contributor in the global economy [2]. At present time industries across the world are focusing on the high value and high margin products [3]. Now the production of the low margin and high volume products have shifted towards the low economies [4]. The application of the just in time and lean philosophies had contributed towards the cost reductions manufacturers have reported the disturbances in the manufacturing practices. At present there is huge demands of many products in which the face shields and pharmaceutical products are main. The demand of these products has increased in last two months [5]. The manufacturing units in most of the countries have shut down due to Covid-19 spread and most of the countries are facing from the lack of the labour due to the fear of Covid-19 spread. The first case of Covid-19 in India reported in January, 2020 and now Government of India has declared the lockdown in the country to minimize the spread of Covid-19 [6]. Supply chain across the nation is disrupted. The Indian government has already held the high level meetings to set the new manufacturing strategies. Japan and other countries are also looking for the diversify the supply chains and manufacturing systems to new destinations. Indian government is now focusing on the try and establishing India as an alternative to the China for manufacturing for both the local and global market. Most of the countries have shifted their production out of China due to the disruption of the supply chain between major trading partners [7]. Supply chain is also disrupted in India at local level due to some barriers which are discussed in the present study. In the present paper we have discussed the effect of Covid-19 on Indian economy and on supply chains in India. There are total of 18 critical

barriers are found out which affected the supply chains in the India. It is expected that this study will helpful the researchers to develop the conceptual models to overcome from this issue.

Impact of COVID 19 on Indian Economy:

After the great depression of 1930 in which the global economy has faced the worst recession is now facing the global pandemic of corona virus that has laid the adverse effect on all the economic activates across the world. The sudden decline in economic activities due to the lockdown is unexpected in the history of India. The great economist Keynes has suggested the concept of trade business cycle after the great depression. The four stage of trade cycle is considered to measure the growth rate and real GDP. International Monetary Fund (IMF) has projected the GDP growth as 1.9% and this shows the worst growth performance of India after the liberalisation policy of 1991 in this fiscal year as the corona virus has disturbed the whole economy [8].

Instead after this the IMF in its latest edition of the World Economy Report has placed India being the fastest growing economy in 2020. The global economy is projected to contrast sharply doi:10.20944/preprints202005.0148.v1 by -3%percent in 2020 which is much worse than the financial crises in 2008-09. In India, the impact on real or predictive sectors of the economy is worse than that witnessed in 2008 crises. The country will now face multiple challenges in terms of financial crises, health crises, collapse in commodity prices and much more [9]. The banking system has increased the surplus liquidity because of the demand-side shocks that arises due to uncertainties as well as lock down in the market. There is a huge impact on the financial shock that includes stock market crash, liquidity crises as it began to drain out from global market in banking system and various changes in monetary policies. The US dollar credit crunch has started bothering the world economy due to huge collapse of earnings, dollar denominated debts [10]. As the most of the companies that depends upon international trade will suffer severe pressure. The global economic production is on decline and expecting a huge recession in the entire economy. The global pandemic has hit the economy which questioned the target to make Indian economy of USD \$5 Trillion with 7% of GDP by the year 2024. As per the World Bank latest assessment, India is expected to grow 1.5 percent to 2.8 percent as well as according to IMF, it has projected a GDP growth of 1.9 percent in 2020 and to achieve the object of USD \$5 Trillion economy it is expected to grow at 9 percent every year for five years [11]. India's growth trajectory since 2011 shown in figure 1.

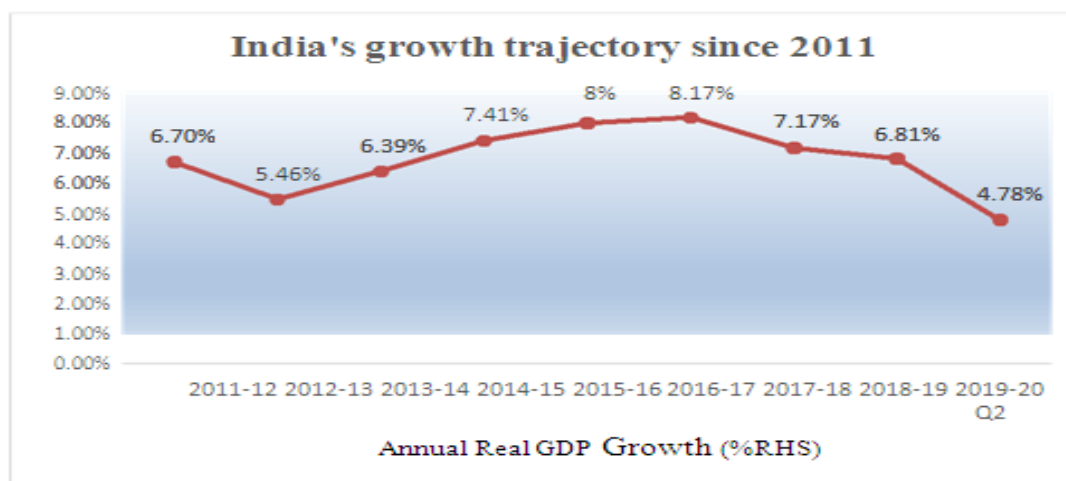


Figure 1: India's growth trajectory since 2011

Demand side shock:

The huge uncertainty and fall in market has led to double whammy of business that disturb the entire chain of production and demand cycle. It includes the various facilities and services provided by the Indian government and private sectors such as Tourism, Hospitality and Aviation are the major sectors that are facing maximum loss in the present crises. Tourism that account for 9% of GDP may decline at least next 2-3 quarters [12]. Aviation that contributes around 2.4% of GDP has severely impacted and these sectors include employees around 42.7 million of people. Sectors such as auto, that contributes 10% of GDP and employee around 40 million of people, is declining continuously due to less of demand and due to which the marginal firms and other industries has forced to shut down [13]. Closing of cinema halls, declining in shopping from complex malls has affected the retail sector too and also to the consumption pattern of consumer in terms of essentials and luxury goods. The consumption pattern of consumer has impacted and has shown a downfall due to fall in income and lost jobs especially to the daily wage earners that questioned the Ratchet Effect and Demonstration Effect given by economist J.V. Dusenberry. The constant fear of the pandemic in the public has affected their mental well-being and confidence level that postponed their purchasing decision. The service of travel and transport is on a pause due to lockdown across the country as has direct impact on slowdown in economic activities. It is accounted for a loss of \$4.5 billion every day of the lockdown. The hotel services are catching huge cancellation from business travellers from various conferences, workshops seminar that got cancelled on such a large scale.

Supply side impact:

Some targeted industries in the supply side go for the shutdown that are the marginal firms. India being the highest exporter of raw material and import source of goods that are required for their intermediate and final goods are on pause now due to the delay in supply of goods from china. Various sectors such as pharmaceuticals, automobiles, electronics and chemical products etc are facing a shortage of required component [14]. As china accounts for 27% of India's automotive part imports. India imports about 85% of active pharmaceuticals ingredients (API) from china and due to the factor there is a possibility of shortage in availability and thus prices may go on hike. Due to the lockdown and global pandemic the business is hampering with the production cycle that will further affect the investments [15]. There is about 55% of electronics are imported from china that has slid down to a percentage.

Impact on International Trade:

According to WTO, world trade is expected to fall by between 13% and 32% in 2020 due to COVID 19 pandemic that has disturbed normal economic activity. Share of Indian export in, in total world's export is 3.5% and share of Import in world's import is 3.1% (2019). The trade balance of India has shown a trade deficit of 9.8 USD bn in March 2020. The unexpected decline the trade and production has negative consequences on the business and households. The aspect of international trade the government may look for the countermeasure for the indigenous production and to reduce the dependency ratio on a single country that will somehow boost the production of domestic industries and reduce the trade deficit. China being the highest foreign trade with India and it is major market for many Indian products like sea food, gems and jewellery, petrochemicals etc. Due to the fall in export the fisheries sector has shown a fall of Rs. 1300 crore. For the April-February period, India's current fiscal exports have dropped by 1.5%

to 292.91 billion [16]. According to UNCTAD, India's trade impact is about to be 348 million dollars. India stood in among 15 most affected economies due to fall in the production of china that is disturbing the entire trade pattern of world. For India, the estimated trade impact to be most on chemical sector at 129 million dollars, textiles and apparel at 64 million dollars, automotive sector at 34 million dollars, electrical machinery at 12 million dollars, leather products at 13 million dollars, metal and metal products at 13 million dollars and wood products and furniture at 15 million dollars. The UN economist has announced drop by of USD 50 billion drop in manufacturing exports around worldwide. India majorly export 7500 commodities to 190 countries and import around 6000 commodities from 140 countries. India share its trade surplus with USA, UAE, and Bangladesh and have trade deficit with China, Switzerland, Saudi Arab

[17]. **India's total export growth from April 2019 to March 2020 is shown in figure 2.**

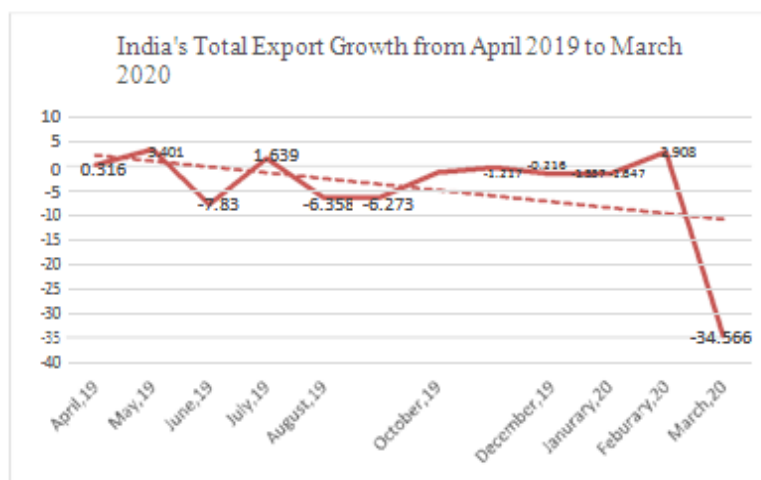


Figure 2: India's total export growth from April 2019 to March 2020

Impact on Financial Market:

As the global economy is declining in terms of output and production it is expected that the world will suffer from recession. The American Credit Rating Agency Fitch has forecasted Indian rupee, the currency will average 77 per US dollar in 2020 and 80 in 2021 and steep monetary easing. In the short run steep monetary easing will pressure the rupee weaker but over the long term it is expected of overvaluation of Indian rupee. The foreign investors has pulled out \$14 billion dollar in March 2020. The economy is facing huge crashes and wealth erosion, which in turn is impacting consumption levels. On the other side Sensex and Nifty closed sharply bated by weak global cues amid historic due to fall in oil prices. BSE Sensex closed 1,011 points lower at 30,636 and NSE Nifty ended 280 points lower at 8,981 on 21 April 2020. The domestic equity markets was seen on March 12, when following the trend of the global equity markets, both the BSE Sensex and NSE Nifty crashed by more than 8% in a single day. An estimated Rs 10 lakh crore of market cap was reportedly wiped off due to this single day fall. The virus crises has already dropped out equity wealth to 40 percent of the expected size of India's gross domestic product (GDP). The aggregate market capitalism of all BSE listed shares of 52 lakh crore, as it fall from Rs.155.53 lakh crore on December 31, 2019 to Rs. 103.69 lakh crore in March 24,2020. The Reserve Bank of India (RBI) has reduced the repo rate by 75 basis points (bps) and bring it

doi:10.20944/preprints202005.0148.v1 down to 4.4 percent, the lowest repo rate fallen till now. The rate cut will lead to encourage growth and financial stability.

Impact on global manufacturing and supply chain n-CoV has affected the manufacturing firms and their supply chain over the world. COVID-19 is affecting our supply chains and manufacturing operations daily. The peak of COVID-19 virus have already affected the supply chain and forced thousands of industries to throttle down or shut down their assembly lines temporarily in the U.S and Europe and now in the developing nations like India [18]. Many of global industries are depends on the China for the materials and parts. The manufacturing units in China have already shut down and will be shut down for next few months. Supply lead time have also affected due to n-CoV it takes around 30 days for shipping from China to U.S or Europe [19]. It means if China has shut down their manufacturing units in January then shipments will arrive in February and there will be spike in the temporary closure of manufacturing units in the mid-March. For example Fiat Chrysler automobiles have already announced for temporary shut down their production in Serbia as the parts imported from China. Similarly, Hyundai has also announced to suspend their assembly lines in the Korea due to the disruptions in the supply chain because of n-CoV. The effect of n-CoV has already visible to world as there is decrease in 40% of departures from the ports of China due to n-CoV outbreak which is showing that there is a major effect on the manufacturing worldwide. There are three impact areas which are majorly affected due to the n-CoV which are:

1.Workforce: To limit the impact of coronavirus government has already instructed their people to stay at home where in developing nations like India, government has already advised their employees to stay at home. Some of the industries are depends on other industries for goods in which supply chain has disrupted due to n-CoV. Now, the industries having very less workforce to meet the customer demands.

2.Products: The n-CoV has transformed the competitive landscape. Suppliers are at risk to lose their market value and share as clients are now seeing the other options when they are not receiving the good products or on time.

3.Costs: There has been increase in the costs of the products due to increase in the shipping charges of products and industries are now also meeting with their financial objectives. There is increase in some of the products due to the n-CoV effect as it disrupt the supply chains. There are multiple challenges for the industries at present such as: at the same time they have to work doi:10.20944/preprints202005.0148.v1 for the protection of their workers and also safeguard their operational viability. At present most of industries are working with mobilizing concept so that they can set up the crisis management mechanism for short term. Industries have to face the six main challenges for this:

1. There is need to create transparency on the multi-tier supply chain with the critical list of components. There is need to determine the origin and alternative sources of supply chain to tackle the current situation.

2. There is need for the estimation of current inventory which includes the spare parts and after sale stock which can be used as the bridge to keep the production processes running until the situation comes under control.

3. The demands of some products may increase or decrease in such type of situations. There should be proper demand planning according to industry experience. There is need to develop demand forecast strategies which defines the time horizon for the demand forecast which will help in the risk informed decision for the industries.
4. There is need to optimize the production and distribution capacity in the organization. Optimization process begins by ensuring employee safety which includes the engaging and sourcing with the teams working on the crisis situation to communicate with the employees of the industries regarding infection risk concerns. There should be options for the home or remote location working.
5. There is need to identify and secure the logistic capacity. It helps to estimate the capacity and accelerate whenever possible also results in flexible transportation whenever required.
6. There is need to manage the cash and net work capital by running the stress tests which helps to understand when the supply chain of industry will start to cause the financial impact.

Barriers in Supply chain during COVID-19 in India:

Supply chains are always influenced by some barriers [20]. India is the developing country and Covid-19 has disrupted the supply chain of India. Global supply chains are also disrupted by the Covid-19. Many countries has banned on the import and export of many goods which affected the manufacturing firms across the globe. The barriers for the Indian supply chain caused by the Covid-19 are found out with the academia discussion and supply chain experts.

There are total of 18 critical barriers were found out in the study which is discussed below:

S.No	Barrier	Barrier Name
1	B1	Lack of Labour
2	B2	Lack of raw materials for production
3	B3	Unavailability of Imported goods
4	B4	Shortage of livestock feed and their availability
5	B5	Bottleneck in last mile delivery
6	B6	Lack of transportation
7	B7	Slow movement of goods
8	B8	Lack of availability in local transport
9	B9	Ban on overseas transportation
10	B10	Decline in consumption of High value food commodities
11	B11	Lack of awareness in People regarding Covid 19 (affect the chicken and egg demands)
12	B12	Lack of buyers
13	B13	Perception of scarcity among masses
14	B14	Increased shortage for perishables
15	B15	Slow credit flow from banks and non banking financial companies
16	B16	Lack of cash flow
17	B17	Pressure from local laws enforcement
18	B18	E-Pass issues

These barriers have the great influence on the Indian supply chain. Although these issues in the supply chain are very generalized which needs further study and prioritization of these barriers will help the industries to overcome from the supply chain issues due to the Covid-19. These barriers can be studied with the MCDMs techniques such as AHP, ANP, TOPSIS, DEMATEL, MAVT, MAUT, VIKOR, Fuzzy set theory based MCDMs and other model validation can be done by data analytics techniques such as: SEM, ANOVA, and ISM [21-25].

Conclusion:

In the present study the effect of Covid-19 on Indian economy and supply chain is studied. This study also reported about the Covid-19 effect on global manufacturing and supply chain. n-CoV has affected the manufacturing firms and their supply chain over the world. COVID-19 is affecting our supply chains and manufacturing operations daily. The peak of COVID-19 virus have already affected the supply chain and forced thousands of industries to throttle down or shut down their assembly lines temporarily in the U.S and Europe and now in the developing nations doi:10.20944/preprints202005.0148.v1 like India In the study with consultation with experts total of 18 critical barriers were identified which affects the supply chain at local level in India. This study can be extended by assessment of barriers with the multi-criteria decision making approaches. Interrelationship between the barriers can be identified with the interpretive structural modelling.

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Indian Banking Sector : A Case Study of Covid – 19 Pandemic

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Abstract:

Indian Government announced complete lockdown in the country starting on March 24, 2020 and the same was extended to 3rd May, 2020 in the second phase. Though the lockdown was necessary and inevitable so as to prevent the faster spread of Novel Coronavirus (Covid-19) and to save lives of people of the country, it is going to affect the various sectors of our economy severely. The Banking and Non-banking finance companies (NBFCs) which are backbone of India's economy are not exception to the above. This article is an attempt to assess the impact of this pandemic on Banks and NBFCs due to lockdown which has resulted into closure of all commercial organisations, educational institutions, public and private offices, suspension of means of transportation, etc. The conclusion in this regard is based on the views expressed by several groups including economists, financial institutions like IMF, World Bank and consulting firms. Secondary sources of information are used to collect the required information. The article has indicated a very severe effect of lockdown on banks and NBFCs in case it prolongs beyond July 2020.

Key words: Covid-19, India's economy, Indian Banks, NBFCs, NPAs, Lockdown

I. Problem Statement:

On 31 December, 2019, first of all the news came on Novel Coronavirus outbreak from Wuhan city of China. This coronavirus is a new virus that has not been identified in human so far. Literature indicates that Coronavirus is a large family of viruses that causes illness. This disease may cause from the common cold to more severe respiratory syndrome. To combat with COVID-19, Indian Government announced complete lockdown in the country starting on March 24, 2020 and the same was extended to 3rd May, 2020. A similar action has been taken by many governments around the world. WHO has appreciated the timely action in the form of lockdown by Indian Prime Minister- Narendra Modi and many others as it seems the best alternate to stop the spread of the virus in the absence of any cure or vaccine of this disease. However, the Transnational institutions like IMF and World Bank, central banks of various countries, economists, fund managers and consulting firms have expressed their fear regarding the devastating effect of lockdown on GDP world over in general and emerging economies like India in particular. On April 14, for instance, the IMF released its global growth projections, revealing that in 2020, the global economy is expected to plunge into the worst recession since the Great Depression in the 1930s, which might be far worse than the Global Financial Crisis. IMF made a projection of 1.9 per cent growth in GDP for India in 2020 because the global economy is affected by the COVID pandemic, the worst recession since the Great Depression in the 1930s. According to KPMG, the lockdown in India will have a huge impact on the economy chiefly on consumption which is the biggest component of GDP. It says that reduction in the

urban transaction can lead to a steep fall in the consumption of non-essential goods. Further, according to the assessment of World Bank, the growth rate in India is expected between 1.5 per cent to 2.8 per cent. Moreover, the lockdown and pandemic is hitting several other sectors including banks, NBFCs, MSME, hospitality, civil aviation, agriculture and allied sector. However, different experts and authorities have given different opinions about the impact of Pandemic, Covid-19 caused lockdown on current position and future of Indian Financial sector, primarily on Banks and NBFCs. So, the flooding of information has confused investors, depositors, borrowers and other stakeholders in this sector of high importance. It is under the above background the present article entitled, "Covid-19 Pandemic and Lockdown Impact on India's Banking Sector: A Systemic Literature Review," has been prepared.

II. Indian Banking Sector: A Backdrop

Before touching the real issue of this article, let me first give a background of the Indian Banking sector along with NBFCs. A bank is an institution which has a primary function to accept deposits and lend money to needful individuals, businesses, and governments. Banks are considered to be trustworthy around the world. When any individual deposits money in the bank, doesn't matter what is the amount, the individual knows that the money will be safe in the bank as compared to anywhere else. Besides this, banks provide numerous services such as loan facilities, fixed deposit schemes, debit & credit card facilities, etc. The Indian banking industry which is nearly 200 years old has been expanding and modernizing since the initiation of reforms in 1991. Now, this industry has evolved into the current size of INR 81 trillion. A study by KPMG (2017) made a prediction that the Indian Banking sector is heading towards becoming the fifth-largest banking industry in the world in year 2020 and third-largest by 2025. There are three types of banks in India, according to ownership pattern. These are: public or state-owned, private, and foreign banks. In India, currently there are a total of 34 banks, of which 12 are public sector banks and rest 22 are private sector banks. State Bank of India (SBI), along with six associates, which was constituted under separates (SBI Act, 1955 and SBI Subsidiary Banks Act, 1959) is acknowledged as a separate group of Scheduled Banks. Ten nationalized banks, and seven SBI and associates form the Public Sector Banks (PSBs), with over 50% government ownership. PSB's control around 2/3rd of total business. The banks have dominant position in India's economy and it is major contributor towards employment in India. Unfortunately, many of the performance indicators of India's banks have been signalling downtrend or negative situation since last five years. This situation holds more true in case of PSBs as they seems more inefficient compared to their peer groups. PSBs account for 80 per cent of non-performing assets, carrying a bad debt book of Rs 7.4 trillion, and PSBs also reported huge losses, when private sector peers reported profits in 2019. Over 90 per cent of bank fraud cases happened with PSBs. Piyush Khaitan (Dec. 19, 2019) expressed that over the last two decades, India's non-banking financial companies (NBFCs) have assumed critical importance in the financial system. NBFCs in India can boast of having total asset size of more than \$370 billion. They provided nearly 20 per cent of total credit in India till March 2018 as compared to 15 per cent in 2015. The lending book of NBFCs has grown at around 18 per cent annually over the last five years. The NBFCs are serving the underserved and often ignored retail and MSME segments which are the backbone of India's growth story. For instance, credit to MSMEs grew at a rate of 12 per cent year-on-year in June 2019, at a time when credit to larger firms was slowing down massively.

However, over the last year, the sector has seen some difficulties in the form of a liquidity crunch when the failure of IL&FS unravelled. IL&FS failed to service its liabilities which has caused suspicion about the strength of the financial sector in India. Moreover, mutual funds reduced NBFC exposure by 30 per cent in the last year and various leading entities in the sector moved over this challenge by increasing bank funding and managing external and internal borrowings through a tightrope. The Reserve Bank of India announced in August 2019 that banks can have an exposure of up to 20 per cent of their Tier 1 capital to a single NBFC. This limit was 15 per cent earlier. This helped boost credit flow as bank funding to NBFCs grew by 30 per cent year on year. The Government has taken a series of measures to generate demand and ease the liquidity by ensuring public sector banks lend further to NBFCs, introducing partial credit guarantee scheme, organizing loan mela etc.

III. Research Methodology

As stated previously the present paper is aimed to assess the impact of Covid-19 and Lockdown on India's Banking sector. To achieve this objective some extracts have been drawn from the existing literature available on various sites of internet in the form of highlights of interviews of renowned economists, fund managers, economic and financial advisors, senior officials of economic bodies, Chambers of commerce and industry, authorities of international institutions like world Bank and IMF and so on. Further, research articles and reports of diversified groups like consulting firms, transnational institutions, central banks, regarding the impact of corona on financial sector of India were referred. The relevant information available in various forms and at various sources was scanned and understood carefully while drawing a right conclusion for this article. It needs mention that this paper is an exploratory type of study. Presently, there is no factual data regarding impact of COVID-19 on various sectors of economy including banks and only the intuitive estimates are available. The quantified data is available only about the number of positive cases, no. of deaths, cases recovered and so on. On account of non-availability of quantitative data, the use of statistical tool was not possible, hence a descriptive article has been prepared with the help of online views of experts regarding the impact of ongoing pandemic.

IV. Major Findings of the study

Based on a systematic review of online literature regarding the impact of COVID-19 pandemic on India's banking sector, the following findings have emerged:

The rating agency *Fitch* said Coronavirus impact to bring more worries for Indian banks and therefore revised downside the operating environment score for the critical sector by a notch (ET Market New: March 26, 2020). The agency said Indian banking system is under-capitalised and continues to saddled with bad loans, despite some successes. From a banking perspective, travel, which forms 2.2 per cent of all loans and small business lending that accounts for 5.4 per cent will be the hardest hit, along with sectors such as auto that depend on inputs from China.

Rakesh Kumar, MD and CEO, TransUnion Cibil says, the ongoing COVID-19 pandemic poses new threat to businesses, especially for small and medium enterprises. Out of the loans worth Rs 2.32 lakh crore of MSME are at a risk, Rs 13,500 crore of micro enterprises may become NPA, in the coming 12 months, as they fall in the risk category of 7 to 10, which is the highest risk category according to TransUnion Cibil, a credit Information firm (quoted in Financial Express

Online, April 27, 2020). Thus, banks and NBFCs are going to be ultimately affected if the huge part of loans of micro enterprises turns bad.

India's banking sector was facing a big crisis of mounting bad debts due to which RBI had to come forward with a bailout package for a private sector bank, named- Yes Bank. Banking sector in India was just on the verge of seeing signs of stability, when COVID-19 forced the Reserve Bank of India to further loosen liquidity and bad loan rules. Saswata Guha, the head of financial institutions at Fitch Ratings in India stated that there is an expectation of a sharp slowdown in credit growth and deterioration of asset quality across all private banks in India because of shut down of economic activities due to Pandemic of Corona virus. The individual impact will depend upon the relative exposure to vulnerable small businesses and the risky unsecured retail segment.

Amita Bodla, Assistant Professor of Finance at GMN College, Ambala Cantt., expressed a concern for Private sector banks in an interview conducted by the author on April 22, 2020 telephonically. She said that the private banks namely HDFC Bank Ltd., Kotak Mahindra Bank Ltd. and ICICI Bank Ltd. have performed in the past as best banks of the nation. They have successfully kept the NPAs significantly lower as compared to their counterparts state-owned banks for many years. However, these private banks have been unable to escape the effects of India's lockdown of its economy, which is expected to devastate many of their retail and corporate customers. If they now work on strategy of curtailing new loans even to healthy borrowers, that may lead to serious consequences for the Indian economy.

India's banking stocks have encountered a sizeable value erosion since the beginning of pandemic of Novel Corona. For instance, Nifty Bank- the benchmark index of India's banks has fallen alarmingly since the beginning of March. Kotak Mahindra Bank's loan growth dropped to 6.7% in the first quarter of the current year (i.e. 2020), the slowest in at least three years and down from 10.3% in the previous three months. HDFC Bank, has the lowest bad-debt ratio among its peers. But, *Aditya Puri*, managing director of HDFC Bank stated that they also become more stringent about taking on new lending,

According to a recent study by McKinsey & Co., mentions that India's lockdown extended until May 3 has left businesses struggling. Total non-performing loans in the financial system may rise by 7 percentage points if India ends its lockdown by mid-May, At 9.3%, India already has the worst soured asset ratio of any major nation.

In the beginning of March, the impact of Coronavirus on Non-Banking Financial Companies (NBFC) was termed as 'fairly insignificant' as the sluggish economy remained one of the biggest worries. But, two-weeks later the financial sector looked to be in the crosshairs, hit by a lockdown across the nation and subsequent shut down of businesses. The research report of *Emkay Global* titled "For Asia-Pacific Banks, COVID-19 Crisis Could Add USD 300 Billion To Credit Costs" mentions that the impact of the pandemic would be partial during Q4FY20 earnings. However, the full impact of Covid-19 on growth would be visible from Q1FY21 (quoted in Financial Express- online, March 25, 2020)

A report of S&P Global Ratings said, banks in India are likely to witness a spike in their non-performing assets ratio by 1.9 per cent and credit cost ratios by 130 basis point in 2020, following the economic slowdown on account of COVID-19 crisis.

Christopher Wood, Global Head of Equity Strategy at Jefferies (ET- April 24, 2020) said, "Lockdown in countries like India is more disastrous both for human welfare and

economies. It is because in India neither there is any help for small enterprises nor unemployment benefits for the people. He further added, countries such as India, with young demographics, such a lockdown causes more human suffering than Covid-19 itself. Due to ongoing lockdown India is likely to see a change in consumer lending cycle. On his portfolio strategy, Wood said it does not make sense to own Indian banks in such a macro environment. Wood never saw a negative consumer credit cycle since the inception of his portfolio in 2002, in India, however, probably it is going to happen very soon now.

Sony Mathews, a *Senior Market Strategist at Geojit Financial Services* expresses that *lockdown* will have a cascading effect on personal incomes and the individual's ability on repaying personal loans. Personal loans accounted for 28 per cent of total credit. RBI's moratorium on loans has given temporary relief but it needs to be seen how fast the recovery happens and the repayment capacity. Micro and Small Enterprises loans accounted for 12 per cent of the total non-food credit, and this sector is listed as one of the most vulnerable in this lockdown period. The slowdown in economic activity will no doubt impact the debt servicing ability of many borrowers. The moratorium on loans, announced by the RBI, will enable banks to postpone NPA recognition. But eventually, NPAs are expected to spike in the next couple of quarters.

Although the pace of credit growth to NBFCs has slowed down, as a percentage of total credit, NBFC exposure of bank loans have increased to 7.9 per cent, from 6.9 per cent, a year ago. Some of the NBFCs were already struggling with liquidity issues and this lockdown will only make it worse for them. After large corporate lending and housing loans, NBFC sector accounts for the largest percentage of bank borrowings.

V. Conclusion and Suggestions

The review of expert opinions presented in the above section reveals the following crux about the impact of lockdown on Banks and NBFCs in India:

- The coronavirus crisis has left some banks struggling to hang on to deposits, as funds migrate to the perceived safety of state-owned lenders. Besides other smaller private lenders, more prominent name among such banks are IndusInd, RBL Bank Ltd, and Yes Bank.
- According to a report (March, 30, 2020) by Credit Suisse Group AG analysts led by Ashish Gupta, more than 25%, 35% and 45% of loan book is of most vulnerable sectors to the lockdown, such as small businesses and automobile finance in case of ICICI Bank, Axis Bank, and IndusInd Bank Ltd respectively. Ability to withstand deposit shocks will be key for Private banks for their survival in coming several months.
- Liquidity conditions of smaller private banks could force them to reduce lending on account of which companies relying on banks for lending might face weak financials and poor liquidity. And in this situation the companies may default on loans.
- RBI has given all banks a three-month grace period during which they have some relief from rules governing bad loan recognition. But from September onward, non-performing assets are likely to surge if the crisis is still acute. If asset quality starts to deteriorate, the bad-loan ratios of private banks could rise from the 3.9% recorded in September-2019.

- It is well known by the bankers that since the imposition of lockdown by the Government of India on March 25, 2020, the RBI has taken numerous requisite steps to ensure normal business functioning by the entire banking sector.
- Further, as fresh measures, the RBI infused \$6.5 billion of additional cash for banks to lend to shadow lenders and small borrowers. Moreover, RBI has relaxed the timelines for bad loan rules, and barred lenders from paying dividends for the year ended March 31, 2019.
- Even after withdrawing lockdown, the banking sector will take a long time to revert to any normalcy.

Based on the above findings and assessment of the financial sector situation, the following measures are recommended:

- (i) RBI must take all possible initiatives to maintain sufficient liquidity in the financial system and its constituents in the face of COVID-19;
- (ii) Adequate bank credit flows is must for putting the small and medium enterprises on the track afresh after lockdown is over;
- (iii) Government is required to take decisions and actions to lessen uncertainty and financial stress in the economy;
- (iv) Continuous measures should be taken to enable the smooth functioning of both money and capital markets;
- (v) All enterprises must put in place business continuity plans to operate for disaster recovery so that there is no disruption in customer services; and
- (vi) Government must take timely initiatives to open the economy to avoid the worse to come.

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Role of Librarian in the Electronic Teaching & Electronic Learning

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Abstract:

Library and librarian will become redundant in the tech-based education system. Some may think that library without wall and library without librarian are the same. Practically these two are quite different from each other. In the virtual library era it is somehow possible to have a library without wall. The role of the librarian and library professional just changes their identity, e.g. Cybrarian, Information Processor, Information Consultant, etc. To cope with the rapid changes of the technology and to control the ephemeral rate of information generation, librarians along with his professional colleagues should have to equip themselves as per the requirement of the electronic information society. In the light of the above, the present paper would like to highlight the reasons why library and librarian is essential in the modern technology based library service era. The paper also tries to point out the role of the librarian in the changing society, services offered by the e-library, e-learning and issues faced by the librarian.

Keywords: Traditional Library, Virtual Library, Digital Library, Technology and Education, Internet, Digitization, Librarian, Cybrarian.

Introduction:

The nature of the academic library and the role they play in campus is changing. Libraries are moving towards an information commons model of service, and becoming campus community centers. They invite student and faculty socialization, learning, research, scholarship and instruction. They are most effective when programming, services, and spaces are developed in partnership with others seeking similar educational outcomes. Academic libraries will increasingly provide information and services to their users at right time as per their requirement. Whatever the changes, the traditional roles of a library in an academic community, especially those communities that aren't changing substantially themselves, will remain valid and important to a successful college or university.

Virtual library Environment:

The concept of the virtual library is one that has developed with the growth in telecommunication networks, especially the Internet. The 'virtual library' emulates a 'real' library, but is understood to be a product of the virtual world of the Internet. A digital library possesses the same functions and goals of the traditional print-based library and that the difference lies in 'the digital part of the term which indicates merely that the material is stored and accessed digitally'. Comprehensive definition of the digital library is provided by the Digital Library Federation (1999) in the United States: Organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital

works so that they are readily and economically available for use by a defined community or set of communities.

E-teaching and E-learning:

Electronic learning is a term for all types of technology-enhanced learning (TEL), where technology is used to support the learning process. Often the medium of instruction is through computer technology, particularly involving digital technologies. E-learning has been defined as "pedagogy empowered by digital technology". In some instances, no face-to-face interaction takes place. E-learning is used interchangeably in a wide variety of contexts.

Goals and Benefits of e-learning

- i. **Access to quality education:*** The fact that instructors of the highest calibre can share their knowledge across borders allows students to attend courses across physical, political, and social boundaries. Recognized experts have the opportunity of distributing information internationally at minimum costs.
- ii. **Affordable education:*** E-learning can drastically reduce the costs of higher education, making it much more affordable and accessible to the masses. An Internet connection, a computer, and a projector would allow an entire classroom in a Third World university to benefit from the knowledge of a distant instructor.
- iii. **Convenience and flexibility to learners:*** in many contexts, e-learning is self-paced and the learning sessions are available 24x7. Learners are not bound to a specific day/time to physically attend classes. They can also pause learning sessions at their convenience.
- iv. **Reducing environmental impact:*** e-learning allows people to avoid travel, thus reducing the overall carbon output. The fact that it takes place in a virtual environment also allows some reduction of paper usage. With virtual notes instead of paper notes and online assessments instead of paper assessments, eLearning is a more environmentally friendly solution

The Roles of the Librarian

Librarian is a professionally trained person responsible for the care of a library and its contents, including the selection, processing and organization of resources and the delivery of information, instruction and loan service to meet the needs of its users. In an online environment, the role of the librarian is to manage and mediate access to information that may exist only in electronic form. Crawford and Gorman (1995) have defined the role of the librarian today: To acquire, give access to, and safeguard carriers of knowledge and information in all forms and to provide instruction and assistance in the use of the collections to which their users have access. Libraries are about the preservation, dissemination, and use of recorded knowledge in whatever form it may come. The enhanced role of librarians is pivotal to the success of the academic enterprise of the knowledge society and could contribute to academic acceleration in the following ways:

1. **The collection development role** – that provides the materials for research and scholarship and involves selection, acquisition, processing for access, and control.
2. **The information consultation role** – that guides the student or faculty member toward the best materials to meet their information needs.
3. **The instruction role** – that helps develop students (and faculty) into information fluent citizens capable of long-term continued self-education and effective and ethical use of

information.

4. **The archival role** – of collecting, preserving and carefully sharing the historical records of an institution and the people who have worked there.
5. **The incredibly important and under-appreciated role** – of Special Collections in creating a unique intellectual focus and identity for an institution.
6. **The role of the library in providing** – not only spaces for group study or digital media creation and viewing, but for individual reflective work

Some other roles are as;

1. To provide intellectual access to information in any format
2. To evaluate available sources of information
3. To organize and structure information
4. To ensure the preservation of information
5. To provide specialized staff to offer instruction and assistance in interpreting resources and access to resources

Services offered by the E-library

1. Online/offline access to digital information resources;
2. Database searching;
3. Public access services;
4. Electronic reference;
5. Public relations services;
6. Library promotion and marketing;
7. E-publishing;
8. Information literacy programmes;
9. Online circulation activities, such as electronic reserves;
10. User Services and queries; and
11. Online access to library catalogues, databases and the Internet.

The top issues facing by the academic libraries

1. Online/offline access to digital information resources;
2. Database searching;
3. Public access services;
4. Electronic reference;
5. Public relations services;
6. Library promotion and marketing;
7. E-publishing;
8. Information literacy programmes;
9. Online circulation activities, such as electronic reserves;
10. User Services, and queries;
11. Online access to library catalogues, databases and the Internet

Conclusion:

Society is not ready to abandon the library, and it probably won't ever be. Libraries can adapt to social and technological changes, but they can't be replaced. While libraries are distinct from the Internet, librarians are the most suited professionals to guide scholars and citizens toward a better understanding of how to find valuable information online. Indeed, a lot of

information is online. But a lot is still on paper. Instead of regarding libraries as obsolete, state and federal governments should increase funding for improved staffing and technology. The virtual library environment provides both an opportunity and a requirement for librarians to develop greater familiarity with IT-type skills. Today, more than ever, libraries and librarians are extremely important for the preservation and improvement of our culture. Para-professional staff required practical 'hands on' experience and training. Librarians are moving into database development, courseware, open learning and academic staff development and need a combination of knowledge, skills, aptitudes, and personal qualities in order to fill their multi-faceted roles. Finally, it may be state that human component is basically an indispensable part of the Library as 'Librarian' and Cybrary (in the electronic environment) as 'Cybrarian'.

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The Role of Kalvi Kendra on Social Transformation Through Vision and Mission in Villupuram District

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Abstract:

This study has mainly focused on Villupuram district, and the effect made by the Kalvi Kendra and its innovative schemes and skill based programme on social transformation. Being an overpopulated country, both Indian government and State Government of Tamil Nadu have forcefully worked to enhance each and every citizen's life and livelihood. On the futuristic approach, more money has spend for uplift the people's social, economic level by implementing innovative schemes and programmes. However, the effort of the programmes has very less. Because, lack of awareness, corruption, illiteracy, poor economical background, lack of transport, may be main constrains for getting the beneficiations. But the Voluntary organization (VOs) and Non-Governmental Organizations (NGOs) acted as ambassador to bring the programmes and schemes and wellness the needy to door step. They make awareness, given literacy and trained for skill based works for uplift their life ever. This transformation has not happened in one day, but the continuous work of this organizations with utilizing their own money or supported from other voluntary organization form abroad may changed the society over the years. So the all nations have worked together government and non government organization for enhance their social status, especially poor, and marginalized community. On the path Kalvi Kendra gave more effort on Villupuram district ever.

Keywords: social Tranformation, Kalvi Kendra, women empowerment, innovative schemes, marginalized community

Introduction:

India has second most population in the world after China, estimated around 1,391,864,443 on May 18 2021,¹ as per the UN data. Moreover, Indian population is equivalent to the world population to 17.7%. Indian poverty line has kavalai around 21.92% in 2011, according to the Tendulkar Committee (only official record available). From Independence to today, the India has fighting to eradicated poverty.² Although India ranked at 76th place³ out of 82 economics ,(Global Social mobility Index) as per the parameters of health , education, technology, work, and protection. Apart from poverty, castes, women exploitation, rural unemployment, lack of education is the major issue in India and the state of Tamil Nadu. The Effect of Social welfare schemes has implemented by the Himachal Pradesh, Kerala and Tamil Nadu better reducing poverty line in India. ⁴Indeed Tamil Nadu is the only state better performance and reducing poverty at a higher ratio to compare all India average.⁵ Hence, social welfare schemes did tremendous changes in social change and social transformation in India, especially State of Tamil Nadu.

Every human being is a part of society, for this nature they are bound to understand not only ones requirements. Every individual has to developed in this society for own or by the

government initiatives. By the futuristic approach of enhancing the social development in the form of aid or schemes, and programmes, not only planned and executed by the Government also the Non Governmental organization done some tremendous effort. So every village, town, district have been needed for the voluntary organization for uplift the needy, poor, and marginalized. Moreover, there is need for an agency as a voluntary organization to collaborate with the government for the effective implementations of the policy and programmes that would create desire social change. On the great path, Kalvi Kendra working smart way to implementing more programmes and planning wise schemes to enhance the social status of people in and around Villupuram District, over the years.

Fortunately, Indian states having so many non –Governmental organizations the state-wise list of VOs/NGOs signed in the NGO-DARPAN clearly show wise. The NGOs listed in the DARPAN viz., Uttar Pradesh (15812), Maharashtra (15187), West Bengal (8553), Delhi (8549), and Tamil Nadu (7960)⁶

Housing projects of Kalvi Kendra:

Apart from education, kalvi Kendra ultimately worked for housing projects in Villupuram districts. In this process, kalvi Kendra constructed numerous houses for needs and poor, and marginalized, also those who lost their home in natural and man-made disasters like, flood, Tsunami and violation respectively.

Villupuram Housing projects (Rehabilitation and Reconstruction):

The cruel incident made several victims in the Villupuram town, lead their life into hell; they lost their shelter, education, lives and livelihood. So kalvi Kendra done its first project, perhaps, this incident might be the reason to start the organization. Hence, this organization built around 250 houses to the Dalits and victims who lost homes in communal clash in 1979-84.

Marketing for marginalized:

Empowerment of 2000 rural women through provided opportunities of access to market by organized entrepreneur development, exposure visit to successful enterprise business management training require technical training relevant to their economic activities, marketing managements enterprise management and capital mobilization during 1988-2004 Rehabilitation and Reconstruction programme to the affected people of Tsunami in coastal villages of Tamil Nadu. Imported disaster risk reeducation education to the school going children affected by Tsuanmi, counseling given ot the persons who were in Tsuanami affected villages with the help of councilors and medical doctors. During 2004-2007

There is lot of activities done on the following:

1. Constructed 82 houses to the Tsunami affected Chinnakottakuppam, a dalit village in coastal area
2. Constructed 101 houses in Tsunami in Tsunami affected fishing community of Chettynagar
3. Constructed 2 disaster rescue centers in the coastal villages of Neduckkupram and Sodhanaikuppam village⁷
4. Supported alternative income generation activities and cash for work to the fishing communities

5. Supported the fishermen to get livelihood means of boats and fishing nets which they lost in the Tsunami

This scheme had been supported by CORDAID, from Netherlands, OXFAM from India, NOVIB from Netherland, RED CROSS from Coimbatore.

Housing programme (2005-2011)

- Constructed 75 disaster safe concrete houses for the flood affected dalit families of Kongampattu villae in Kadamangalam block
- Constructed 82 houses to those who lost their vulnerable houses in the flood in CHinnakottakuppam slum
- 50 concrete houses were constructed for the flood affected people in Chinna kallipattu village for which Rs.25000 each given an interest free long term loan and the volunteers of HFH rendered manual labour support, which supported by CORDAID, from Netherlands.

IFAD assisted (PTSLP) Post Tsunami Sustainable Livelihood programme in Marakkanam and Vanur Block:

Under this programme Kalvi Kendra has been running two cluster resource centers in the coastal area. Disaster preparedness among the community and school safety programme to the school going children were organized. Livelihood infrastructure created to the fishing communities to carry out their fishing activities and access to sustainable income. Livelihood of the community is insured 140 SHGs are formed and trained in carrying out economic activities for which credit linkages are being created with the financial institutions for access to continuous financial support 19 coastal villages has been covered in this programme supported by TN Government.⁸

Swarna Pragathi Housing Programme

Financial assistant supported to 200 families to construct houses in collaboration with Swarna pragathi Housing project⁹

Conclusion:

Being an overpopulated country, both Indian government and State Government of Tamil Nadu have forcefully worked to enhance each and every citizen's life and livelihood. On the futuristic approach, more money has spend for uplift the people's social, economic level by implementing innovative schemes and programmes. However, the effort of the programmes has very less. Because, lack of awareness, corruption, illiteracy, poor economical background, lack of transport, may be main constrains for getting the beneficitions. But the Voluntary organization (VOs) and Non-Governmental Organizations (NGOs) acted as ambassador to bring the programmes and schemes and wellness the needy to door step. They make awareness, given literacy and trained for skill based works for uplift their life ever. This transformation has not happened in one day, but the continuous work of this organizations with utilizing their own money or supported from other voluntary organization form abroad may changed the society over the years. Sometimes, they are undertaken the Government projects completely for some regions and given full effort for enhancing the society high esteem. On the great consequences, from 1978 onwards, Kalvi Kendra has working for the people of Villupuram district without any break. Moreover, this organization has concentrated on the educational services for school

children to all. further, Kalvi Kendra took over lot of housing projects for surviving man made calamities , and natural disasters like flood and Tsunamai. Apart from this, the efforts of Kalvi Kendra aimed to develop the women from the region and given skill based training to develop their economical position ever.

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Introduction to Augmented Reality and Virtual Reality

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Abstract:

The purpose of this paper is to describe the background for libraries to consider the benefit of implementing the virtual reality (VR) or Augmented Reality (AR) usage.

Keywords:- Augmented Reality, Virtual Reality, Library ,Graphical User Interface.

Information :

Technology is combination of two words Information and Technology. Information Technology is application of computers to store, retrieve, transmits and manipulate data of business and research. Technology involved is with transmission and storage of information, the development, installation, implementation and management of computer system within the organisation.

First Generation:

First Generation of Computer was vacuum tubes circuits which were used. A vacuum tube was a fragile glass device using filaments as source of electronic and could control and amplify electronic signals. It was the only highspeed electronic switching device available in those days. Interface between man and computer was through machine language consisting of 1s and 0s. the first generation of computer was giant, having special purpose. They were slow in operations and possessed limited computing capacity. Large amount of heat generated during operations; air conditions required for maintenance. Memory of these computer depends on electronic relays. punched cards and paper tapes are used for input data to operation.

Second Generation :

Transistors were used, Transistors are semiconductor device that are functionally equivalent to vacuum tubes but smaller in size. Transistors have low power consumption, low cost and more reliable replacement for vacuum tubes. They consumed less power and less heat than first generation of computer. computers built using transistors were compact in size, and occupied less space. Use of transistors fastened the processing speed and reduced the computational time from milliseconds to microseconds. The second-generation computers has less hardware failures and better portability. Magnetic disk and magnetic tape were the main secondary storage devices used in second generations computers. High level language, for example FORTRAN was used.

Third Generation :

In this generation Integrated Circuit used, size was reduced. Power consumptions of computers was reduced and their reliability was improved. Time sharing operations system allowed interactive usage and simultaneous use of these system by multiple users, requiring lower maintenance cost and Standardization of high-level programming language allowed programs written for one computer to be easily ported to and executed on another computer.



Fourth Generation :

Very Large-Scale Integration circuits used. Personal Computers were smaller and cheaper than mainframes or minicomputers of third generations. They consumed less power than third generations computers. It is general purpose machine, and maintenance cost is negligible. Commercial production of these systems became simpler and cheaper.

Fifth Generation :

In fifth generation Ultra Large-Scale Integration technology used. This result in production of Microprocessor chips having ten million electronic components. Microprocessor chips having ten million electronic components, portable PCs are much smaller and handy than fourth generations due to this user could use computing facility even travelling. They consume less power and general-purpose machines. Use of standard high-level programming language allows programs written for one computer to be ported to an executed on another computer. Input devices for the Fifth Generation Computers could also include speech and visual recognition. Fifth generation computing devices, based on artificial intelligence, are still in development, through there are some applications, such as voice recognition, that is being used today. The use of parallel processing and superconductors is helping to make artificial intelligence reality

Evolution of user Interface: -

Laptop or smartphone, every piece of hardware has a user interface design that tries a great user experience. A good user interface is smooth completion of any task and making the experience enjoyable.

Batch Processing and Command Line Interface: -

It all started with Batch computing when computing power didn't exceed that of modern microwaves. The user interface of Batch computers consisted of the input of a punched card or equivalent media and apart from this operating console, humans had no interaction with these early batch computers in real time.

The next user interface was the introduction of video display terminals. Having your command inputs appear on a screen and be able to reversely modify them was much faster than having them printed

Graphical User Interface: -

Digital user interface and pointing systems equivalent to a mouse could allow for a compelling user experience. The first GUI was developed by researchers at Xerox Palo Research centre in the 1970 and was the start of a succession of computer graphic innovations to GUI's which has led us.

The Mac OS system 1 operating system has a windows-based system with icons that had many features that are still used on today's system. Windows could be moved around the screen with the cursor, and files could be moved to different folders by dragging and dropping on the target window or icon.

The next 10 years of GUI releases started to incorporate features such as colour, higher resolution displays and better processing power but the GUI design remained relatively consistent.

Smart Phone: - Towards the end of the 2000's Computer UI design started to change significantly due to the rise in popularity of the smartphone. There were portable devices before the Apple iPhone, including laptops and handhelds such as Amstad's Pen Pad, US Robotics PalmPilot and arguably the first smartphone the IBM Simon in 1993.

Today's handheld UI's are designed around app functionality, but this trend can be seen to influence desktop and laptop UI's as well.

Computer UI's have come a long way since textual command inputs, and from the traditional computer desktop operating systems. Along with keyboards and mouse cursors, touch and voice inputs are common in both desktop and mobile devices now. Such functionality is likely to become more prevalent in the future along with other UI advancements such as gesture functionality, brain computer interfaces and augmented reality.

Augmented and Virtual Reality are often part of the same conversation, through there are significant differences between the two technologies. one provides textual, symbolic, or graphical information that hold a real time relationship with situations or surroundings, and other provides a complete replacement to our visual world.

Augmented Reality: -

The phrase augmented reality is general term applied to variety of display technologies capable of overlaying or combining alphanumeric, symbolic or graphical information with users view of the real world. Augmented reality (AR) is an interactive experience of a real-world environment where the objects that reside in the real world are enhanced by computer-generated perceptual information.

Virtual Reality: -

Virtual reality is a simulated experience that can be similar to or completely different from the real world. This application has been developed in a variety of domains, such as education, architectural and urban design, digital marketing and activism, engineering and robotics, entertainment, fine arts, healthcare and clinical therapies, heritage and archaeology, occupational safety, social sciences and psychology. Virtual Reality in general, VR is computer-generated simulation of a 3D environment, which seems real to the person experiencing it, using special electronic equipment. The objective is to achieve a strong sense of being present in the virtual environment.

Types of Head Mounted Displays:-

There are two types of Head Mounted Displays for Virtual Reality. Desktop VR and Mobile VR

Desktop VR:-

Desktop VR headset is more peripheral to a more powerful computer that process the heavy graphics. The computer may be windows PC, Mac, Linux. Headset is connected to computer with wires. The games run on the remote machine and the HMD is peripheral display device with motion sensing input. Desktop VR devices rely on desktop computer for CPU and Graphical User Interface power.

Mobile VR:-

Mobile VR is created Google Cardboard. The phone display is used to show the twin stereoscopic views. Next generation of mobile VR device includes all in one headset with

embedded screens and processors, eliminating the need for a separate mobile phone. these devices also introduced a three degree of freedom hand controller that can be used like a laser pointer within VR experiences.

Difference between Virtual Reality and Augmented Reality: -

The virtual reality (VR), the user's perception of reality is completely based on virtual information. In augmented reality (AR) the user provided with additional computer-generated information that enhances their perception of reality. E.g. In architecture, VR can be used to create a walk-through simulation of the inside of a new building, and AR can be used to show a building's structure and systems super-imposed on a real-life view

Applications of VR

1. Travel and Tourism:- Visit far away places without leaving home. Visit art Museums in other country like Paris, New York, Tokyo in one hour. We can visit National Library in different countries. Take walk on Mars. We can also visit historical places, Geographical Places without leave our home.
2. Mechanical Engineering and Industrial Design: - Computer aided design software such as AutoCAD and SOLIDWORKS pioneered three-dimensional modelling, simulation, and visualization. With VR, engineers and designers can directly experience the end product before it's actually built and play with scenarios at a very low cost. We can also arrange VR Book Exhibition,
3. Architecture and Civil Engineering: Architects and engineers have always constructed scale models of their designs, if only to pitch the ideas to clients and investors or, more importantly, to validate the many assumptions about the design. Presently, modelling and rendering software is commonly used to build virtual models from architectural plans.
4. Medicine: The potential of VR for health and medicine may literally be a matter of life and death. Every day, hospitals use MRI and other scanning devices to produce models of our bones and organs that are used form medical diagnosis and possibly pre-operative planning. Virtual reality is also being used for the simulation of surgery to train medical students.
5. Mental health: Virtual reality experiences have been shown to be effective in a therapeutic context for the treatment of post-traumatic stress disorder (PTSD) in what's exposure therapy, where the patient, guided by a trained therapist, confronts their traumatic memories through the retelling of the experience. Similarly, VR is being used to treat arachnophobia and fear of flying.
6. Training: -Toyota has demonstrated a VR simulation of driver's education teach teenagers about the risks of distracted driving, In another project, vocational students got to experience the operating of cranes and other heavy construction equipment. Training for first responders, the police, and fire and rescue worker can be enhanced with VR by presenting highly risky situations and alternative virtual scenarios. The National Football League (NFL) and college teams are looking to VR for athletic training.
7. Entertainment and Journalism: Virtually attend rock concerts and sporting events. Watch music videos Erotica. Re-experience news events as if you were personally present. Enjoy 360-degree cinematic experiences. The art of story telling will be transformed by virtual reality.

Benefits of AR and VR :-

Providing authentic learning experience.

Going beyond the walls of the classrooms. According to researchers Mehmet and Yasin, "This new approach enhances the effectiveness and attractiveness of teaching and learning. The ability overlay computers generated virtual things to on real world changes the way we interact, and training become real that can be seen in real time rather than a static experience."

Collaborations: - students can use immersive technology to access resources. Access to virtual support that can describe, share and demonstrate the knowledge that students needed

In Library It will uses

- Book shelf reading and browsing.
- Library instruction and orientation.
- Library tours
- Instructional Guides
- Awareness campaign

Potential Contributions of IT to Library

Library Process Automation: - Information technology automates most of repetitive, time consuming, error free library activities. it is very useful to library activity task.

Storage Large Amount Data: - In library generate large volume of transaction and collection on daily basis.

Conclusions: -

Facebook is the largest investor in AR and VR, and because Facebook is also extremely popular, many are opportunity to have a go at VR and AR through the use of the Facebook social media platform. VR is complete VR and AR system for the Library. It provides an engaging, immersive experience for students of all ages, and allows them to view and understand subjects and topics through personal experience. The immersion and engagement students gain from VR dramatically increase their ability to understand and retain information.

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A Study on Will Covid -19 Have A Lasting Impact on The Environment and Development of Low Carbon Economy?

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Abstract:

This informative Research paper emphasizes on impact on the environment due to COVID-19 and studies about will COVID-19 have a lasting impact on the environment and development of low carbon economy?

Introduction:

Carbon emission is a major problem in our world which leads to polluted air and other destructive happenings. Pollution and greenhouse gas emissions have fallen across continents as countries try to contain the spread of new coronavirus cases. Could it lead to long lasting falls in emissions is a big question? In a matter of months, the world has been transformed. It is all aimed at controlling the spread of COVID-19, and hopefully reducing the death toll. But all this change has also led to some unexpected consequences i.e. a sudden drop in carbon emissions.

Review of Literature:

Carbon Economy refers to a World Economy in which Carbon plays an Important role in Energy Generation and thus Functioning of the Entire world. Increase in Carbon Emission brought about higher pollution and global warming. A Low Carbon Economy, Low – Fossil fuel Economy is an economy based on Low Carbon power sources that therefore has a minimal output of greenhouse gas emissions into the atmosphere, but specifically refers to the greenhouse gas carbon dioxide.

Carbon emissions due to anthropogenic activity are the dominant course of observed global warming since the mid- 20th century. Continued emissions of greenhouse gases may cause Long – Lasting changes around the world, Increasing the irreversible impacts for people and Ecosystems.

Shifting to Low-Carbon Economy on a Global scale could bring substantial benefits both for developed and Developing countries. Many Countries around the World are Designing and Implementing Low Emissions Development Strategies. These Strategies seek to achieve Social, Economic and Environmental Development Goals while reducing Long -Term greenhouse gas emissions and increasing resilience to climate change impacts.

Nations may seek to become Low-Carbon or Decarbonised economies as a part of a National climate change mitigation strategy. A Comprehensive Strategy to mitigate Climate Change is through carbon neutrality. Products those reduces carbon emissions are to be promoted like LED Bulbs, Electric Car etc. Furthermore, it has been proposed that to make the transition to an Low Carbon Economy is Economically viable. We would have to attribute a Cost (per unit

output) to Carbon Emissions or Green house gases through means such as emissions trading and/or Carbon Tax.

Some Nations are presently Low Carbon Societies that are not heavily Industrialized or Populated. In order to avoid Climate Change on a Global Level, all Nations considered Carbon Intensive societies and Societies that are heavily populated might have to become zero- carbon Societies and Economies. Several of these Countries have pledged to cut their emissions by 100% via offsetting emissions rather than ceasing all emissions. In other words, Emitting will not cease but will continue and will be offset to a different Geographical Area. EU Emissions Trading System allows companies to buy International Carbon Credits, Thus the Companies can channel clean technologies to promote other Countries to Adopt Low-Carbon Developments. Low Carbon economies gives multiple benefits to Ecosystem Resilience, Trade, Employment, Health, Energy Security and Industrial competitiveness. To Reduce Carbon Emissions, Involves ambitious National Commitments to Emissions Targets But the Planet's Transition towards a Low Carbon Economy will also require Financial titans to mobilise.

Companies must make an Investment in those products which are resembling to Low-Carbon solutions economy and making sure that their Investment flows go where they need to and Shifting Trillions to Low-Carbon Solutions.

Childress told Al Jazeera that a key task in paying for decarbonisation is “ Engaging the Private sector and making sure Investment flows go where they need to and Shifting Trillions to Low-Carbon Solutions.” She Said there has been a major increase in Climate-Friendly Investment in the Past 15 years, from \$ 60 bn. in 2004 to \$ 354 bn. in 2018. “ The Cost of Clean Energy is Competitive, if not cheaper, in many jurisdiction,” Added Childress. “ Solar Farms and Windmills are Cheaper than a New Coal Plant.”

In 1997, Kyoto Protocol agreement signed where 160 Countries participated and committed to set a limit on emission of each countries for Carbon Emissions. With Kyoto Protocol Agreement Countries decided to reduce hazardous gases emissions like CO₂ and CH₄. Limit has been set by Multilateral agreement between the Countries to reduce Emissions. More than 184 Countries now Accepted this agreement for Green Initiative. Every Countries is allowed to Emit certain ton of emissions (CAP). Like 1000 tons emissions to India allowed and if India emits 800 tons, so difference of 200 tons less emitted by India which can be traded by sale Agreement. If any Country exceeds the limit then they have to buy Carbon Credits from the Country with less emission (Trading). By seeing big Economy and big Industries limits has been set on Carbon Emissions.

Objectives:

- To understand the impact of COVID-19 on the environment.
- To understand the Development of Low Carbon Economy due to COVID-19 as an unexpected consequences.

Hypothesis:

- Null Hypothesis H₀: There is no significant relationship between COVID-19 and environment.
- Alternate Hypothesis H₁: There is a significant relationship between COVID-19 and environment.

Research Methodology:

This paper is based on Secondary Data. Data collection is always Depend upon Experiences, observations or experiment or a set of premises. The data is collected from different articles and Websites.

Rationale:

- ⑩ In a matter of months, the world has been transformed. Thousands of people have already died and lakhs of have fallen ill from a coronavirus that was previously unknown before appearing in the city of Wuhan in December 2019. For millions of others who have not caught the disease, their entire way of life has changed by it. All countries affected and almost every countries are following lock down. Worldwide, flights are being cancelled or turning around in mid- air as the Aviation industry buckles. Those who are able to do so are holed up at home, practising social distancing and working remotely.

Data Collection, Analysis and Interpretation

- ⑩ It is all aimed at controlling the spread of COVID-19 and hopefully reducing the death toll. But all this change has also led to some unexpected consequences. As Industries, Transport networks and businesses have closed down, it has brought a sudden drop in carbon emissions. Compared with this time last year, Levels of pollution in New York have reduced by nearly 50% because of measures to contain the virus.
- ⑩ In China, Emissions fell by 25% at the start of the year as people were instructed to stay at home, Factories shuttered and coal use fell by 40% at China's six largest power plants since the last quarter of 2019. The proportion of days with " good quality air" was up by 11.4% compared with the same time last year in 337 cities across China, According to its ministry of ecology and environment.
- ⑩ In Europe, Satellite images show nitrogen dioxide (NO₂) Emissions fading away over northern Italy. A similar story is playing out in Spain and the UK. Only an immediate and existential threat like COVID-19 could have led to such a profound change so fast. Economic activity has stalled and stock markets have tumbled alongside the falling carbon emissions. It's the precisely opposite of the drive towards a decarbonised sustainable economy that many have been advocating for decades.
- ⑩ A Global pandemic that is claiming people's lives certainly shouldn't be seen as a way of bringing about environmental change either. For one thing its far from certain how lasting this dip in emissions will be. When the pandemic eventually subsides, will carbon and pollutant emissions " Bounce back" so much that it will be as if this clear-skied interlude never happened? Or could the changes we see today have a more persistent effect?
- ⑩ Transport which makes up 23% of global carbon emission have fallen in the short term in countries where public health measures such as keeping people in their homes have cut unnecessary travel which reduces the carbon emission. Driving and Aviation are key contributors to emissions from transport contributing 72% and 11% of the transport sectors greenhouse gas emissions respectively.

Limitations:

- ⑩ We know that for the duration of reduced travel during the pandemic, these emissions will stay lowered. But when measures are eventually lifted then the situation will as occur as

same earlier. That is why we the people have to take measures for Long- Lasting and Sustainable development for low carbon economy. We have to reduce unnecessary things and make or plan for alternatives options which saves environment and helps in lowering carbon emissions.

suggestions:

COVID-19 Crisis can highlight how important those priorities are and help people focus on the health and well being of family, friends and community. Therefore each country have to make a provision on some activities which help to keep emission lower.

conclusion:

This is not the first time an epidemic has left its mark on atmospheric carbon dioxide levels. throughout history, the spread of disease has been linked to lower emissions even well before the industrial age. Its environmental impacts are more akin to those of recent world events such as the financial crisis of 2008 and 2009. Then, Global emissions dropped immensely for a year. But this quickly rebounded by 2010 as the economy recovered leading to an all time high.

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- ⑩ [http://www.bbc.com/carbon emission reduction](http://www.bbc.com/carbon%20emission%20reduction)



The Development of Human Rights in Global Scenario

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Abstract:

Human beings are born equal in dignity and rights. Human rights are referred as fundamental rights. Human rights are rights inherent to all human beings, irrespective of gender, nationality, religion, race, colour and place of birth. These rights are necessary to ensure the dignity of every individual as a human being. In now a day's the debate over human rights has focused on socio-political activities of Nation-States. The significance of the declaration of UDHR in the light of changing global scenario is inevitable to understand the human rights by each individual of the society. It seems to reclaim its position interns achieving the desired goal. The denial of human rights and fundamental freedoms not only is an individual and personal tragedy but also created conditions of social and political unrest and conflicts within the nations. The human rights are moral claims which are inalienable and inherent in all human beings by virtue of humanity. But today these claims are articulated and formulated and called it as human rights.

Keywords:

Political unrest, Nation-state, Dignity, Humanity, Articulation, Rationality, Inalienable

Introduction:

The concept of human right is based on the assumption that human beings are born equal in rights. Some were made privileged and some were not. Equal dignity of all persons is the central concept of all human rights. These rights are naturally universal in application and inalienable in exercise. Hence, human rights are in naturally executed without distinction of language, religion, caste nationality, gender, social and economic conditions of the society. Even the human rights are providing an opportunity to all individual to utilize their intelligence, talents, rationality in a proper way. As rightly said by Subhash c Kashyap is 'Human rights are those fundamental rights to which every man inhabiting any part of the world should be deemed entitled by virtue of having been born a human being'.

The Constitution of India is one of the most comprehensive constitutions in the world. The many chapters of the constitution says about the constitute of the human rights framework. Such as, Preamble, Fundamental Rights, Directive Principles of State Policy and Fundamental Duties. But today the debate over globalization has focused to a considerable degree on political and economic forces, on the activities of governments and business and the dynamics of states and markets even though the civil society plays a significant role in shaping these rights. The Article 2 of UDHR stated that everyone is entitled to all the rights and freedoms set forth in this declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status. Furthermore, no distinction shall be made on the basis of the political, jurisdictional or international status of the

country or territory to which a person belongs, whether it be independent, trust, non self government or under any other limitation of sovereignty.

The UNO has worked diligently and systematically to promote and protect human rights. It has enabled the international community to organize its response to human rights violations. Hence, the United Nations adopted the Universal Declaration of Human Rights on December 1948. It says 'Human rights derived from the inherent dignity of human person'. The General Assembly of UNO in 1968 was identified the following of a few core concept of human rights playing a significant role in civil society, they are,

- The right to respect human right and dignity
- The prohibition of slavery, bonded labour and exploitation
- The protection against to the deprivation of liberty of individual
- The prohibition of discrimination on grounds of caste, race, gender, religion and language.

Objectives of The Study:

- 1) To study the evolution of human rights at the global level
- 2) To study the affiliation of agencies to the development of human rights in international level
- 3) To understand the nature and characteristics of human rights
- 4) To analyse the difficulties in the implementation of Human Rights

In the development of human rights the main concerns were survival, justice and human well being. In a sense, the development can be viewed as the process by which all human rights are to be realised and human rights as the goal of development and a set of standards to be met through development. The human rights are evolutionary in nature. It is necessary to the development of human beings. Therefore it develops from the following struggles and documents of the state. They are:

- ❖ Magna Carta of 1215
- ❖ Social Contract Theory
- ❖ Bill of Rights of 1689
- ❖ Declaration of American Independence of 1776
- ❖ French Declaration of the Rights of Man of 1789
- ❖ The Revolution of Russia of 1917
- ❖ International Labour Organisation of 1919
- ❖ Universal Declaration of Human Rights of 1948
- ❖ International Covenants on Human Rights

The above declarations and struggles have made important contributions in advancing the concept of human rights. Many of the above movements were emphasized that economic and social rights were as important as the civil and political rights. In the modern era, The United Nations effectively implemented the human rights with its specialized agencies, which were entrusted with to the formulation and observation of social, economic and cultural rights of several countries. Based on this observation UNO started to do its work from the following agencies. They are,

- a) ILO- International Labour Organisation
- b) FAO- Food and Agricultural Organisation
- c) WHO- World Health Organisation

- d) UNESCO – United Nations Educational, Scientific and Cultural Organisation
- e) UNICEF- United Nations International Children's Emergency Fund

Classification of Human rights:

The origins of the contemporary conception of human rights can be traced to the period of the renaissance and the enlightenment of humanism. It is very significant to understand about certain aspects of the evolution of the contemporary concept of human rights. The concept of Human rights evolving in terms of three generations, they are, The First generation of Rights: To the relation with state individual has got civil and political rights. Civil and Political rights demand freedom from coercive action by the state against an individual, while economic, social and cultural rights necessary to actions and provisions by the state in order to fulfill its obligations. The Article 3-21 of the UDHR stated about the first generation of human rights.

The Second generation of Rights: To the relation with developing countries some group rights were ahead instead of the individual rights. The Article 22-27 of the UDHR stated about the second generation of human rights.

The Third generation of Rights: It relatively recent origin, which include environmental, cultural and developmental rights. They are concerned with rights of groups and peoples rather than of individuals. Therefore, it has relation with self-determination, right to development, right to participation, right to healthy environment amongst many other collective rights. The characteristics of human rights are encouraged to the each citizens of state irrespective of any socio-political abuses. They are;

- 1) Universality
- 2) Inalienability
- 3) Comprehensive
- 4) Absoluteness
- 5) Uphold the human dignity
- 6) Human rights are natural rights
- 7) Human rights are evolutionary in nature



We have many laws and covenants to promote human rights, violations in various levels are still going on. Actually there is gap between the theory and its practices. Because the lack of effective implementation of the respective machinery of the state. So that various national governments taken the measures towards making available the various human rights promised by the covenants to their citizens. Similarly various instrumentalities are established to protect and promote the human rights throughout the world. But still it is facing several difficulties in its implementation. They are,

- 1) To fight against to Terrorism
- 2) To eradication of social evils
- 3) To the protection of fundamental rights of each citizens of the state
- 4) To provide basic needs to the people and living in minimum standard of life
- 5) To control communal riots
- 6) To bring harmony among the people and to uphold the unity and integrity of the nation
- 7) To implement strong policy and programmes to the protection of child, women and the Weaker sections



The above all points are serious human rights violations in the society. They can be redressed the international community be held responsible and asked to intervene in all these cases to help the victims of wars, operation and persecution to assert their human rights. Therefore, the conception of the rights which every human being is entitled to enjoy by virtue of being a member of the human species has evolved through history in the course of these struggles.

Conclusion:

The struggle for the recognition of human rights and the struggle against political, economic, social and cultural oppression, against injustice and inequalities, have been an integral part of the history of all human societies. Hence, the Human Rights are essential for all individuals to protect themselves against the state or public authority or against members of its own class. These rights are essential for one's progress and development. If people know about their rights, they can enjoy, use and protect them properly and thus they can contribute to the development of the country. The concern of the International community for the promotion and protection of human rights is clearly expressed in the charter of the United Nations.

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Hygiene and Sanitation Key for Lowers Risks of Diseases and Maintaining Health During Pandemic

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Abstract:

The hygiene and sanitation properties to conquer the wellness and proper health. Hygiene is a progression of practices performed to save wellbeing. As per the World Health Organization, "Hygiene alludes to conditions and practices that help to keep up wellbeing and forestall the spread of maladies." Personal hygiene alludes to keeping up the body's neatness. The provision of safe water, sanitation and waste management and hygienic conditions is essential for preventing and for protecting human health during all infectious disease outbreaks, including of coronavirus disease 2019 (COVID-19). Ensuring evidenced-based and consistently applied WASH and waste management practices in communities, homes, schools, marketplaces, and healthcare facilities will help prevent human-to-human transmission of pathogens including SARS-CoV-2, the virus that causes COVID-19.

Keywords: Hygiene, Sanitation, Disease and Health

Introduction:

Absence of essential sanitation puts a large number of lives in danger and is liable for a fourth of all kid passing's in creating nations each year.¹ Lack of sanitation and helpless hygiene likewise seriously limit the effect of other advancement intercessions in training, wellbeing, provincial and urban turn of events. A huge measure of assets has been used on giving sanitation offices, yet still over 2.5 billion individuals don't approach fundamental sanitation administrations (WHO/UNICEF - JMP, 2008). All through the creating scene the low sanitation inclusion figures paint a distinct picture. Besides, sanitation equipment alone isn't adequate: in numerous occurrences despite the fact that new latrines and washing offices have been assembled, and inclusion is recorded by authorities as generally high, legitimate use stays low and next to zero advantage is determined. To be sure, mindfulness is developing among general wellbeing specialists that, until hygiene is appropriately rehearsed, both at home and in the network all in all, the ideal effect of improved water and sanitation administrations as far as network medical advantages can't be figured it out. In the course of recent decades specialists have strived to discover approaches to diminish not just the colossal number who stay without access to a latrine yet additionally the gigantic number who don't utilize offices cleanly in any event, when they are accessible. The strategies used to deliver this difficult undertaking to connect with target gatherings (people, family units, networks, foundations or even associations) being developed projects that empower an adjustment in practices or make an interest for administrations. These strategies or approaches are for the most part alluded to as "programming" exercises to recognize them from the arrangement of equipment.

Hygiene and Sanitation:

According to the World Health Organization (WHO), "Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases." Personal hygiene refers to maintaining the body's cleanliness. Many people equate hygiene with 'cleanliness,' but hygiene is a broad term. The terms hygiene and sanitation can mean various things to various individuals. For the reasons for this report the term 'sanitation' is utilized to allude to the administration of human excreta. The term hygiene is utilized to allude to the practices/measures, including yet past the administration of human excrement, which are utilized to break the chain of disease transmission in the home and network. While a great many people perceive that hygiene signifies 'hand washing', there is some disarray with respect to what else is included. In actuality, the entirety of the accompanying contribute in some measure to diminishing the weight of irresistible maladies flowing in the network:

- Hand hygiene and individual hygiene;
- Food hygiene (cooking, putting away, forestalling cross pollution);
- Ensuring safe water at 'purpose of utilization';
- Respiratory hygiene;
- Safe removal of dung (both human and creature);
- General hygiene (clothing, surfaces, latrines, showers, sinks); and
- Disposal of strong waste, control of wastewater and water

Need of a decent Hygiene :

Good personal hygiene is one of the best ways to protect yourself from getting illnesses such as gastroenteritis and the common cold. Washing your hands with soap removes germs that can make you ill. Maintaining good personal hygiene will also help prevent you from spreading diseases to other people.

1. Sickness Prevention :

Great hygiene brings down your hazard for sicknesses and diseases regularly spread through infections and microscopic organisms. Your hands come into contact with microbes each time you hack, utilize the bathroom, contact your pet, or contact surfaces, for example, step railings, utilized as often as possible by others. Neglecting to wash your hands and body consistently can make this microscopic organisms duplicate, expanding the hazard for contamination and other medical issues. Washing yourself and remaining clean can murder and expel sickness causing microbes from your body, bringing down the hazard for disease.

2. Social and Professional Acceptance :

Investing energy around the individuals who neglect to show great hygiene can be horrendous because of variables, for example, awful breath and personal stench, and it expands your own hazard for sickness and contamination. Helpless hygiene can have negative results on your public activity and connections — including business connections. Numerous businesses encourage or expect representatives to rehearse great hygiene and will in general recruit individuals who look clean and like they practice solid hygiene propensities.

3. Higher Confidence and Self-Esteem :

Helpless hygiene can influence your state of mind, your collaborations with others, and the manner in which you feel about yourself. Great hygiene can help your certainty and confidence and cause you to appear to be increasingly positive and alluring to others. Good hygiene can in a roundabout way support your prosperity at work, in the rec center, and in situations that expect you to be at your absolute best.

4. Agony Prevention :

Rehearsing great hygiene can keep you from creating excruciating sicknesses and contaminations. Experiencing ceaseless torment can lessen your general personal satisfaction and even lead to comorbid messes, for example, corpulence and painkiller addiction.[6] Good hygiene can assist you with remaining in great by and large wellbeing so you can abstain from encountering torment brought about by certain ailments.

Methods to follow hygiene and stay healthy:

1. Keep up a Healthy Weight :

Holding your weight within proper limits is frequently more difficult than one might expect, yet a couple of basic hints can help. This without anyone else can improve your wellbeing. At that point, when you're prepared, attempt to remove some additional pounds for a considerably more noteworthy wellbeing help.

2. Exercise Regularly

Barely any things are as bravo as customary physical action. While it tends to be elusive the time, it's critical to fit in any event 30 minutes of movement consistently. More is stunningly better, yet any sum is superior to none.

3. Try not to Smoke

You've heard it previously: If you smoke, stopping is totally the best thing you can accomplish for your wellbeing. Truly, it's hard, but at the same time it's a long way from inconceivable. In excess of 1,000 Americans stop for good consistently.

4. Eat a Healthy Diet

In spite of confounding news reports, the nuts and bolts of good dieting are very direct. You should concentrate on natural products, vegetables and entire grains and downplay red meat. It's additionally critical to reduce terrible fats (soaked and trans fats) and pick solid fats (polyunsaturated and monounsaturated fats) all the more regularly. Taking a multivitamin with folate consistently is an incredible nourishment protection strategy.

5. Drink Alcohol Only in Moderation

Moderate drinking is useful for the heart, the same number of individuals definitely know, yet it can likewise build the danger of malignant growth. In the event that you don't drink, don't feel that you have to begin. On the off chance that you as of now drink modestly (short of what one beverage daily for ladies, under two beverages every day for men), there's presumably no motivation to stop. Individuals who drink more, however, should decrease.

6. Shield Yourself from the Sun

While the warm sun is absolutely welcoming, an excess of presentation to it can prompt skin malignancy, including genuine melanoma. Skin harm begins from the get-go in youth, so it's particularly imperative to ensure kids.



Conclusion:

Great cleanliness brings down your hazard for maladies and diseases usually spread through infections and microorganisms. Your hands come into contact with microscopic organisms each time you hack, utilize the bathroom, contact your pet, or contact surfaces, for example, step railings, utilized habitually by others.

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Indian Agriculture : Status, Issues and Challenges

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Abstract:

Agriculture has been the primary source of livelihood of rural India. Agriculture sector has been contributing significantly to Gross Domestic Product (GDP) of India. India ranks first in production of milk, pulses and spices in the world. During the crop year 20-21 agriculture sector has shown a better performance despite Covid-19 pandemic in the country and registered 3.4 per cent growth. India ranks second in horticulture production after China. Out of the 126 million operational holdings marginal farmers hold 68.5 per cent of land. Increasing fragmentation of operational holdings has become a major concern for India's agriculture sector. There has been overuse of ground water for intensive cropping in India. Though the credit flow to agriculture has increased over the years, still it is not adequate to cater the need of rural farmers. Marketing of agricultural products is another problem confronted by Indian agriculture. The share of money lender to agriculture finance is estimated at 21.6 per cent in 2010-11. Declining share of public sector investment in agriculture sector is a serious issue. In addition to that cost reduction in agriculture sector is a big challenge. Doubling of farmers' income by 2022 is a gigantic task to be realised. Efficiency in production or cost reduction has to be maintained for productivity enhancement and poverty reduction. A second Green Revolution is needed for making agriculture a profitable profession.

Keywords: Agriculture, Productivity, Efficiency, Crop, Performance

I.Introduction:

Agriculture has been the primary source of livelihood of rural India. About 60 per cent of India's population directly or indirectly depends on agriculture sector. About 53 per cent India's land area is arable making it second largest in the world. Agriculture sector has been contributing significantly to Gross Domestic Product (GDP) of India since independence. Share of agriculture in GDP is estimated at 19.9 per cent in 2020-21 against 54 per cent in 1950-51. Though economic contribution of agriculture sector has been declining over the years; still it provides employment to 42 per cent of total workforce. Moreover, India ranks first in production of milk, pulses and spices in the world. It has the largest area under wheat, rice and cotton cultivation. India ranks second as far as production of rice, wheat, cotton, sugarcane, fish, sheep & goat, fruit and vegetables are concerned. India is one of the leading exporters of agriculture products in the world. In addition to that India's food security is also dependent on agriculture sector. Fourth advanced estimates reveal that total food grain production in India is estimated at 296.65 million tonnes in 2019-20, against 285.21 million tonnes in 2018-19. During the crop year 20-21 agriculture sector has shown a better performance despite Covid-19 pandemic in the country and registered 3.4 per cent growth. In the crop year 2020-21 due to good monsoon season India's food grain production has touched a record 303.34 million tonnes as against 291.95 million tonnes in 2019-20.

In addition to providing livelihood to farmers and labourers India's agriculture sector has ensured food security to 75% rural population and 50% of urban population under National Food Security Act 2013. Till the year 2015 almost 68 per cent population of the country have come under this umbrella. During the last couple of years Indian agriculture has done well and undergone diversification towards high value commodities (fruits, vegetables and livestock). India ranks second in horticulture production after China. Total horticulture production is estimated at 326.58 million tonnes in 2020-21 (first advanced estimates 2020-21) as against 320.77 million tonnes in 2019-20. Despite such huge production of agricultural commodities, 15 per cent of country's population remains under-nourished. Agricultural products exports have shown an increasing trend and touched Rs. 2.52 lakh crores in 2019-20. Important agriculture commodities include marine products, basmati rice, buffalo meat, spices, non-basmati rice, cotton, oil meals, sugar and tea. However, India's agricultural export accounts only 2.5 per cent of total global agricultural trade.

II. Issues and Concerns

Despite these achievements in agricultural field India is far behind other countries in terms of productivity and quality. Some key issues related to agriculture sector are discussed below.

II.1 Land use Pattern and Fragmentation

India ranks seventh in terms of geographical area with 328 million hectares (mha) of land. Out of this total geographical area 156.4 mha is arable and 140mha (42.6%) is cultivated as of 2015-16. Small and marginal farmers having less than 2ha of land accounts for 86.2 per cent (126 million) out of 146.4 million operational holdings. Out of the 126 million operational holdings marginal farmers hold 68.5 per cent with less than 1 ha of land. Data reveals that the share of marginal holdings (less than 1ha) has increased from 62.9 per cent in 2000-01 to 68.5 per cent in 2015-16 and share of small holdings (1 ha to 2 ha) has registered a fall from 18.9 per cent to 17.7 per cent during the same period. During this period large holdings have decreased from 6.5 per cent to 4.3 per cent. As far as the operated area is concerned, small and marginal farmers accounted for 47 per cent of total operated area in 2015-16. As such, this increasing fragmentation of operational holdings has become a major concern for India's agriculture sector. The average size of land holdings has decreased from 2.28 hectares in 1970-71 to 1.08 hectares in 2015-16. Moreover, the land base available per household has further declined as a result of continuously growing population pressure with limited employment opportunities in other sectors of the country.

Due to the increase in incomes and standard of living, consumption pattern of Indian families has changed over the years and shifted towards high value products. There is a drastic fall in the share of monthly expenditure incurred on staples in both rural and urban areas from 41.1 per cent to 10.8 per cent in the former and 23.4 per cent to 6.6 per cent in the latter between 1972-73 and 2011-12 (Gulati and Juneja, 2020). Indian farmers have adopted multiple cropping systems due to existing different soil types and varying climate condition in the country. Moreover, globalisation and changing consumption pattern of consumers have induced the farmers to shift their traditional farming (non-commercial) to cash crop so as to meet changing demand. Farmers are now increasingly moving towards more commercial crops such as oilseeds, fruits and vegetables, spices etc. compared to staples (Majhi and Kumar, 2018).

II.2 Irrigation and Fertiliser:

As far as irrigation facility is concerned out of total cultivated area in the country 51 per cent area is under irrigation facility. Agricultural production in India is heavily dependent on monsoon. If monsoon fails or temperature rises it affects production negatively. In such situations small and marginal farmers suffer as they have taken crop loans and fall into debt trap. As a result farmers commit suicide. At least 10,281 persons involved in farm sector committed suicide in 2019.¹ The availability of water for irrigating the crops (either through rainfall or other irrigation sources) is one of the most crucial factors affecting cropping intensity (Gulati and Juneja, 2020). Higher intensity implies intensive use of land for agriculture (Desmukh and Tanaji, 2017). However, there has been overuse of ground water for intensive cropping in India especially in Haryana, Rajasthan and Punjab.

Fertilizer is a crucial input for boosting agricultural production. India's average yield is one of the lowest in the world. There has been significant increase in the consumption of fertilizer soon after the Green Revolution. Fertiliser consumption has increased from 2.17 kg per hectare to 134 per hectare in 2018-19 with inter-state variations. The major concern regarding the use of fertiliser in India has been that the farmers' application of fertiliser has been different from that recommended on the basis of soil tests. Moreover, in most of the states the consumption of fertiliser per hectare is lower than the all India average. This is one of contributing factor of lower food grain production in India.

II.3 Availability and Access to Credit:

Credit is not only important input for increase in agriculture productivity but also important for building capital base for farm development. Nationalisation of commercial banks in 1969 and establishment of Regional Rural Banks in 1975 and establishment National Bank for Agriculture and Rural Development (NABARD) in 1982 has increased functional reach of credit institutions. After the nationalisation of banks there has been rapid expansion of scheduled commercial banks from 8187 in 1969 to 14.58 branches per 1000 persons in 2020. A speedy progress has been witnessed in the supply of credit to agriculture sector in past few years. Institutional credit flow to agriculture sector has increased from Rs. 214 crores in 1960-61 to Rs 1392469.81crores in 2019-20.

Although there has been significant expansion in banking service and credit flow to agriculture sector during the past few decades, still there are many issues relating to the supply of easy credit to agriculture sector. Some of this are- narrow branch network in rural areas, falling credit-deposit ratios in rural areas, fall in agricultural credit to small and marginal farmers and worsening of regional inequalities in rural banking (Dev, 2008). Though the credit flow to agriculture has increased over the years, still it is not adequate to cater the need of rural farmers. Moreover, rich farmers have better access to farm credit depriving the small and marginal farmers. High operational cost and transaction cost also make credit costlier in rural areas. Another reason of high cost in rural credit operations is mounting non-performing assets of commercial banks. In demand side there are also certain issues in rural credit. Some key issues are low productivity and risk and vulnerability of small and marginal farmers, low skill and poor market linkage for rural non-farm workers and inadequate awareness and low financial literacy (Dev, 2008).

II.4 Price, Cost and Marketing:

Due to variation in rainfall and low price elasticity of demand for food grains in the country, prices of agricultural commodities fluctuates year to year. To minimise the impact of the fluctuations on farmers' income Minimum Support System (MSP)² was introduced in 1966. The NITI Aayog is of the view that agricultural pricing policy needs to be reviewed to ensure best prices for agricultural produce of farmers. Three new agriculture Bills (2020)³ on agriculture reforms presented in the parliament has led strong opposition by the farmers on the ground that it is anti farmers and it will affect the farmers' income and end MSP.

Marketing of agricultural products is another problem confronted by small and marginal farmers in India. Since agricultural products are perishable goods and due to shortage and non availability of sufficient cold storage product prices are being kept low in harvest season, as a result small and marginal farmers are being exploited. Due to the absence of adequate market facility, the farmers have to depend upon middlemen for disposal of their produce and sale at a very low price. In many cases it has been observed that farmers sell their products to the money lenders from whom they usually borrow money. Due to the absence of sufficient market facility 85 per cent of wheat and 75 per cent of oil seeds in Uttar Pradesh, 90 per cent of Jute in West Bengal, 70 per cent of oil seeds and 35 per cent of cotton in Punjab is sold by farmers to local traders in the village (Singh, 2017). In addition to that limited access to market information, low literacy among the farmers and multiple channels of distribution deprive the farmers in getting the fair price of agricultural products. Under such conditions contract farming arrangements may be helpful. This new concept of contract farming can raise farmers' income and reduce the marketing risk of farmers.

II.5 Capital:

Efficient use of capital can increase farm productivity and income of the farmers. Demand for capital has increased many folds during last couple of decades. The main sources of finance or money to the farmers are the money lender, traders and commission agents who charge high interest and purchase the farm products at low price (Singh, 2017). Different studies reveal that institutional credit flow to agriculture has increased over the years. But the share of non-institutional sources (money lender) of credit to agriculture sector is found to be high till date. The share of money lender to agriculture finance is estimated at 21.6 per cent in 2010-11. Gross capital formation in agriculture from both the public and private sectors as a percentage of agricultural GDP (in current prices) has increased from 7.8 per cent in 1980-81 to 13.7 per cent in 2017-18. The share of public and private investment was almost equal in early 1980s. But the share of public investment has fallen drastically to 21.6 per cent in 2017-18. Declining share of public sector investment in agriculture sector is a serious issue because infrastructure development in agriculture sector requires huge investment. Diversification of agriculture also calls for more investment. On the contrary private sector investment has been increasing significantly during the last couple of years. For rapid growth of agriculture sector more investment is required for research and development, reforms in marketing, innovations and direct income support to farmers (Gulati and Juneja, 2020). Policy makers should review the matter considering the future prospect of agriculture sector.

III Challenges :

After trade liberalisation, efficiency in agriculture production has got more importance. In last couple of year's domestic prices of several agriculture products has turned higher than other countries and government has failed to check the imports of such goods. As such, the cost

reduction in agriculture sector /products has become a big challenge. To make agriculture products more competitive in global market, it needs to reduce various post-harvest costs and improve efficiency and productivity in agriculture sector. Now the challenge is not the maximisation of growth but it is the efficient growth which will make Indian agriculture more competitive.

Protecting environmental degradation particularly water and land has become another big challenge. Ground water level in India has been going down at an alarming rate causing shortage of drinking water. Micro irrigation projects can solve the problem of groundwater exploitation. Government should adopt an integrated approach for water resource management. Excessive use of fertilisers and pesticides in farm sector has caused land degradation. According to the estimates about 37 per cent land area is affected by deforestation, poor irrigation and water management, excessive and unbalanced use of fertilizers and pesticides, overgrazing and improper management of industrial wastes (OECD/ICRIER, 2018). Thus, a new policy framework is needed for efficient use of resources.

Doubling of farmers' income by 2022 is a gigantic task to be realised, but it seems to be difficult amid Covid-19 pandemic. To meet the rising demand of food grains and to address food security, agricultural productivity has to be increased. Diversification of agriculture from traditional, less remunerative crops to higher value crops leads to higher incomes for farmers. At the same time, cultivation of a variety of crops reduces risk (Singh *et al.*, 2006). For efficient growth in agriculture and productivity huge and long term investment is required. Public sector is the only option for such investment.

Reduction of regional disparities is yet another challenge for agriculture sector. There is vast difference in agriculture productivity across the country. In some states farmers are not able to get equal benefits of technology and agriculture input services. Being small and marginal, farmers in some part of the country especially in North Eastern States are not getting easy access to credit. As a result, agriculture development and productivity is extremely low in this region. To reduce the disparity and to raise the productivity in such states special attention is required.

Conclusion:

Implementation of trade liberalisation has led Indian agriculture into a challenging era. Apart from domestic challenges there are many external challenges that agriculture sector has to cope with. Public investment is falling drastically thereby affecting infrastructure development as well as research and development in agriculture sector. Declining profitability and easy access to credit has remained an unresolved issue. The main challenge before Indian agriculture is improving productivity and diversification towards high value products. To reduce the pressure on farm sector non-farm activities should be promoted. Efficiency in production or cost reduction has to be maintained for productivity enhancement and poverty reduction. A second Green Revolution is needed for making agriculture a profitable profession. Covid-19 situation has also created some new challenges but it has also opened up some new opportunities for agriculture sector. These opportunities have to be realised.

Notes:

- 1) ¹As per National Crime Bureau Record Suicides cases in farm sector accounts of 7.4 per cent of total
- 2) number of suicides in India in 2019.

- 3) ²Minimum Support Price (MSP) is the price at which the central government purchases food grains from
- 4) farmers.
- 5) ³The three Bills on agriculture reforms- The Farmers' Produce Trade and Commerce (Promotion and
- 6) Facilitation) Bill, 2020; The Farmer (Empowerment and Protection) Agreement of Price Assurance and
- 7) Farm Services Bill, 2020 and the Essential Commodities (Amendment) Bill, 2020 were introduced in
- 8) September, 2020. The farmers
- 9) and farmer associations across the country have protested against these Bills on the ground that it is
- 10) against cooperative federalism and it will end the MSP system in agriculture sector.

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A Study on Policyholders Attitude Towards Life Insurance with Special Reference to Rajapalayam Town

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Abstract:

This study investigated for “ A study on Policyholders Attitude towards Life Insurance with special reference to Rajapalayam Town”. Most of the humans are very interested to know about Life Insurance. Basically Rajapalayam is an textile and agricultural area. The earnings of the money is not enough to their livelihood. So they are not able to make investments. They giving priority to their necessary activities like day-to-day expenses , foods ,medical expenses and children’s education expenses. So they think about investment is the best way to reduce their risk in minimum level. Comparatively the income tax assessed people are taking policies for their tax relief only. The sampling technique of 50 respondents only. These responses are collected through online survey using google forms . In this research has been used for 5 points Likert scale.

Key words : Life Insurance , Insurance sector, Policyholders attitude

Introduction:

Life Insurance was established on 19th January 1956 under the Life Insurance Corporation act. There are 245 Insurance companies are available in India. Life Insurance is one of the most developing sectors in India. In 1993 the Government of India appointed RN Malhotra Committee and regulate their own rules and regulations. Insurance sectors in India which covers both private and public sectors. Rajapalayam is a city in the Indian state of Tamil Nadu. Our city people economy is based on textile and agricultural. People are insecure towards risks and uncertainties. So every one wants to secure their life and reduce their risks, Insurance sectors offering to reduce their risks at minimum level. The main aim of the Insurance companies are looking for reduce the cost of losses for their policyholders. So the Insurance Companies are expecting more policies from people.

Review of Literature:

Muhammad Sarmad ¹ in his journal named that “ Impact of customer satisfaction and attitude towards Insurance company” examined that most of people are not aware of Insurance Industry. The main aim of this study holds their policyholders satisfaction and the insurance sector should give the seminars programs to the general public to increasing their awareness level.

Ganga Devi, Dr. K. Rajan and Dr.Lekshmi Bhai ² in their article named that “ Customer attitude and satisfaction towards investment in Life Insurance with special reference to Ernakulam city” explained that most of the factors are affecting the policyholders investment decision in life insurance and they are major pivotal role of purchasing life insurance policies.

Policyholders are the real pillar of the insurance sectors, so the companies should give awareness to their products.

Amsaveni And Indira Priya dharshini ³ in their article named that, “ Attitude of LIC policyholders with special reference to Pollachi Taluk” expands that Insurance sectors should be give trustworthy for the public and conduct more conferences about their schemes to popularize among the people.

Statement of The Problem:

The main focus of the study is Policyholders attitude and their satisfaction level towards the Insurance sectors. This is very grateful for insurance companies for popularizing their schemes according to their wants and needs.

Objectives of The Study:

IN this study the profile of the policyholders who take the Life Insurance policies and their awareness level towards Insurance sector.

- To study the attitude of policyholders in Life Insurance.
- To identify the factors influencing selection of various insurance schemes by the policyholders.

Research Methodology:

Primary Data:

Life Insurance Corporation of India working in Rajapalayam Town was selected for this study. This data was collected from the policyholders with the help of questionnaire through online survey using google forms. A sample of 30 Life insurance policyholders representing various types such as Government employees, private Employees, Agriculturists, Business people, industrialist and Labourers.

Statistical Tools Used For Analysis:

The collected data were presented in the form of tables and also interpret the results. The following tools were used to analyze the data. The researcher used cross table personal back round of the respondents related attitude using Likert scale were carried out with the help of SPSS software.

Demographical Results:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	22	73.3	73.3	73.3
	Female	8	26.7	26.7	100.0
	Total	30	100.0	100.0	

Source: Primary Data

This table shows that there are 73.3 percentage are male and 26.7 percentage are Female in this study.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	31-40	16	53.3	53.3	53.3
	41-50	8	26.7	26.7	80.0
	above 50	6	20.0	20.0	100.0
	Total	30	100.0	100.0	

Source: Primary Data

In this table there is none of the persons are fall between less than 30 age group, 53.3 percentage of the persons are fall between 31-40 age group, 26.7 percentage of the persons are fall between 41-50 age group and 20.0 percentage of the persons are above 50 age group.

List of Components

components	code
Safety and Security	Q1
Provide Satisfactory services	Q2
Minimum Legal formalities	Q3
Redressal of customer grievances	Q4
Promptness latest information	Q5
Providing latest information	Q6
Awareness of policies	Q7
Quick settlement of claims	Q8
Revival of policy is easy	Q9

Source: Primary Data

The Five point Likert Scale is considered as interval scale. The mean is very significant. Among nine attitude questions, the policyholders are highly satisfied with the companies trust and it

Table 1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Safety and Security	30	1.00	3.00	1.7333	.63968
Provide Satisfactory service	30	1.00	3.00	1.5000	.77682
Minimum Legal Formalities	30	1.00	4.00	1.8667	1.07425
Redressal of customer Grievances	30	1.00	5.00	1.9667	1.12903
Promptness in issuing policy	30	1.00	5.00	1.8000	1.06350
Providing latest information	30	1.00	4.00	1.8667	1.04166
Awareness of policies	30	1.00	4.00	1.8667	1.04166
Quick settlement of claims	30	1.00	4.00	1.9667	.99943
Revival of policy is easy	30	1.00	4.00	1.9000	.92289
Valid N (listwise)	30				

indicated that all the mean values are greater than 1. This implies that the policyholders are satisfied.

Frequency Table:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	11	36.7	36.7	36.7
	Strongly Agree	16	53.3	53.3	90.0
	Neutral	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

Table 3 Provide Satisfactory service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	20	66.7	66.7	66.7
	Strongly Agree	5	16.7	16.7	83.3
	Neutral	5	16.7	16.7	100.0
	Total	30	100.0	100.0	

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Table 4 Redressal of customer Grievances

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	15	50.0	50.0	50.0
	Strongly Agree	4	13.3	13.3	63.3
	Neutral	9	30.0	30.0	93.3
	Disagree	1	3.3	3.3	96.7
	Strongly Disagree	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

Table 5 Providing latest information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	16	53.3	53.3	53.3
	Strongly Agree	4	13.3	13.3	66.7
	Neutral	8	26.7	26.7	93.3
	Disagree	2	6.7	6.7	100.0
	Total	30	100.0	100.0	

Table 8 Revival of policy is easy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	13	43.3	43.3	43.3
	Strongly Agree	8	26.7	26.7	70.0
	Neutral	8	26.7	26.7	96.7
	Disagree	1	3.3	3.3	
	Total	30	100.0	100.0	

Table 9 Minimum Legal Formalities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	16	53.3	53.3	53.3
	Strongly Agree	5	16.7	16.7	70.0
	Neutral	6	20.0	20.0	90.0
	Disagree	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

Table 10 Promptness in issuing policy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	17	56.7	56.7	56.7
	Strongly Agree	4	13.3	13.3	70.0
	Neutral	8	26.7	26.7	96.7
	Strongly Disagree	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

Table 6 Awareness of policies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	16	53.3	53.3	53.3
	Strongly Agree	4	13.3	13.3	66.7
	Neutral	8	26.7	26.7	93.3
	Disagree	2	6.7	6.7	100.0
	Total	30	100.0	100.0	

Table 7 Quick settlement of claims

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	13	43.3	43.3	43.3
	Strongly Agree	7	23.3	23.3	66.7
	Neutral	8	26.7	26.7	93.3
	Disagree	2	6.7	6.7	100.0
	Total	30	100.0	100.0	



In this table described that majority of the policyholders agree with all the factors influencing the attitude of the policyholders towards Life Insurance companies since, the percentage is high for “Agree” compared to other factors.

Limitations of The Study:

The sample of 30 respondents makes difficult to get accurate results. The variables of the study also very little according to the sample size. This study is restricted to Rajapalayam Town only. Most of the respondents are not given the accurate statement.

Conclusion:

The finding shows that there is significant policyholders attitude towards Life Insurance sectors. Many of the people are aware of the Insurance sectors. Policyholders are the real king of the Insurance market. If the Insurance company offers special schemes and attention to the policyholders it will be create high awareness to the public.

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Virtual Learning Approach during Covid-19 in Madhya Pradesh: Perspectives and Experiences of School Teachers

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Abstract:

The education landscape underwent a transformative change during the Covid 19 Pandemic crisis, 2020. The Covid 19 upsurge and its severity led to closure of schools and imposition of Covid 19 protocols across India. In accordance with government guidelines, the schools quickly redesigned, prepared and launched online teaching schedules to continue teaching. Owing to closure of schools, teachers all over India virtually embraced the radical change and adapted online teaching. Over a year into pandemic, online teaching and learning has become ubiquitous and continues to be so. The current study was designed to discover what school teachers perceived and experienced in their online teaching practices in Madhya Pradesh. Besides providing helpful information for the government and educational authorities on the perspective of teachers, this research aims to contribute to literature and policy making on virtual teaching in India. The findings show that following areas need intervention, namely, enhancing digital competency of teachers, access to digital equipment and tools, affordable high quality professional development and positive well being of teachers.

Keywords: Covid-19, online teaching, school teachers, Madhya Pradesh

1. Introduction:

Covid-19 disease is an infectious disease caused by corona virus. The outbreak of the deadly respiratory illness was first reported in Wuhan city, Hubei Province, China. The WHO after assessing the outbreak and alarming levels of spread, declared it a pandemic, on 11 March 2020 ringing the bell loud and clear for countries to plunge into action [1]. The Government of India issued Orders on 24 MARCH 2020 prescribing lockdown for containment of COVID19 pandemic in the country [2]. The Ministry of Human affairs, Government of India, issued guidelines vide Order No 40-3/2020-D dated 24.03.2020 which led to closure of educational institutions in the country [3]. Taking cognizance of the grave situation, on July 14, 2020, the Ministry of Human Resource Development, announced detailed guidelines for various state governments to start online classes to assist students in their learning. A learning experience enhanced through the use of computers or the internet is called virtual learning [4]. It requires teachers to use various digital tools, resources and also implement new approaches, in a virtual environment. Online teaching learning gives access to teachers and students who cannot attend school for many reasons, when in-person attendance is not possible [5]. The state machinery in the country did everything to ramp up the capacity to teach remotely. Taking into consideration the socio economic profile and limited access of students to resources, the state government of Madhya Pradesh introduced a series of interventions. The state education department started tech enabled tools and measures for students and teachers to continue education remotely. Various digital initiatives namely, Radio School, DigiLEP, WhatsApp group networking, weekly Digital Flipbooks, Zoom, WebEx lectures, TV broadcasts were made available to students and teachers. A well structured architecture of 50,000+ WhatsApp groups comprising parents, students and

teachers were created across the state to enable education during the pandemic. The CM RISE Digital Teacher training was launched on May 1, 2020 for training teachers. A group of experts prepared content of NCERT curriculum videos to assist teachers and students during the pandemic [6]. The teachers of the state quickly adapted to the change and new standards brought about by virtual approach.

2. Data and Methodology:

2.1 Subjects:

This is an online survey designed to study the experience and reflections of 103 school teachers of government and private schools of Madhya Pradesh.

2.2 Data Collection and procedure:

An online survey was conducted to collect information about the perspectives and experience of school teachers on virtual learning approach. A well structured questionnaire was designed and the questionnaire link using Google form was sent to teachers through WhatsApp. The details about the survey were shared with the participants and therefore completion of the survey was considered as consent for the same. An opinion survey by phone was also done to gather more meaningful data. The respondents gave their consent to reveal their name, designation and opinion on a public platform.

2.3 Data Analysis:

Descriptive statistics was used and simple percentage distribution was estimated to study the perspectives and experience of teachers. The study has tried to examine factors like internet access, attitude, teaching status, instructional methods and media, food availability, financial, health and wellbeing aspects, social aspects of teaching and learning.

3 Results and Discussion:

3.1 Demographic Characteristics of Participants:

The participants in this study were 103 school teachers from various provinces of Madhya Pradesh. Out of the 103 participants, the percentages of female and male teachers were 72.2% and 27.8% respectively. Almost 87% of the teachers resided in urban areas and 13% in rural areas. With regard to the status of classes taught, 34% taught in Higher Secondary, 34% secondary and 32% primary classes.

3.2 Information about virtual approach and online classes

At the outset, teachers were asked about internet speed and connectivity at home, with 88.3% reported having good speed and 11.7% being deprived of this facility. Around 66% of teachers opined that students lack access to online devices and technology. In this survey around 90.2% of teachers reported that the pandemic has adversely affected education in the country. Nonetheless, a vast majority of teachers (79.6%) support the idea that digital transformation will improve the education of the country. It is essential to generate new education models for the future by improving the existing virtual approach [7]. Though teachers are tech savvy, a complete virtual approach is new for them. It seems that 89.3% of teachers well-managed their work life balance during online classes. A significant number of teachers rated their virtual approach experience as satisfying (52.4%), very satisfying (24.3%) and extremely satisfying (14.6%). use of digital tools. It is found that only 71.8% of teachers are trained in use of digital tools. Most of the teachers (96.1%) are familiar with the policies and guidelines issued by the government from time to time.



“The need of the hour is to provide more training about digital tools and use of technology to upgrade and refine virtual teaching. Most of the teachers are open to adapting technology to breathe a fresh air into the teaching process”. Mrs.Beena Dominic, Principal, Navjyoti Mission School, Bijuri.

3.3 Instructional Strategy and methods

It is found that teachers used multiple devices like smart phones, laptops, desktop and tablets to deliver content and instruction. In this survey, most of the teachers (84.5%) used smart phones in virtual teaching followed by 46.6% taught using laptop, 9.7% using tablet and 1.9 % desktop. It also necessitates providing them with computers, as the majority of teachers use smart phones for teaching. It is extremely difficult to spend many hours before a small screen.

With many virtual platforms to deliver learning material, teachers used diverse platforms for instruction. The study finds out that 55.3% of teachers have used Google meet, 43.7 % Zoom, and then 43.7% WhatsApp as their preferred digital platforms to teach students. Besides this, 19.4% used mobile as well as Youtube videos for teaching.

Teachers have tried varied methods to improve teaching and learning in a virtual environment. The majority of the respondents (85.4%) preferred WhatsApp to share and collect assignments. followed by 51.5% using Google forms and 17.5% availed email services for the same. However, 9.7% of teachers shared assignments by hand and 1.9% of teachers did not share assignments with students.

Virtual learning cannot be a passive activity. So, teachers have tried a multitude of ways to make classes engaging and meaningful. To make classes lively, 70.9% of teachers held class discussions and 57.3% of teachers made interactive videos to engage students. The influence of peers is vital to learning. Online discussion and participation improves active learning and brings out good learning outcomes. [8]As regards face to face interaction, 57.3% of teachers consider it extremely important and 34% regard it very important. The teachers of the state were asked by the government to interact with at least five students everyday [6]. Teachers can alleviate the emotional and psychological problems of students more than parents during tough times [9]. Assessment is an important component of the teaching learning process. About 71.8%of the teachers used online assessments to evaluate the learning levels of students and 54.4% of teachers gave online assignments for students to practice at home. The study shows that 71.8% of teachers are familiar with online proctored exams.

The support of parents is essential in virtual learning. It is found that 36.9% of the teachers held discussions with the parents to sensitize them and earn their support in making the virtual learning approach a fruitful one.

The study reveals that 64% of teachers relied on textbooks for course content, only 26.2% used E-Pathshala and 39.8% used Diksha portal for resources. Most of them (62.1%) used other online resources for course content. This reveals that high quality, interactive instructional material must be made available to teachers. Online specific pedagogy should be developed and given to teachers as the data reveals that only 30% of teachers are well equipped with online pedagogy whereas 34% is moderately equipped, 28.2 somewhat equipped and 7.8 % are least equipped. The data shows the digital proficiency of teachers but it is time to change from emergency online teaching pedagogy to excellent instructional design and planning [10]. There is a need for comprehensive review of online pedagogy and curriculum design that helps to sustain students' interest in learning.

3.3 Information about finance, health, wellbeing and food:

Teachers, who spearheaded the digital initiatives in education during the Covid 19 crisis, are real warriors. They used unknown digital tools in a virtual environment and set the cogwheels of education running without any halt. The results of this study indicate that the economic condition of the teachers was severely affected during COVID-19 crisis. It depicts that 70.9% of teachers were going through a financial crisis whereas 39.8% reported health issues. The most painful revelation was that teachers (3.9%) in urban areas faced food shortage. This lays bare the naked truth about the existing socio - economic inequalities in the state. In the ongoing crisis the revenue of schools suffered resulting in less salary to teachers [11]. The status quo of this crisis remains the same even in May 2021. Many teachers have pointed out physical ailments like headache (43.7%), backache (26.2%) and fatigue (17.5%) during online classes. Around 35.9 % of teachers reported that online teaching was stressful.

“Teachers who nurture the future of a nation undertook the Herculean task of online teaching, but were left with no salary. Many have bank loans taken for different purposes. Who will take care of their financial and health issues?” Dr.Akhilesh Kumar Singh, Educationist and writer.

Conclusion:

The present study has discussed the experience and reflection of teachers on many aspects. Taking stock of all that has been achieved, the study aims to attract the attention of the government, policy makers and institutional authorities to review the perspectives and experience of teachers to understand the educators' needs and boost virtual learning in India. The well being of teachers must be tended to without fail. Teachers should get a high quality professional development programmes, the puissant tool, to adapt new emerging technologies. Additionally, online instructional strategies and pedagogical skills would congeal a better virtual teaching system .Introducing teachers to new digital tools would help in capacity building and develop digital competence. This requires an investment from the government in distributing computers and ramping digital infrastructure. It is necessary to surmise that NEP advocates technology driven systems in education. So, use of technology driven education must be made a part of teacher education curriculum. Despite all odds, online teaching has thrown open opportunities to augment future education models. This is, therefore, a crucial moment to reframe the presuppositions about the scope of the virtual learning ecosystem in India. The teachers are a remarkable and forward thinking community that supports the 'avant-garde' in virtual education.

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Marital Discord in Desai's Novels '*Fire on the Mountain and Clear Light of Day*' : An Exploration on the Youthful and Isolated Dreams that Fall Apart

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Abstract

This paper as an article seeks to explore the theme of marital discord and explores the youthful and isolated dreams that fall apart in Indian English Literature with special reference to the select novels of Anita Desai namely Fire on the Mountain and Clear Light of Day:

Anita Desai is a gifted writer with an extraordinary sense of details usually left unnoticed. She chooses an important situation and uses it with graceful rhythm and a poetic felicity. The two novels of Anita Desai, i.e., Fire on the Mountain, and Clear Light Of Day portray female protagonists who are not average but have retreated, or been driven into some extremity of despair, and so turned against, or made a stand against the general current. Withdrawn into a life of seclusion and loneliness, their material wants are taken care of by affluence of wealth and servants, but their emotional needs are much more difficult to meet. All the central female characters in the novel are either misshapen or bogged down by life, and by men. As a result of this, they seem to live in a closed world of private suffering of marital discord and also the youthful and isolated dreams that fall apart.

This research paper proposes to summarize the marital discord as projected by Anita Desai and bring out her efforts to offer solution to the problems of women's youthful and isolated dreams that fall apart with an optimistic note.

The methodology followed in this thesis is as per the norms stipulated in M L A Handbook for Writers of Research Papers, Seventh Edition, Edited by Judy Goulding. (First East-West Press Edition 2009).

Key Words: Poetic Felicity, Flashes of Individual Vision, Agonized Modern Sensibility of an Indian Woman, Marital Discord, Loneliness, Withdrawal, Exile, Alienation, Attitude And Temperaments, Mature Treatment, Youthful And Isolated Dreams

Anita Desai is gifted with an extraordinary sense of details usually left unnoticed. She chooses an important situation and uses it with graceful rhythm and a poetic felicity. In an interview she has said: "Of course, I do write. I do write of the contemporary scene". She is said to have added, "and therefore the characters must contain the modern sensibility" (Interviews with Indo – English Writers, 22).

Anita Desai holds the view that, a writer... follows flashes of individual vision and depends on a kind of trained instinct that tells him what to follow and what to avoid, how to veer away from what would be destructive to his vision. It is these flashes of vision, and a kind of trained instinct that leads him (Interviews with Indo-English Writers, 22).

Anita Desai remarkably voices “the terror of facing single-handed, the ferocious assault of existence through a recurrent, favourite existentialist theme of husband-wife alienation and non-communication that lays bare the agonised modern sensibility of an Indian woman.” (Prasad, 64). Story, action and drama mean little to her except insofar as they emanate directly from the characters she writes about, born of their dreams, wills and actions. According to Desai, a story imposed from the outside simply destroys their life and reduces them to a string of jerking puppets on a stage. Whatever action there is in her novels is a part of “the integral whole composed of the human psyche, the human situation, the outer and inner rhythms.” (*Replies to the Questionnaire*, 4).

Fire on the Mountain is stylistically the most successful of Mrs. Desai's novels, according to critics. In this novel too, marital discord, loneliness, withdrawal, exile and alienation are projected, substantiating the novelist's conviction that all human relationships are inadequate and that loneliness is an inescapable human predicament. This malady affects the child, the young and the old. In this novel, the two old ladies, Nanda Kaul and Ila Das and the child Raka suffer from isolation and alienation in varying degrees for different reasons. But here, instead of the feverish and frenzied outpourings witnessed in the previous novels, there is a quite austerity and coldness in the principal characters Nanda and Raka. Their attitude and temperaments call for a controlled and mature treatment of the theme.

In the novel, the aged Nanda Kaul lives in a decrepit summer villa in the foothills of the Himalayas, retreated to her small house called Carignano after the death of her husband, a university Vice-Chancellor. Once an important figure in society as well as in her vast family, Nanda Kaul is one of those intelligent, unsentimental Indian women with a built-in-streak of sardonic feminism who do not love their patriarchal role. She had previously tended to her children with pleasure and pride, entertained her husband's colleagues and students, “looking sharply to see if the dark furniture, all rosewood, had been polished and the doors of the gigantic cupboards properly shut” (*Fire*, 18). She now has a different attitude toward her personal environment. “the care of others was a habit Nanda had mislaid. It had been a religious calling she had believed in till she had found it fake” (*Fire*, 30). The appropriateness of her lonely, haunted and rather dismal existence is verified for her when she reads a quotation from *The Pillow Book of Sei Shonagon* (*When a Woman Lives Alone*):

When a woman lives alone, her house should be extremely dilapidated, the mud wall should be falling to pieces, and if there is a pond, it should be overgrown with water plants. It is not essential that the garden be covered with sage-brush, but weeds should be growing through the sand in patches, for this gives the place a poignantly desolate look. I greatly dislike a woman's house when it is clear she has scurried about with a knowing look on her face, arranging everything just as it should be, and when the gate is tightly shut (*Fire*, 27).

Primarily interested in exploring the psychic depths of her female characters, Anita Desai may be said to be doing something unique among the contemporary Indo-English novelists. She portrays the characters as individuals “facing singlehanded, the ferocious assaults of existence” (Anita Desai interviewed. *The Times of India*, April 29, 1979). Carefully avoiding to be associated with any feminist movement, she makes it clear that her concern as an artist is with individual men and women. She finds it impossible to whip up any interest in a mass of women marching forward under the banner of feminism. “Only the individual, the solitary being, is of true interest. One must be

alone, silent, in order to think or contemplate. Or write.” (Anita Desai interviewed. *The Times of India*, April 29, 1979).

Sincere to her convictions as an artist, Anita Desai, in her novels, seizes upon that incomplete and seemingly meaningless mass of reality around her and tries to “discover its significance by plunging below the surface and plumbing the depths then illuminating those depths till they become a more lucid, brilliant and explicable reflection of the visible world”(Anita Desai Replies to the Questionnaire. *Kakatiya Journal of English Studies*, Vol. 3, No. 1, 1978, 1-2). Howsoever rigorous, this is surely no mean an achievement by any standards.

Anita Desai's *Clear Light of Day* is a study of youthful, isolated and alienated dreams that fall apart or get drowned like the cow that falls into the well with a welter of sounds no one hears. The novel tries to probe the subconscious where love, isolation and frustration create enormous alienation. Desai also shows how the mind refuses to get trapped within the maze of alienation. The story moves from the murky atmosphere of isolated decay and death into the clear light of day.

In this novel Bim, her sister Tara and her two brothers Raja and Baba grow up like weeds because their parents have no time to look after the children. Having no access to their mother and father who spend “day after day and year after year till their deaths, playing bridge” (*Clear*, 23). The children live like orphans in an oppressive atmosphere of silences and shadows.

Bim and Raja escape into a world of poetry and dreams. Tara is excluded from their “enclosed world of love and admiration” (*Clear*, 26). Baba, the latest born who is no more than a white flower or garden remains an unsubstantial shadow, confined to his room with his old records. The sisters thought their parents had no vitality or personality left to hand down to him. Marriage to Bakul affords Tara a means of escape. Returning home after several years she is shaken not only by the petrified state of her house but also by the look of Bim. The sister she had imagined to be a

Fortress of strength was actually vulnerable and lonely. Tara does not know that love makes one vulnerable and lonely. She saw “the petals that had clung together in a bunch in their fall and scatter themselves” (*Clear*, 2). She “goes on her knees to contemplate the quality of disillusion” (*Clear*, 2).

These two novels of Anita Desai, i.e., *Fire on the Mountain*, and *Clear Light Of Day* portray female protagonists who are not average but have retreated, or been driven into some extremity of despair, and so turned against, or made a stand against the general current. Withdrawn into a life of seclusion and loneliness, their material wants are taken care of by affluence of wealth and servants, but their emotional needs are much more difficult to meet. All the central female characters in the novel are either misshapen or bogged down by life, and by men. As a result of this, they seem to live in a closed world of private suffering of marital discord and also the youthful and isolated dreams that fall apart.

Anita Desai has thus delineated in the novels the problems and plights of marital discord and alienated individuals caught in the crises of a changing society. She exiles particularly in highlighting the miserable position of highly sensitive and emotional women, tortured by a humiliating sense of neglect, of loneliness and of desperation. The existential problem of the alienated self finally emerges to be the central theme of her novels. Desai represents therefore “a set of new attitudes and themes” (Dieter Riemenschneider, *British Characters in Indo-English Fiction*, in M. K. Naik, ed., *Aspects of Indian writing in English*, Macmillan India, 1979, 137),

associated with modern Indian novel in English. In the novels of Anita Desai the problems of marital discord and the youthful and isolated dreams that fall apart are confronted, has been outlined and resolved in a positive way.

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Use of Grey Literature by the LIS Discipline Researchers in Rashtrasant Tukadoji Maharaj Nagpur University Library : A Case Study

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Abstract :

This study was undertaken to find out the use of grey literature by the Library and Information Science (LIS) discipline researchers in Rashtrasant Tukadoji Maharaj Nagpur University Library (RTMNUL). The Survey conducted by well-structured questionnaires. The study demonstrates and elaborates the various aspects of grey literature, strategies for enhancing the use of grey literature were formulated to guide the study. The sample consisted of 76 Library and Information Science (LIS) discipline researchers from Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.

Keyword: Grey Literature, Strategies, Library and Information Science (LIS), Rashtrasant Tukadoji Maharaj Nagpur University Library (RTMNUL)

1. Introduction:

Universities are relied on for education, training and manpower development and research for socio-economic development of any nation. For Universities to meet up with the onerous responsibility, they need to provide strong literature support to the teaching, learning, research and community development activities. The unit of the university responsible for the provision, management and dissemination of information to support the effective and expeditious attainment of the objectives of the university is its library. It is pertinent to state that the increase in the volume of literature in the library collection has been occurring at an exponential rate in this information age century. Nevertheless, many University Libraries globally are beset with dearth of information resources especially in the professions and local content. This is due to the fact that in the field of librarianship and information science generally, there has been an outcry for literatures in quest of people utilitarian. While relief has come to some of the libraries through computerization and internet connectivity, there is still the pressing need to more effectively manage Grey Literature for higher education and research as they are often not accessible on the web.

2. Review of Literature :

Gelfand and Tsang (2015) opined that the Prague Definition has been “challenged as still being too narrow considering new forms and practices of scholarship and research underway and the methods of publishing now widely available”.

Neal R. Haddaway (2015) explained in his paper searches for grey literature can require substantial resources to undertake but their inclusion is vital for research activities such as systematic reviews. Web scraping, the extraction of patterned data from web pages on the internet, has been developed in the private sector for business purposes, but it offers substantial benefits to those searching for grey literature. By building and sharing protocols that extract search results and other data from web pages, those looking for grey literature can drastically increase their transparency and resource efficiency. Various options exist in terms of web-scraping software and they are introduced herein.

Osayande and Ukpebor (2012) viewed grey literature as “publications not published commercially or indeed by major database vendors”.

Okoroma (2012) referred to grey literature as “unpopular but precious semi published information materials with very limited circulation which are not usually accessible through the normal commercial book channels such as publishers catalog and book shops.”

Schopfel (2010) Grey literature stands for manifold document types produced on all levels of government, academics, business and industry in print and electronic formats that are protected by intellectual property rights, of sufficient quality to be collected and preserved by library holdings or institutional repositories, but not controlled by commercial publishers i.e., where publishing is not the primary activity of the producing body.

3. About The Rashtrasant Tukadoji Maharaj Nagpur University Library.

The main library of the Rashtrasant Tukadoji Maharaj, Nagpur University Nagpur is located in Ramdaspath, which is named as Dr. V.B. alias Bhausahab Kolte Library, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur. It has also separate campus library, which caters the needs of the students, faculty and research fellow. In the overall needs of the research students and faculty are more or less meet in terms of reference books. However, the number of journals subscribed is small in number due to their exorbitant price. The library is an active participant of prestigious UGC- Infonet project since the past two years providing the various e-resource including a number of e-journals to the encompassing various subjects. At present library has the various kinds of collection of 359091 Printed Books, 42000 Back Volumes, 10662 Theses/Dissertations, 30 CD ROM Database, 15000 Manuscript. The library provides the various facilities to the users, Reprographic facilities, Computers, Audio and Video Cassettes, Internet, OP AC, online Databases, offline CDROM Databases, Xerox, Fax, INFLIBNET, Braille Reader / Printer Services to the visually impaired computerized accession register of a manuscript database using the multilingual facility.

4. Scope of The Study:

The present study is limited to Research students of Library and Information Science (LIS) discipline from Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur (RTMUN).

5. Objectives of The Study:

It specifically focused on the following objectives:

- To find the Gray Literature usage by the LIS researchers in Rashtrasant Tukadoji Maharaj Nagpur University Library.
- To find out the purpose of using the Gray Literature by the LIS researchers in Rashtrasant Tukadoji Maharaj Nagpur University Library.

- To find out the use pattern of Gray Literature by the LIS researchers in Rashtrasant Tukadoji Maharaj Nagpur University Library.

6. Methodology:

Data collection: - To know the needs of students covered, a structured questionnaire was designed and factual questions, opinion questions were asked. The researcher has distributed 76 questionnaires to research Scholars 61 questionnaires duly filled returned by students and it is observed that the response rate is 80.26%.

7. Data Analysis:

The collected data were organized and tabulated by using statistical methods, Table and percentages.

Table: - 1. Frequency of Visit University library

S. No	Time	No. of Respondents	Percentage
1	Daily	14	22.95
2	3-4 times in a week	18	29.51
3	Once in a week	26	42.62
4	No Response	3	4.92
Total		61	100

Table No 1 shows that 26 (42.62%) respondents visit the library once in a week, followed by 18 (29.51%) respondents visit the library 3-4 times in a week, 14 (22.95%) of the Respondents visit the library daily and 03 (4.92%) of the respondents have not responded to the question.

Table: - 2. Purpose of Grey Literature Use

S. No	Purpose	No. of Respondents	Percentage
1	Teaching/Study	11	18.03
2	Research Work	31	50.82
3	Publication needs	17	27.87
4	No Response	2	3.28
Total		61	100

Table No 2 shows that 31 (50.82%) of the respondents use grey literature for their Research work, followed by 17 (27.87%) used grey literature for publication needs, 11 (18.03%) of the respondents used grey literature for teaching and study and 02 (3.28%) not responded. Hence, it can be inferred that a majority of the Respondents use the grey literature for their research work.

Table: - 3. Use / Access of Grey Literature

S. No	Use / Access of GL	No. of Respondents	Percentage
1	Most Frequently	18	29.51
2	Frequently	10	16.39
3	Moderately	29	47.54
4	Occasionally	4	6.56
Total		61	100

Table No 3 shows that 29 (47.54%) of the respondents access the grey literature moderately, followed by 18 (29.51%) access the grey literature most frequently, 10 (16.39%) of the respondents access the grey literature frequently, 04 (6.56%) occasionally access the grey literature. Hence, it can be inferred that a majority of the Respondents access the grey literature moderately.

Table: - 4. Satisfaction of Accessing Grey Literature

S. No	Level	No. of Respondents	Percentage
1	Highly satisfied	3	4.92
2	Satisfied	36	59.02
3	Average	21	34.43
4	Not satisfied	1	1.64
Total		61	100

Table No 4 shows that 36 (59.02%) of the respondents satisfied for accessing grey literature, followed by 21 (34.43%) of the respondents average for accessing grey literature, 03 (4.92%) of the respondents highly satisfied and 01 (1.64%) of the respondents not satisfied. Hence, it can be inferred that a majority of the Respondents satisfied accessing grey literature.

Table: - 5. Difficulties for Accessing Grey Literature

S. No	Difficulties	No. of Respondents	Percentage
1	Sources are classified under different subjects	9	14.75
2	No systematic arrangement for grey literature	13	21.31
3	No Difficulties for Accessing Grey Literature	39	63.93
Total		61	100

Table No 5 shows 39 (66.93%) of the respondents have no difficulties for accessing grey literature, followed by 13 (21.31%) respondents have difficulty in no systematic arrangement for grey literature and 09 (14.75%) respondents difficulty in sources are classified under different subjects.

Table: - 6. GL collection is Up-to-date and Recent collection.

S. No	Rating	No. of Respondents	Percentage
1	Excellent	14	22.95
2	Good	35	57.38
3	Fair	12	19.67
Total		61	100

Table No No.6 shows that 35 respondents (57.38%) of the total sample rating that the grey literature collection is good in the library. While another 14 respondents (22.95%) rating that the grey literature collection is too excellent for them and 12 respondents (19.67%) rating that grey literature collection is fair in the library.

Table: - 7. GL collection is Sufficient and comprehensive collection.

S. No	Rating	No. of Respondents	Percentage
1	Excellent	16	26.23
2	Good	33	54.10
3	Fair	12	19.67
Total		61	100

Table No No.7 shows that 33 respondents (54.10%) of the total sample rating that the grey literature collection is good sufficient and comprehensive collection in the library. While another 16 respondents (26.23%) rating that the grey literature collection is too excellent sufficient and comprehensive collection for them and 12 respondents (19.67%) rating that grey literature collection is fair sufficient and comprehensive collection in the library.

8. Findings of The Study:

On the basis of responses received from respondents on the topic of “Use of Grey Literature by the LIS Discipline Researchers in Rashtasant Tukadoji Maharaj Nagpur University Library” the following important findings can be noted:

- The study reveals that majority of researcher’s purpose of using grey literature for their research work needs.
- A majority of the respondents accessing the grey literature.
- A majority of respondents did not face any problems while they were using or accessing grey literature in the university library.
- It was found that a maximum number of users were satisfied with the accessing grey literature in the university library.

9. Conclusion:

This study gives a snapshot of the use of grey literature by the LIS Discipline Researchers in Rashtasant Tukadoji Maharaj Nagpur University Library. It is clear that most of the researchers accessing grey literature for their study, teaching and research needs. 64% of the researchers no problems while accessing grey literature in the university library. The infrastructure of grey literature stack section needs to be developed for better arrangement of grey literature collection. The study also indicates that most of users were satisfied with the using the grey literature.

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Legal Information E- Resources: An Overview

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Abstract:

During COVID-19 most of the users need e-resources for their study. For the fulfillment of users, we provide some e-resources which are helpful for legal education this paper discussed various legal information E-resources which useful for legal education

Key Words: Legal Information resources, E- Resources, Legal database

Introduction:

During 19 pandemic period most of the readers are unable to visit the library physically to access resources. During this period it is very difficult to access books and reaching materials from the library. But e-resources are the best way to accesses legal information which is required for their study. Legal resources such as national and international level are available in the e-form, legal researcher, students, judges; Advocates can access e-resources and fulfill their need during this period.

Legal Information E-Resources:

Legal researchers, students, advocates, judges, required legal information for their study. The Legal information E-Resources are Books, Journals, Legal databases, Judgments, Indian code. The Supreme Court, high court, session court, and national and international court judgments, various tribunals, and Authorities' information are required for their study.

Legal Databases:

The legal databases which are provided by the respective authorities through IP Base or Remote access to users as per libraries requirements. Some of the legal database are Lexis nexis , SCC onlie, HEIN Onlie, Law Finder, Manupatra, West law india, Kluwer Compeation law, CLA (Company Law Advisor), Kluwer Arbitration, Kluwer Patent Law, International Taxman.

Legal Information E- Resources are as follows:

SN	E- Resources	URL
1	National digital library	https://ndl.iitkgp.ac.in/
2	E- PG pathshala	http://epgp.inflibnet.ac.in/
3	E-sahitya	http://www.esahitya.com/
4	Directory of Open access Journals	https://doaj.org/
5	Parliamentary digital library	https://eparlib.nic.in/
6	Legal bite study materials	https://www.legalbites.in/study-material/
7.	Shodhganga	https://shodhganga.inflibnet.ac.in/
8.	Vidyamitra	https://vidyamitra.inflibnet.ac.in/
9.	E-books	https://openlibrary.org/
10.	Open text book library	https://open.umn.edu/opentextbooks
11	World digital library	https://www.doabooks.org/
12	Inflibnet	https://inflibnet.ac.in/
13	Shodhshindhu	https://ess.inflibnet.ac.in/
14	OER commons	https://www.oercommons.org/



15	Directory of open access books	https://directory.doabooks.org/
16	Free e- books	http://www.gutenberg.org/
17	Internate archive	https://archive.org/
18	Online book page	http://onlinebooks.library.upenn.edu/
19	National academic press	https://www.nap.edu/
20	E-thesis online service	https://ethos.bl.uk/Home.do
21	Indian code	https://www.indiacode.nic.in/
22	Prs legislative research India	https://www.prsindia.org/prsindia.org
23	<i>United nation digital library</i>	https://digitallibrary.un.org/
24	<i>LII of India</i>	http://liiofindia.org/
25	<i>Constitute</i>	https://www.constituteproject.org/
26	<i>United states code</i>	https://www.govinfo.gov/app/collection/uscode/
27	<i>Canada supreme court judgments</i>	https://www.scc-csc.ca/case-dossier/index-eng.aspx
28	<i>Hathi trust digital library</i>	https://www.hathitrust.org/
29	<i>E-book directory</i>	http://e-booksdirectory.com/
30	<i>Law book store</i>	http://www.legalserviceindia.com/law_bookstore/bookstore.htm
31	<i>Open research library</i>	https://openresearchlibrary.org/viewer/86bc2147-342a-4ad0-ae8c-45c1d663d275/2
32	<i>International law library</i>	http://www.worldlii.org/int/special/ihl/
33	<i>Rajya Sabha database</i>	https://rsdebate.nic.in/
34	<i>Common wealth legal information institute</i>	http://www.commonlii.org/
35	<i>Law commission of India</i>	https://lawcommissionofindia.nic.in/
36	<i>United nation digital Library</i>	https://digitallibrary.un.org/record/3898912?ln=en
37	<i>United nation digital Library</i>	https://www.un.org/library
38	<i>Electronic information system for international law</i>	https://www.asil.org/coming-soon
39	<i>Agile law</i>	https://www.agilelaw.com/blog/13-free-sites-to-do-your-legal-research/
40	<i>Open text book library</i>	https://open.umn.edu/opentextbooks/
41	<i>Merlot open education research</i>	https://www.merlot.org/merlot/
42	<i>E-Gyankosh</i>	http://egyankosh.ac.in/
43	<i>Digital history</i>	http://www.digitalhistory.uh.edu/
44	<i>National Burro of economic research</i>	https://www.nber.org/
45	<i>Institution of education science</i>	https://eric.ed.gov/
46	<i>Open library of humanities</i>	https://www.openlibhums.org/
47	<i>Social science research network</i>	https://www.ssrn.com/index.cfm/en/
48	<i>Digital library of commons</i>	http://dlc.dlib.indiana.edu/dlc/
49	<i>National conference of state legislatives</i>	https://www.ncsl.org/aboutus/ncslservice/state-legislative-websites-directory.aspx
50	<i>Journal of research engine</i>	http://www.jurn.org/#gsc.tab=0
51	<i>Open access database</i>	https://oaister.worldcat.org/
52	<i>Research gate</i>	https://www.researchgate.net/
53	<i>Elsevier open access journals</i>	https://www.elsevier.com/open-access/open-access-journals

Important Legal Information Links :

SN	Important law websites	URL
1	Supreme court of India	https://www.sci.gov.in/
2	Bombay high court	https://bombayhighcourt.nic.in/
3	Law commission of India	https://lawcommissionofindia.nic.in/
5	Legal abbreviations	http://www.legalabbrevs.cardiff.ac.uk/
6	Find law	https://www.findlaw.com/
7	American bar association	https://www.americanbar.org/
8	Indian kanoon	https://indiankanoon.org/
9	Law guru	https://www.lawguru.com/
10	Advocatekhaj	https://www.advocatekhaj.com/
11	Ecourt services	https://ecourts.gov.in/ecourts_home/
12	Live law	https://www.livelaw.in/
13	Ebc reader	https://www.ebcreader.com/
14	Department of justice	https://doj.gov.in/about-us/introduction
15	Maharashtra district courts	https://court.mah.nic.in/courtweb/index.php?MenuID=1079
16	E-court mediation	https://districts.ecourts.gov.in/mediation-centre-19
17	Maharashtra judicial academy	http://mja.gov.in/Site/Home/Index.aspx
18	National commission for minorities	http://ncm.nic.in/homepage/homepage.php
19	National commission for scheduled castes	http://www.ncsc.nic.in/
20	National commission for women's	http://ncw.nic.in/
21	National human right commission	https://nhrc.nic.in/
22	Delhi judicial academy	http://www.judicialacademy.nic.in/
23	National judicial academy of India	http://www.nja.nic.in/
24	Center for alternative dispute resolution	https://dme.ac.in/research/centre-for-alternative-dispute-resolution/
25	United national human right commission	https://www.ohchr.org/EN/pages/home.aspx
26	Asian human right commission	http://www.humanrights.asia/
27	University grants commission	https://www.ugc.ac.in/
28	Mediation	https://www.mediate.com/products/pg1357.cfm
29	Mediation courses	https://www.mediateuniversity.com/
30	Law era	https://www.legaleraonline.com/
31	Law E- Resource Search Engine	https://shodhsagar.dnyansagar.in/2021/05/Law-search-engine.html

Open Access Law Journals:

SN	Name of Journals	URL
1	Harvard human right	https://harvardhrj.com/
2	Harvard Journal of Law and Gender	https://harvardjlg.com/
3	Harvard Journals of Law and Technology	http://jolt.law.harvard.edu/
4	The Journals of Criminal Law and Criminology	https://scholarlycommons.law.northwestern.edu/jclc/
5	European Journals of Legal Studies	https://ejls.eui.eu/



6	European Journal of Law and technology	http://ejlt.org/index.php/ejlt
7	Journal of Indian Law Society	https://jilsblognujs.wordpress.com/
8	Journal of Politics and Law	http://ccsenet.org/journal/index.php/jpl/index
9	Journal of International Law and technology	https://www.neliti.com/journals/journal-of-international-commercial-law-and-technology
10	Law review International	http://www.internationallawreview.eu/
11	Melbourne Journal of International Law	http://www.worldlii.org/au/journals/MelbJIL/
12	Stanford Technology law review	https://law.stanford.edu/stanford-technology-law-review-stlr/
13	Global legal information network	http://www.glinf.org/
14	JASTOR Open access Content	https://about.jstor.org/oa-and-free/
15	Colombia law review	https://columbialawreview.org/
16	African journals online	https://www.ajol.info/index.php/ajol
17	Akron tax journal	https://www.uakron.edu/law/lawreview/taxjournal/
18	American Bankruptcy Institute law review	https://www.stjohns.edu/academics/graduate/law/journals_activities/abi
19	American Society of International Law	https://www.asil.org/insights
20	Arizona Journal of Open access International law	https://law.arizona.edu/journals/ajicl/default.htm
21	Journal of Open Law Technology and Society	https://www.jolts.world/index.php/jolts/issue/view/1/showToc
22	Journal of Open Technology	https://journals.tdl.org/jodi/index.php/jodi
23	D-lib	http://www.dlib.org/
24	Stanford law review	http://www.stanfordlawreview.org/
25	Stanford technology law review	https://law.stanford.edu/stanford-technology-law-review-stlr/
26	Web Journal of Current legal Issues	http://www.bailii.org/uk/other/journals/WebJCLI/admin/wjclidex.html
27	Virginia law review	https://www.virginialawreview.org/
28	Corporate law advisor	https://www.claonline.in/
29	Lawyers updates	https://www.lawyersupdate.co.in/
30	Law magazine	https://lawzmag.com/

Tribunals and Authorities Links:

SN	Tribunals and Authorities	URL
1	Armed Force Tribunals	http://www.aftdelhi.nic.in/
2	Authority of Advance rulings	https://www.aarrulings.in/
3	Appellate Tribunals for Electricity	https://aptel.gov.in/
4	Central Electricity Regulation commission(CERC)	http://www.cercind.gov.in/
5	Telecom Regulatory Authority of India(TRAI)	https://www.trai.gov.in/
6	Securities and exchange board of India (SEBI)	https://www.sebi.gov.in/



7	Competition Commission of India (CCI)	http://www.cci.gov.in/
8	Income Tax Appellate Tribunals	https://itat.gov.in/
9	National Green Tribunals	https://www.greentribunal.in/
10	Cyber Appellate Tribunals	http://www.catindia.gov.in/

Conclusion:

In the age of ICT, most of the users use smartphones and laptops for their study purpose hence the user's requirements also change. The users want to access most of the information through digital media because it is easy to access at any time anywhere. Hence the user preferences given to e-resources for their research and study purpose. In the field of legal education also most of the researchers use e-resources as an information source for their study. E- resources are updated form and easy access for their study. In this paper includes most of the law information digital resources which are helpful to law researchers.

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9. <https://nludelhi.ac.in/home.aspx/>
<https://www.doabooks.org/>

Useful Online Databases for LIS Research

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ICT plays a significant role in academic sector including library and information science; it derives revolutionary changes in the profession of Library and Information Science and Electronic Information Resource is one of them. Online database searches have become common and a number of online databases become very popular in research due to their contents availability, searching facility and also specialisation in specific fields. Availability of variety of commercial and open access online databases is the backbone for the researchers in any field. This paper aims to find out various online databases those are useful for researchers especially in library science. Study also highlights the importance and usability of these databases in LIS research. 4 Commercial/Subscribed and 4 Open access databases are selected for the study.

Keywords: Online Databases, Open access databases, E-resources, LIS Research

1. Introduction:-

In the present era, Information and communication Technology plays a prominent role in every sector of human life, and education is highly impacted by ICT. During this COVID-19 pandemic situation ICT helps to academic sector to survive by providing variety of platform like virtual learning, by availability of digital information resources for research etc. WWW plays an important role in the transformation of traditional libraries into digital libraries. Due to advancement it became essential for researchers to adopt modern technology in research work. Information has become a necessity for everyone, and everybody needs information for some or other purpose. Availability of Information resources in digital form makes easier for teachers and research scholars to access information anytime and anywhere. A database is a computerised collection of logically related set of data or records about something that are stored and organised in the computer. The researchers, especially in the field of social science, need information on continuing basis. Therefore, most of the information systems and services have been developed in academic institutions and universities to satisfy these requirements of the researchers. It is essential to understand the need of modern researchers, to minimize their difficulties in research work. Availability of relevant databases and research tools to help researchers in all phases of research. An online database search is simply bibliographic research which is performed by an individual scholar or librarian using a computer and the internet. By connecting with a database research service, millions of records from thousands of publications in hundreds of databases can be searched for material on a topic.

2. Need of the study:

The need of the modern era is every researcher should do smart work to carry out their qualitative research smoothly. (Wisker 2007). It is essential to know the various advanced databases and availability of information resources which create healthy environments for researchers. Researcher finds difficulty in various stages of research, such as finding literature,

data collection techniques, writing reviews etc. (Casanave & Hubbard 1992). So here researcher describes various online databases those are useful for LIS professionals. Study will help to the LIS researchers to know the various types of online databases that will might useful for their research study. In the pandemic situation LIS researcher can use of these e-resources to fulfil their information needs and also to improve the quality of research.

3. Objectives:

The main aim of the present study is to know the concept of online databases and also investigate the various type's online databases useful for LIS researchers.

- To know the Commercial/Subscribed and Open access online databases useful for LIS research.
- To know the scope and features of the selected online databases.
- To know the different types of LIS information resources available under selected databases.

4. Scope and Limitations:

The study is intended to understand the various subscribed and open access online databases where the LIS literature is available. There are a verity of Commercial and open access databases available on the internet those are accessed through various search engines. Due to the limitation of the length of the paper researcher covered few popular online databases under LIS literature made available.

5. Methodology:

The study is based on the descriptive method of research. Researcher used survey method for finding various online databases those are available online. The selected databases are evaluated by its available contents. Various University sites and research organizations websites are searched to understand the role of online databases in research process. The selected databases arranged by alphabetical order.

6. What is Database?

- It is a searching tool that provides complete information of different resources from a variety of topics.
- The databases can provide full text articles or the complete bibliographic information, necessary to locate the needed article.
- Database is an organization of data files having information or reference material on a particular subject, or subjects.

6.1 Definition of Database-

- The *Oxford English Dictionary* – “database” as: “A structured set of data held in computer storage and typically accessed or manipulated by means of specialized software.”
- Database – is Collection of structural and organized related information which is accessible to the user on demand in automatic search by the use of the computer - (Gupta O P)

6.2 Online Database

An online database is a database accessible from a network, including from the internet. It differs from a local database, held in an individual computer or its attached storage, such as a

CD. Currently, there are several database products designed specifically as hosted databases, delivered as software as a service, products. Some of the differences are:

- The online databases are delivered primarily via a web browser
- They are often purchased by a monthly subscription
- They embed common collaboration features such as sharing, e-mail notifications, etc.

Some examples of online databases are: (a) Web of Science; (b) EBSCO; (c) Science Direct; (d) Springer Link; (e) ABI/INFORM; and (f) Scopus. (g) LISA; (h) Google Scholar etc.

7. Databases for LIS Research :

Library and information science is an interdisciplinary subject. Along with all other subjects, teaching and research are done in the library science. Though there are thousands of journals published in LIS around the world each year and indexed in various databases. It is impractical to study all the databases so, only selected databases are evaluated with its services, contents, facilities in this paper. The primary abstracting database service for locating LIS literature are Library and Information Science Abstracts (LISA), Library and Information Science & Technology Abstract (LISTA) Library Literature and Information Science (LLIS, formerly Library Literature). There is much overlap in materials between them, but each has its own strengths and weaknesses. Researcher highlights the some selected subscribed and open access databases those might useful for LIS researchers.

7.1 Subscribed/Commercial Databases for LIS Research:

7.1.1 LISA - (Library And Information Science Abstract)

LISA is an international abstracting and indexing service designed for library professionals and other information specialists. LISA provides bibliographic information about past and present developments in librarianship, information science, online retrieval, and publishing and information technology. LISA currently abstracts more than 500 periodicals from more than 68 countries and in more than 20 different languages. Since its inception in 1969, all aspects of librarianship, library users, information retrieval and more has been covered. *LISA* is updated monthly with more than 1,000 records added per update. (These details acquired from the ProQuest-CSA website)

Publication types of LISA

- Magazines
- Reports
- Scholarly Journals
- Trade Journals

Subject Coverage of LISA

- Information management
- Information technology
- Internet technology
- Knowledge management
- Librarianship
- Library management
- Library technology
- Library use and users
- Online information retrieval
- Libraries and archives

List of Selected Periodicals available in LISA

- Aslib Journal of Information Management
- Collection Building
- The Library Quarterly
- Library Resources & Technical Services



- DESIDOC Journal of Library & Information Technology
- Library Trends
- Journal of Academic Librarianship
- Public Libraries
- Journal of Documentation

7.1.2 LISTA – (Library and Information Science & Technology Abstract) LISTA is another international abstracting database that covers the Library and Information Science publications along with publications related to technology. LISTA's coverage begins in the 1960s and indexes more than 560 core journals, nearly 50 priority journals, and nearly 125 selective journals; plus, books, research reports and proceedings. Subject coverage includes librarianship, classification, cataloguing, bibliometrics, online information retrieval, information management and more. In order to get a better view for the subject coverage of LISTA three different searches are made in LISTA database with three different key terms Library, Information Science and Technology, the result does not give the comprehensive view, but indicates the areas that are generally covered in LISTA.

Subject Coverage of LISTA:

- Communication & Technology
- Computers in Education
- Educational Technology
- Information Resources
- Information Resources Management
- Information Retrieval
- Information Science
- Information Services
- Information Technology
- Internet Searching
- Libraries
- Library Science
- Library Users

7.1.3 Library Literature and Information Science Retrospective: 1905-1983

Library Literature & Information Science Retrospective: 1905-1983 is an archive index chronicling nearly 80 years of library scholarship. It includes thousands of citations that cover the innovations, controversies and people instrumental in the making of modern librarianship. Database contains more than 1200 indexed publications and more than more than 5,00,000 indexed articles. *It also* indexes hundreds of periodicals, books, book chapters, academic journals, conference proceedings and library school theses. This resource also includes multilingual coverage, with translated titles and English-language summaries from Europe, Russia, China, India, Australia and Latin America.

Subject coverage of LLISR: 1905-1983

- Automation
- Care and restoration of books
- Cataloguing
- Censorship
- Copyright
- Education for librarianship
- Electronic searching
- Government aid
- Indexing
- Library associations and conferences
- Personnel administration
- Publishing
- Rare books
- Reference services

The coverage of these online indexes overlaps, but isn't identical. Their search interfaces, although different in appearance, offer standard options for formulating basic and complex searches, combining search terms, displaying results, and saving, printing and emailing results.

7.1.4 Library Literature & Information Science Full Text

Library Literature & Information Science Full Text is a database of essential library and information science journals. It includes full-text, indexing and abstracts for journals covering all related subjects, including librarianship, classification and cataloguing. It contains more than 50 full text LIS journals those are non-open access. LLIS full text currently indexing and abstracts more than 430 journals and coverage available dating back 1980. It is a useful tool for study in more than just librarianship; Library Literature & Information Science Full Text covers subjects ranging from automation, censorship, government aid, public relations and more. Library Literature & Information Science Full Text also provides PDF page images of all full-text articles, including charts, graphs, photos and other important graphical information.

Subject Coverage of LLIS Full Text

- Automation
- Care and restoration of books
- Cataloging
- Censorship
- Copyright
- Electronic searching
- Indexing
- Preservation of materials
- Public relations
- Publishing
- Rare books
- Reference Service

7.2 Open Access Databases for LIS Research

7.2.1 Google Scholar

Google Scholar is a Web search engine that specifically searches scholarly literature and academic resources. It includes journal and conference papers, theses and dissertations, academic books, pre-prints, abstracts, technical reports and other scholarly literature from all broad areas of research. It contains full text links to a few of Tufts subscribed databases such as Emerald insight, EBSCO and scholarly articles that are available anywhere across the web.

Search Facilities

Google Scholar includes basic and advanced search options, but they are not as developed as the corresponding features in commercial databases. For example, the browsing options for variations of journal and author names are lacking. Google Scholar provides a simple way to broadly search for scholarly literature. From one place, you can search across many disciplines and sources: articles, theses, books, abstracts and court opinions, from academic publishers, professional societies, online repositories, universities and other web sites.

The search result of Google Scholar is varying. It may include a link to the full text of an article, an abstract or a reference. Search results are sorted by GS ranking system. The number of citations to a particular work seems to be important part of GS ranking system. Nevertheless the GS ranking is partly unclear.

Features of Google Scholar

- Search all scholarly literature from one convenient place
- Explore related works, citations, authors, and publications
- Locate the complete document through your library or on the web
- Keep up with recent developments in any area of research
- Check who's citing your publications, create a public author profile.

- Contains about 6, 650,000 items as PDF.

List of high impact factor journals on GS

Google Scholar provides list of top 20 impact factor journals

Sr. No	Title of the Journal
1	Journal of the Association for Information Science and Technology
2	Scientometrics
3	Journal of Informetrics
4	Journal of Information Science
5	The Journal of Academic Librarianship
6	Online Information Review
7	College & Research Libraries
8	Information Development
9	Journal of Documentation
10	Learned Publishing
11	The Electronic Library
12	Journal of the Medical Library Association
13	Aslib Journal of Information Management
14	Portal: Libraries and the Academy
15	Library & Information Science Research
16	Library Hi Tech
17	Journal of Librarianship and Information Science
18	Information Research-An International Electronic Journal
19	International Journal on Digital Libraries
20	New Library World

(Information accessed from Google scholar website on 6.1.2021)

7.2.2 Directory of Open Access Journals (DOAJ)

The Directory of Open Access Journals (DOAJ) is a free journal service, launched in 2003 at Sweden. DOAJ started with about 300 OA journals, the number has now increased to around 10000+ OA journals covering all areas of science, technology, medicine, social science, and humanities. To date, DOAJ contains 15,696 indexed journals of more than 5,55,7,222 articles with 80 languages and 123 countries. DOAJ is growing at a rate of more than one title a day.

Searchability of DOAJ

The DOAJ search screen is highly functional and well organized. The DOAJ main page provides three search options: Find Journals (a keyword search that can also be used to search for journals by title), Browse by Title, and Browse by Subject. The menu at the left-hand side of the screen provides additional options, such as viewing New Titles, Find Articles, Suggest a Journal, links to information about DOAJ, links to information for journal publishers (password protected) and authors. The Find Journals feature is very useful, but could be improved by including true keyword search functionality. The expandable Subject Tree is very useful. Each Subject list and sublist has its own URL, which can be added to library subject guides or pathfinders. This provides a list of fully Open Access, peer-reviewed journals in a particular subject area, which is automatically kept up to date.



Status of DOAJ Seal in Journals

The DOAJ Seal is a certificate of competence for OA journals that achieve a high level of openness. It is awarded to the journals that adhere to best practices and prime publishing standards. A total of 1,426 journals indexed by DOAJ have DOAJ Seal. To receive the Seal, the journal submitted in DOAJ must comply with the conditions.

Peer review status for LIS journals in DOAJ

Peer review is an important and integral part of the research and scientific publishing that validates the originality and quality of a paper. Peer reviewers are experts who deeply study the paper to pull out gaps and offer advice as to how to make them work more qualitatively. Many times a paper is rejected due to non-compliance with journal standards. The job of the peer reviewer is to make sure that the quality of the paper is high because if low-quality manuscripts are entertained, the reputation of the journal ceases in the scientific community. Majority of the journals 82 (53%) in LIS field are Double Blind Peer-Reviewed, followed by 32 (21%) peer-reviewed journals, 23 (18%) Blind Peer reviewed journals, 8 (6%) Editorial reviewed journals while as only two journals (1%) are open peer-reviewed whereas no information has been provided for 2 journals in DOAJ.

LIS Journals Available in DOAJ

It is evident from the data collected from DOAJ; 177 indexed Open Access LIS journals have shown their presence in a total of 43 countries. USA has the biggest contribution of 28 publishers which publish in Open Access Environment followed by Brazil (25), Spain (13), Indonesia (12), Poland (11), UK (8), Switzerland, Iran (5), Germany, Italy, Canada (4), Taiwan, Romania, and Cuba (3) while in the remaining countries, only one to two publishers are seen working in an open-access environment. A total of 15 LIS journals indexed by DOAJ have DOAJ Seal.

List of Selected Journals available on DOAJ

Journal of Information Studies & Technology	KULA	Record and Library Journal
International Journal of Web Research	Open Information Science	International Journal of Librarianship
International Journal of Information Science and Management	Regional Journal of Information and Knowledge Management	Frontiers in Research Metrics and Analytics
Brazilian Journal of Information Science	Marketing Libraries Journal	EduLib: Journal of Library and Information Science
Information and Communication Sciences Research	Webology	Urban Library Journal
The International Journal of Information, Diversity, & Inclusion	Nordic Journal of Information Literacy in Higher Education	Annals of Library and Information Studies
The Journal of Altmetrics	IAFOR Journal of Literature & Librarianship	LIBRES: Library and Information Science Research Electronic Journal
Knowledge Engineering and Data Science	Journal of Information Technology Management	Catalogue and Index

7.2.3 Dimentions Database

A Dimensions database is a partly free scholarly database launched by Digital Science in January 2018. Dimensions include journal articles and citation counts, making it a potential new source of impact data. The almost 92 million publications in Dimensions currently come from CrossRef, PubMed, Europe PMC (PubMed Central), Repack (Research Papers in Economics). It includes such resources as journal articles, books, and conference papers. As much as possible, each citation is linked to relevant grants, patents, and clinical trials. It is a more open and comprehensive data infrastructure that empowered users to explore connections between a wide range of research data. Dimension team worked closely with the research community throughout the project and that relationship continues to drive new developments. As a researcher, being able to find relevant information fast is crucial in our daily work. With Dimensions, users can get free access to a vast collection of curated research outputs and tools that help source exactly what they need.

Search Options:

Features of Dimension Databases

Instant Full Text Access

With just a single click, user can access the full text of millions of Open Access articles. If your university subscribes to Dimensions, the publications they license may also be accessible with a single click.

Full Text Search and Powerful Filtering

Dimensions full-text search offers a breadth of search results across journals and books. Rich filtering options provide powerful way to quickly curate search results to suit your specific needs.

Linked information at fingertips

Dimensions' linked database of grants, patents, datasets and clinical trials, along with its up-to-the-minute citation and Altmetric attention data, means user can view information in context. Means users can easy to get access of which patents and clinical trials are linked to a particular publication and also discover cited or used research.

Explore rich researcher profiles

Dimensions researcher pages are aggregated using advanced machine learning techniques that display the outputs of individual researchers, from publications to patents.

Connection to ORCID

System links researchers ORCID account with Dimensions so researcher can add publications from Dimensions to their ORCID record. An up-to-date publications list helps to make research more discoverable and ensure receive credit for full body of work.



7.2.4 Shodhganga ETD Database

Shodhganga is a repository of Indian theses and dissertations and it provides a platform for research scholars to deposit their theses and dissertations and make it available for the scholarly community worldwide in open access. It is designed on open-source digital repository software 'DSpace'. The Shodhganga repository has the facility to capture, index, and store, disseminate and preserves electronic theses and dissertations submitted by the Indian Universities. At present, there are 556 Universities have signed the MoU (Memorandum of Understanding) and 476 Universities are contributing in the Shodhganga repository and total 2,90,000 full text theses and dissertations submitted to the Shodhganga repository. Total 2143 full text LIS thesis and dissertations submitted on till 6 Jan 2021.

Search Strategy:

Shodhganga search screen is highly functional and well organized. User can find the title of thesis, research scholar and guide/supervisor name of latest submission. User can find university name those are participating in Shodhganga project and uploaded thesis on website. Users can also browse the catalogue through entering few key words related with his subject/research topic to get related thesis or proposal or research abstract. By clicking chapters researcher can access research thesis. Users also have facility to download chapter in his desktop.

Conclusion:

Searching proper information resources related with research work is important task researchers want to do. all the databases discussed here are stronger because of its subject coverage. Due to lack of awareness of these researchers have to face many problems during their research tenure. If researcher collects proper information sources then half battle is won. There are varieties of subscribed and open access LIS databases available online that make research work become easy. The above mentioned databases are essential for modern LIS researchers.

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Mobile Devices Application and Technology for Academic Libraries.

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Abstract:-

This paper highlights an introductory view about Library and information services on mobile devices. With a massive ten billion user of mobile phone around the world it is predicted that internet access from mobile devices will exceed from the desktop computer within five years. Mobile technology is motivating the younger generation to used modern gadgets for learning purposes. Latest technological developments present an overview of trends in mobile tools and applications for Libraries, including the internet mobile, mobile multimedia and SMS etc. It attempts to identify key issues including factors affecting implementation of mobile technologies. the focused on application of mobile computing and its possible applications that can be mobile with library services on the wed based environment Mobile technology will bring a big change in ICT and education system in this senior this study may be helpful in identifying and generating mobile based service for Libraries.

But in this senior all over world is facing Pandemic #Co-vide 19 & Mobile play big roll work at home, Teaching learning & Exam, Money, Transaction, Shopping, Games, Entertainment more Services providing by Mobile Devices.

Keywords: - Mobile Technology, Mobile Devices, Education System, ICT, learning.

Introduction:-

The mobile applications and technology has changed the way one connects and interacts with the world and mobile Library services can meet people's needs for information in fast-paced society. Information & communication technology ICT is the combination of information and communication technology (Dhiman, 2003Dhiman and Rani, 2012) has brought major Changes in everybody's life. The paper defines what the mobile Technology is how the traditional Library services are now moving to mobile Library information services. A Library may reach the remote users effectively by adopting of mobile technology in its services. Now users expecting or preferring. To do things online that would previously have required a visit to the library in person. The wireless technology and mobile phones are becoming an integral part of everyday life and are changing the way one connects and interacts with the world. According to Taylor and Starling (2004), around a third of a million new subscribers join the word's mobile phone services every day.



Fig: 1 Mobile Devices Application and Technology



Libraries should be exploring mobile devices as a way to connect with patrons. Creating a library application (APP). Mobile technologies being used in libraries for library resources that are mobile access to Library collections such as e-books, e-journals and special collections, that are supporting or extending traditional library services like reference enquiries and circulation, using mobile technology.

Libraries go with Mobile Technology

- It is easier to access
- It provides content ubiquitous
- It makes able to access new services
- It enables patron to connect via new medium
- It three times more capable than personal computer

Objectives of study: - This study explores the prospect of providing library services with mobile phones.

- 1 To know some mobile based application for information community.
- 2 To know the various operating systems and network service providers used in mobile phone
- 3 To know the impact of mobiles devices Academic Library

Mobile Devices in library and information Services.

- 1) **Electronic textbook:**-E-readers and tablets have new features that allow student to highlight and annotations to the text, just as they would with paper texts.
- 2) **E-readers:** - the latest generations take content delivery to new levels, allowing for wireless browsing, purchasing and delivery of content through these devices.
- 3) **MP3 Players:**-An iPod, iPhone or other MP3 player mobile devices can use in library for audio/video tours. With an iPods or MP3player, users can explore the library at their convenience, concentrating on the Part of the collection most relevant to their need.
- 4) **Mobile Phones/-Smartphone** :-Smartphone are class of mobile phone with -end capabilities such as stronger, extensive mobile computing systems, multimedia functionality, the present generation smart phones facilitate wider, quality software functionalities, high speed, web browsing website of the library, Librarians should come with a Smartphone app to access the library resources
- 5) **Tablets:** - Tablets are usually the one-third weight of a laptop, light and portable with a typical screen of 7 to 9 inches with a mobile operating system and touch screen display and a rechargeable battery in a single thin flat package.

Mobile Library Websites

Mobile web is simply a world wide web that is accessed through a mobile device ranging from a cellular phone to an iPod touch to Smartphone's. It constitutes the entirety of the internet and is not limited to websites that have been specifically designed for mobile viewing. Handsets and mobile phones which have Web capabilities can search and browse the internet from anywhere they can get a cellular signal. Websites that are made especially for the small screen appears as scaled-back versions of their desktop counterparts, often with a numbered menu system for quick access to content. (Krosi, 2008). The mobile Web opens up a world of knowledge that can be accessed on-the-go by shoppers, travelers, readers, listeners, and newshounds with an information need, the impact is also been felt in libraries all over the world.



One university library is already making it possible for students and researchers to check on the availability of lab computers while on their way to the library and so many initiatives introduced to make library services interesting and irresistible to the new generation library users again the library web site provides access to the catalog, databases, information about events and programs within the library, directory and location information, and directions on how to ask for help. A patron might think they are simply going to the library web site to look for a book title, rather than process the fact that they are navigating to the library's web site, which contains access to the catalog

This can be downloaded mostly from App Store for iPhone and Play store for android enabled operating system. Here are several examples of library Native apps New York Public Library (iPhone, Android; www.nypl.org/mobile-help), District of Columbia Public Library (iPhone, BlackBerry, Android; <http://dclibrary.org/appsandsocialmedia>), Seattle Public Library (iPhone, Android; www.spl.org/using-the-library/get-started/spl-mobile-app), MIT Libraries (iPhone, Android; <http://libraries.mit.edu/mobile-site>), North Carolina State University Libraries (<http://mobile.ncsu.edu/applications>) developed a Library Mobile Tour (iPhone, Android) and a historical campus guide, Wolf Walk (iPhone) (Kim,2013)

Mobile Library Application

Several mobile library applications or apps are designed to cater and improve the services of libraries most especially academic libraries, with the ubiquitous and pervasive technology in the 21st-century apps or application app is shorthand for application or software that typically runs on a mobile device and are classified into a hybrid, native and web application. This section outlines and discusses some of the known mobile library applications and mobile learning

I. Boopsie for Libraries: It is a mobile solution for libraries developed by a company called Demco, it aggregates libraries across the world and provides access to their catalogs, library location, hours and events, and others, and for a fee some of their Customers include the Seattle Public Library, Los Angeles Public Library, New York University Law School and Brown University. Access at <http://www.boopsie2.com/>

II. AirPac (Innovative Interfaces): It offers a mobile version of the Innovative Interfaces for the library catalog and also incorporates features such as cover images, integrated library locations with Google Maps software, request and renew items, and more. Contact **Access:** at <http://www.iii.com/products/airpac.shtml>.

III. Library Anywhere: It is created and sold through Library Thing; Library Anywhere is a mobile catalog for any library. It includes mobile Web and apps for iPhone, blackberry, and android. Prices range from \$150 annually for schools to \$1,000 for universities (additional fees may apply). **Access at** <http://www.librarything.com/forlibraries>. (Barile,2011).

IV. Catch: This app allows users to create notes (via text, voice, or video) and save them to 'spaces' or 'Cloud' as it is commonly known, the basic free plan offers users three spaces which can be private or shared with other users and 70MB of content per month or slightly more. Access at <https://catch.com>

V. Science Direct: Science directs is under the Elsevier which is a world leading publisher journal in fields such as Physical Sciences and Engineering, Life Sciences,



Health Sciences, and Social Sciences and Humanities. It offers the mobile version known as SciVerse, the app is subscription-based. Access at <http://www.info.sciverse.com/sciverse-mobile-applications/overview>

VI. Read cube Read cube is a mobile app that enables its users to search Pub Med and Google Scholar from within the application itself. Users can take notes on their PDFs as they read and can later search within their annotations. Access at (<https://www.readcube.com>)

VII. Access My Library: It is a free mobile app that is available both on Android and Apple Ions; it works in conjunction with a college or university library's databases. Students and faculty would have to log in with their university email addresses to access the online resources available to them from the Gale database, it allows the students to download full-text articles from electronic journals and other scholarly publications and read them on their mobile devices.

Mobile Learning Application:

Evernote: with Ever note users can create text, video, and audio memos. All content within Evernote is searchable, including text within snapshots. Notes can be synchronized to Mac, PC, and Web. Ever note works with iPhone, iPod touch, iPad, Android, BlackBerry, Palm, and Windows Mobile. Price: Free. **Access at:** <http://www.evernote.com/about/download> (Barile, 2011). *Zotero:* is open-source citation management software. The mobile version of Zotero allows you to access and edit your Zotero library on your tablet or mobile device. Zotero also bookmarks and lets the user save items from your mobile device's browser directly to your Zotero account. While there are no official Zotero apps for mobile devices, there are several third-party solutions like Android Apps: Zandy, Zojo, Zed Lite etc. *Udemy:* udemy is an application designed for learning about all kinds of subjects from web design and photographs to data analysis, personal development; with internet connection is not required as long as all necessary download has been made in an area in which a user wishes to learn about. Incorporates audio, video, text to enhance the learning experience, access at <https://udemy.com/android>

Coursera: is a mobile learning application with collaboration with various universities and organizations, you can improve your skill in the various subject area with Coursera from business analytic, to learning various computer programming language such as Java, PHP, etc. <https://www.coursera.org/Dropbox>. Drop box is online cloud storage, which is available both on mobile and PC, with drop box a user can store, sync, and share files online and across computers. Access your drop box, download files for offline viewing, and sync photos and videos to your drop box from your mobile device. Drop box works with iPhone, iPod, Android, and BlackBerry. **Access:** <https://www.dropbox.com/any where> (Barile, 2011). *History: Maps of the World.* This app was developed by **Seung-Bin Cho** it showcases

High - resolution historical maps of the world from the 4th to the 20th centuries. Features include category/era views and keyword searches. History: Maps of the World works with iPhone, iPod touch, and iPod. **Access:** <http://itunes.apple.com/us/app/history-maps-of-world/id303282377>

Mobile Technology & Academic Library:

Academic library is found in the higher education institution of learning. Academic library is the backbone of a college, polytechnic and university because it is charged with the

provision of all educational needs of the institution where it is found. They provide all the teaching. Learning and research need required by researchers, students and faculty members to ease their information need as such there are regarded as an integral part of the college, polytechnic or university it serves. The libraries are the heart of such institutions and without them, the body cannot last long. (Chaturvedi, 1994)

Dr. Ranganathan library is a growing organism as such it is dynamic and tends to adapt to technological changes. Technological changes are enhancing the technological changes involve the use of electronic information resources, internet, social media tools and technology According to George (2019) mobile computing devices have some characteristics, these include but not limited to the following:

- a. Persistent access to the Internet.
- b. A variety of downloadable applications
- c. Used as a communication device, specifically phone and SMS text)messaging,
- d. Small enough to carry in pocket or handbag

Conclusion:-

Mobile phones are inevitable tools of ICT application of mobile phones to provide library and information services will open pathway towards this trend. Mobile technology has become boon to the libraries. A library may reach the remote users effectively by adopting of mobile technology in its services. Mobile phones are inevitable tools for information communication. Human beings in a society user mobile phone to communicate thoughts, facts conversations, in general, information. The dissemination of processed information is a common factor in a civilized society. Mobile Technology is fast becoming the preferred method for connecting to the internet, especially for people on the go. More and more changes are expected after 2010 year in the field of mobile technology and its application to libraries.

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Modern Information Sources

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Abstract:

The libraries in accordance with the principle of wide and equal public access to library and information resources, and as a democratic social institutions contribute to social stability, preservation and development of the spiritual and scientific potential of society. In modern age there are so many types of information sources available for users. This paper provides all information about general types of print, electronic and online sources of information.

Keywords: Information sources, journals, databases, internet, e-sources.

Introduction:

Document enable us to transfer information from one place to another place, one generation to another. Invention of printing machine by Johannes Gutenberg in 1452 has contributed immensely to printing industry and has significantly changed the social, economic, political, educational, scientific, technological and cultural activities of human beings. The information given to the people using the modern technology is called the modern sources of information. The modern sources of technology is more easy and reliable than the older methods. In the modern days information is spread easily and faster. Newspaper, radio, television, internet are some examples for modern sources of information. An Information Source is a source of information for somebody, i.e. anything that might inform a person about something or provide knowledge to somebody. Information sources may be observations, people speeches, documents, pictures, organizations etc.

Sources of information:

- 1. Primary Sources:** Primary sources of information are the first published records of original research and development or description of new application or new interpretation of an old theme or idea. There are original documents representing unfiltered original ideas. Primary sources are unorganized sources, which are rather difficult to use by them, the secondary sources helps us to use these. These are important sources of information. Primary source is a term used in a number of disciplines to describe source material that is closest to the person, information, period or idea being studied. Primary sources include historical and legal document, eye witness accounts, result of an experiment, statistical data, pieces of creative writing. In the nature and social sciences, the result of an experiment of study are typically found in scholarly articles or papers delivered at conferences, so those articles and papers that present the original result are considered primary sources.
- 2. Secondary Sources:** A secondary source is something written about a primary source, which usually has been modified, selected or rearranged for a specific purpose. These contain organized repackaged knowledge rather than new knowledge. You can think of secondary sources as second hand information. Secondary sources are more easily and widely available than primary sources. These not only provide digested information but also serve as bibliographical key to primary sources of information.



Types of Information Sources:

Information sources are all around us and can come in different formats. The sources you chose for your research will depend on your information need.

1. Books: Books cover virtually any topic, fact or fiction. Useful for the complete background on an issue or an in-depth analysis of a theory or person. It can take years to publish, so may not always include the most current information.

2. E-books: E-book means a digital version of a traditional print book. It is available on internet and designed to be read on a personal computer or an e-book reader.

3. Newspapers: Newspapers are usually published as dailies or weeklies. Provides very current information about events, people. Nowadays many newspapers are available on the Internet, some for free and others by subscription.

4. Magazines: The magazines usually refers to the non-scholarly publication written by journalists or professional writers.

5. Reference Books: Reference books include facts, figures, addresses, statistics, definitions, dates etc. These are useful for finding factual or statistical information or for a brief overview of a particular topic.

6. Scholarly Journals: Scholarly journals analyze and report on original research. These are written by experts and scholars in the field, publish longer articles using scholarly language.

7. Trade Journals: Trade journals include report and issues in a given industry. Trade journals are written by experts in the industry, publish articles that standards from the field. Trade journals include charts, graphs, tables and illustrations.

8. Handbook: A handbook is a compilation of miscellaneous information in a compact and handy form. It contains data, procedures, principles, including tables, graphs, diagrams and illustrations.

9. Conference Proceedings: A conference is a meeting where people in specific subject fields get together and share information by having discussions, presenting papers, posters etc. Sometimes, conference proceedings also include questions from participants and answers and clarifications from the authors of papers.

10. Encyclopedias: Reading an encyclopedia article is a good way to get a grasp of the range and depth of the topic. Articles in encyclopedia are written by subject experts for beginners.

11. Dictionaries: Dictionaries are used to define words, to verify spelling, for word pronunciation, to check on usage or to determine the history of a word.

12. Biographical Sources: Biographical sources provide information on the lives of individuals. Focus may be on a single individual or on a group of people.

13. Geographical Sources: Geographical sources provides information about a location. Map, Atlases, Gazetteers and travel guides these are some examples of geographical sources.

14. Almanacs: Almanacs are typically annual publications and contain statistical and other general information in a particular subject.



15. Patents, Standards and Trade Catalogues: A patent is a form of intellectual property that gives its owner the legal right to exclude others from making, using, selling and importing an invention for a limited period of years, in exchange for publishing an enabling public disclosure of the invention. Standards are units or measures in terms of weight, size, length, quality, composition, process of production etc. Trade catalogues are lists of catalogues brought out by the publishers, manufacturers and distributors of various types of materials, products or services.

16. Internet: The large system of connected computers around the world that allows people to share and exchange information and communicate with each other. E-books, scholarly journal articles, videos, movies, music, games and opportunities to interact with others using email, chat and live voice and videos and lots of other information available on internet.

17. Website: A website is a collection of web pages and related content that is identified by a common domain name and published on at least one web server. Website an information resource suitable for the Internet which is accessible through a web browser.

18. Electronic Material: Now with the internet access many printed resources are available electronically. Digital format of traditional information sources is available as e-books, e-journals, web pages, full text Databases, CD-ROMs, DVDs, online public access catalogues.

Conclusion:

Information technology and internet has made today's users self dependent to some extent. New generation of users are fast learners and they need proper direction. There is a phenomenal amount of information available in print format, online, via web-pages, blogs social media and so on. As there is so much information available and because such information can be published quickly and easily by anybody and at any time, it is important that you are vigilant in choosing reliable sources. Whenever you use the internet, remember that the authorship, credibility and authenticity of internet documents is often difficult to establish. So you need to be vigilant and take care when using the internet sources.

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History and Development of Libraries and Library Science Education in India

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Abstract:

The National Library of India, “since education is a process of interaction between learners and information sources, the library serves as a learning resource center. Formal schooling beyond the primary years may be unattainable for most, but all should be able to utilize the library as a “learning resource center”. Unfortunately, the development of libraries in this nation has not been uniform, leaving many without access to adequate facilities and unable to seek the guidance of library professionals. This paper discusses the history and development of libraries in India, as well as the development of the country’s formal library and information science education system. It also outlines the current status of LIS education and addresses some of the contemporary issues faced by LIS students and professionals. The History and Development of Libraries in India

Introduction :

India is the world’s second most populous nation, with nearly 1.2 billion inhabitants as of July 2010. 55% of India’s citizens are poor and nearly 40% are illiterate³. Although compulsory education is required for children until the age of 14, only 15% of Indian students reach high school⁵. In a nation plagued with high illiteracy and wide spread poverty, libraries have great potential to transform the lives of India’s people. As noted by Dwarika Banerjee, the director of the National Library of India, “since education is a process of interaction between learners and information sources, the library serves as a learning resource center”⁶. Formal schooling beyond the primary years may be unattainable for most, but all should be able to utilize the library as a “learning resource center”. Unfortunately, the development of libraries in this nation has not been uniform, leaving many without access to adequate facilities and unable to seek the guidance of library professionals. This paper discusses the history and development of libraries in India, as well as the development of the country’s formal library and information science education system. It also outlines the current status of LIS education and addresses some of the contemporary issues faced by LIS students and professionals. The History and Development of Libraries in India.

The History and Development of Libraries in India:

The first libraries created in India were tied to the Buddhist educational system, established in the 5th century BC. Although it is believed that the reading and writing of manuscripts in India began around the 4th or the century BC⁷, no evidence for writing dated before the century BC exists. Prior to this, knowledge was passed from teacher to student through oral communication. “Primarily religious and the privilege of the priestly class, the vast literature in ancient India existed in oral communication only and was not available in writing”⁹. Upon the development of writing in India, Buddhist educational institutions began to transition from oral to written systems of instruction. Shortly thereafter, libraries began to emerge at Buddhist schools. Ancient Indian libraries were established primarily in religious,



academic and royal settings. Records attributed to Chinese Buddhist travellers from the 4th through 7th centuries AD note the existence of monastic and university libraries as well as libraries attached to palaces. Non-university libraries connected with religious sects hoping to preserve the “literary heritage of their faiths” were also common. Many religious temples had colleges with attached libraries that were open to all members of the community who came to the temple for worship. Private royal libraries and those possessed by scholars and the wealthy increased in number and size between the 13th and 18th centuries but were primarily off-limits to the public. During the 17th and 18th centuries, as Europeans constructed settlements in India, Christian missionaries established printing and libraries with the goal of spreading religion. Throughout the 18th and 19th centuries, academic institutions with attached libraries were founded in India by British colonists. These libraries are the basis of India’s modern academic libraries. Until the 19th century, libraries were created and used almost exclusively by royalty, the wealthy, scholars, and religious/monastic organizations. “The early libraries did not serve as an instrument of mass education... The modern concept of a library being a service institution was missing”. By the middle of the 19th century, some cities had subscription libraries but as in the United States, these were only used by upper class citizens who could afford membership. The general public still had little access to libraries. In 1835, private sources founded the Calcutta Public Library as an institution to serve the public. In 1902, the Calcutta Public Library was merged with the Imperial Library at Calcutta (established in 1891) to create The National Library of India. In 1885, the Indian National Congress was founded, prompting a rise in Indian nationalism and stimulating public interest in libraries. India’s public library movement began in earnest in 1906 after Sayajrao Gaekwar III, the Maharaja of Baroda State, visited the United States and was “greatly impressed by the role played by public libraries in the advancement of education”. He appointed William Borden, an American librarian from Connecticut, to oversee the formation of a public library system in Baroda. Although this library system had deteriorated significantly by 1947 due to lack of state support, the seed for India’s modern public library movement had been planted. In 1948, one year after India gained independence from the British, the Madras (Tamil Nadu) Public Library Act was passed. Madras was the first state post-independence to introduce legislation with provisions for a public library system. Librarian, professor and library advocate S.R. Ranganathan developed and campaigned for library acts in all Indian states and during the second half of the 20th century, nine other Indian states followed suit to “enact library legislation for the establishment and maintenance of public libraries.

Although the national government introduced “Five-Year Plans” in 1951 to improve library service and access for all, India’s Parliament has yet to pass any national library Legislation. Under India’s constitution, libraries fall under state jurisdiction and each state is responsible for developing and maintaining its own libraries. Presently, there are approximately 59,000 public libraries in India, but the majority of these offer only small, out dated collections, limited hours, and under-qualified staff.

LIS Training and Education:

India’s formal LIS Training and Education India’s formal LIS training and education programs began in 1911 when Borden established a library science training course at the Central Library in Baroda. A handful of years later, in 1915, Punjab University’s librarian As a Don



Dickinson established a training program for working college and university librarians. In 1929, the Madras Library Association began offering a certificate course in librarianship. Two years later, the course was taken over by the University of Madras and in 1937, converted into a yearlong postgraduate diploma. In 1946, the first Department of Library Science was created at the University of Delhi and in 1951, the university began awarding MLIS degrees rather than diplomas upon program completion. This was the first full-scale MLIS program in India. Over the next dozen or so years, LIS departments were established at six other universities. Currently, India has over 100 institutions offering LIS programs at various levels. Distance learning programs and correspondence classes are offered at more than two dozen institutions³¹. Eight different LIS certificates and degrees are offered by educational institutions in India. These include a certificate course in Library and Information Science (C.Lib.Sc.), a diploma in Library and Information Science, the Bachelor of Library and Information Science (B.Lib.Sc./BLIS), the Master of Library and Information Science (M.Lic.Sc./MLIS), a Postgraduate Diploma in Library Automation and Networking (PGDLAN), the Master of Philosophy in Library and Information Science (M.Phil.), a Doctor of Philosophy in Library and Information Science (Ph.D.), and a Doctor of Letters in Library and Information Science (D.Litt.) Additionally, several institutions offer an Associate ship in Information Sciences, which some universities consider to be equivalent to the MLIS degree. Unlike library employment requirements in the United States, LIS students in India are not required to obtain an MLIS in order to obtain librarian positions after program completion. Although some job listings indicate a preference for or requirement of a Master of Library and Information Science rather than a Bachelor of Library and Information Science, both are designed to prepare students for professional positions in college and university libraries or for school librarian positions. Generally, those possessing a BLIS will be limited to junior professional positions while those possessing an MLIS will be able to obtain senior professional positions. Certificate and diploma courses train students for junior level or semi-professional jobs, including library clerk and library attendant positions.

Issues in LIS :

India's library and information science field face a number of significant issues. Perhaps the most pressing of these is the extreme inequity in access to information and distribution of library resources and services from one region to the next. While some areas have adequate facilities and up-to-date materials, many others do not. Rural areas in particular lack sufficient library and information resources. While ten states have passed library legislation to provide access to all, the other have not. As stated by Dwarika Banerjee, the director of India's National Library,

On one end of the spectrum the country can boast of a highly specialized information retrieval system, but at the other end stands the common man who has no access even to basic reading material or advice because the lack of a public library network spread throughout the length and breadth of this vast country. While there is an "information flood" in some places, there is an "information drought" in many others. Library and information science professionals are also faced with the task of providing information access to the large segment of the population that is illiterate. Individuals who lack basic reading abilities may have an even greater need for library services and guidance from information professionals than those who are literate, due to their inability to make use of print materials without assistance. In India, as in the United



States, one of the most critical LIS issues relates to the role and significance of traditional libraries in an increasingly technological and information-centred society. While technology is rapidly changing and it is necessary for individuals to become fluent in its use, the basic issue of literacy is still huge in India. With nearly 40% of India's population-and over 50% of its female population-unable to read, it is hard to argue that focus and resources should be shifted to the information and technology areas of the LIS discipline, especially if at the expense of basic library services and literacy support. It is imperative that India's libraries encourage literacy, but it is also essential that they keep pace with the technological advancements and new information formats being utilized by the rest of the world.

Another major issue affecting library and information science professionals and educators is that of LIS program accreditation. In India, there is no overseeing accrediting body to ensure that programs meet minimum standards related to curriculum, faculty qualifications, materials, facilities, or evaluation methods. Although the national government's University Grants

Commission recommends a model curriculum for LIS programs to follow, most schools do not apply these suggestions and instead opt to design their own curriculums. This results in substantial disparities from one program to the next and a lack of consistency in LIS education.

Because programs are not required to report to any accreditation agency, many institutions' curricula are out-of-date and do not reflect the changing needs of the LIS field or the trend toward automation and technology in libraries. A lack of relevant computer and technology courses and practical exposure leaves many graduates ill-prepared to work in modern libraries upon graduation. As noted by P.K. Jain of the University of Delhi's Institute of Economic Growth, "most of the computerized libraries suffer from paucity of competent personnel at top and middle level managerial positions". Adequate training on the use of information technology is severely lacking at programs offered by rural educational institutions in particular.

Those currently enrolled in LIS programs also must deal with the severe lack of resources and quality faculty available at most educational institutions. Because there is no required accreditation process for LIS programs, many schools have been established without adequate facilities or properly trained staff, resulting in subpar student training and education. Many schools do not offer access to the latest reference sources or textbook editions and most lack well-equipped computer facilities. Access to electronic databases is limited, often due to the prohibitively high cost of subscribing to foreign databases. Many schools have no libraries and others have libraries with inadequate or out dated collections. As a result, students of these programs graduate with deficiencies in many practical areas of librarianship as well as insufficient knowledge of the most current theory and research.

Finally, the job market for India's library and information science professionals is grim. LIS programs graduate numbers far in excess of market demand, resulting in prevalent underemployment and unemployment. The large number of schools graduating students despite a lack of adequate facilities has "resulted in mass production of substandard library professionals" who are not qualified to work in libraries, further exacerbating the problem of unemployment. The wages for library and information science professionals are also quite low in India, creating a situation where even those who are able to find work may not be able to earn a living wage.

Conclusion :

For some of the more difficult issues faced by India's library and information science field—for example, literacy and equitable access for all—no immediate solutions are obvious. These issues will likely require major governmental intervention and changes in centuries-old cultural traditions and social structures. However, it seems that many of the other issues presented could be solved or alleviated by establishing an accreditation process for LIS programs. Accreditation would standardize the curriculum and place in effect minimum requirements for facilities and resources, helping to ensure that students are well-prepared for the workforce upon graduation. Elimination of substandard programs would presumably also reduce job market oversaturation, as fewer programs should produce fewer graduates overall, thus aligning job market supply more closely with demand. All of these changes should improve the job prospects for LIS professionals and increase the quality of library workers, benefitting both libraries and their users

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Role of Libraries in Covid Pandemic

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Abstract:-

This paper underlines the different jobs of library experts during the pandemic circumstance like COVID 19. It likewise recognizes the promotion job that Library Professionals have taken up. It follows the quantity of computerized stages accessible all throughout the planet. It additionally advances the utilization of web-based media/networks. Library Professionals can uphold the whole local area in their academic undertakings. The part of the Library Professionals is to follow down data according to the client prerequisite, go about as a data disseminator, and coordinator of information through the differed data pools. Library Professionals can show their aptitude with the help of involvement with expansion to the fluctuated abilities they need. Library Professionals can give E-substance, data connects, their obligation to client assistance. Therefore the part of Library Professionals characterizes the entire local area another method of taking care of job and gets the data distantly in the time of a lockdown/pandemic circumstance. This examination helps the Library Professionals to improve their range of abilities according to the intense conditions and serve the data like a mindful resident of the country.

Keywords: Libraries, E-Resources, COVID 19, online class platforms

1. Introduction:-

Humankind has confronted numerous extreme pandemic circumstances since the beginning where some of them were more perilous for the entire local area of people. This time indeed every nation is confronting a predicament, battling with a secret adversary called (COVID-19). Covid alludes to a group of infections. In the present circumstance, the part of the Library Professionals is the most critical to serve the entire local area through a computerized stage. Libraries are perhaps the best spot that anyone can proceed to acquire information without the assumption for purchasing something. Libraries likewise fill in as a life saver for colleges, universities and understudies, specialists, experts, and numerous individuals in our general public. Covid is another infection which is spreading everywhere on the world quickly. In the vast majority of the cases, individuals tainted with the COVID-19 infection experience sickness and recuperate without requiring unique therapy. Individuals of higher age gatherings and those with hidden clinical therapies like dialysis, diabetes, respiratory diseases, cancer etc. are bound to create significant issues. In this pandemic circumstance of COVID 19, the actual library frameworks are completely adhered due to keeping up the standards of social separating and likewise help to defeat the spread of infection contamination.

2. Objectives:-

- To examine the different kinds of advanced stages accessible all throughout the planet.
- To carry out the various laws of library science given by Dr. S. R Ranganathan, Library Professionals give the perfect data at the perfect time in the correct structure to its various sorts of clients.
- To give the subtleties of E-learning stages accessible all throughout the planet.

- To characterize the duty of a Library Professionals to serve an alternate gathering of the local area like specialists, understudies, researchers, perusers, and so forth.
- To talk about the different conventional jobs of Library Professionals and in this current circumstance of COVID19.To examine the significance of Library Professionals in this pandemic circumstance.
- To know the kinds of assets and administrations given by the various sorts of the libraries during the lockdown time frame.

3. To examine the different difficulties &how Library Professionals are managing difficulties in this pandemic circumstance of COVID 19.

- Towards examine different foundation of advanced intelligent study halls. To give the subtleties of the showing stage for the employee/Senior authorities of the association.
- For advance a solid climate for the whole society through online media stages.
- Towards examine the social drive of different libraries or Library Professionals.
- For advancement free Wi-Fi access and areas of interest.
- Toward giving shrewd admittance to data in E-Media/Formats.
- For keep up and rebuild the accessible assets and data.
- For characterizing the different significant jobs of the Library Professionals as an additive of data.
- For putting together preparing and ability improvement programs for subordinate staff.
- For knowing the future working state of the library framework in this season of the pandemic.
- To exchange about different connections of e-papers and magazines.
- To convers ate about the powerful use of Library Management devices: Extend the checkout date of Books.

4. Difficulties for library professionals during Covid 19:-

- Entirely over the world, Library Professionals are confronting various difficulties which administrations to offer and how to deal with these circumstances of lockdown, going from negligible limitations to full conclusion.
- University and colleges, universities Libraries, colleges, universities libraries are likewise shut and numerous cutthroat tests, just as scholarly tests, are as yet forthcoming, hence in this pivotal time Library Professionals can serve those understudies of our country, they need data through the advanced stage.
- An important part is human instinct to feel from ordinary to miserable, pushed, befuddled, and frightened/furious during an emergency. For Library Professionals the greatest test to adapt up to these conditions during this lockdown and draw in the entire local area in a solid climate.
- The most crucial for opening the libraries for clients under the public authority rules and human interest. Library administrations limitation or shutting a library for the accompanying social
- Step by step instructions to tackles the above mentioned challenges by the library professional's society during Covid 19
- Library Professionals can give Open sources, Open Course products/OERs, Open Learning assets, Webinar, Virtual Classrooms, ORCID, Citation age: Mendeley, Zotero.

- For providing data assets to clients - "Various kinds of administrations, assortments can be connected together and give access on electronic stages".
- Provide the libraries offices for the clients under the legitimate government rules and human interest.
- The upmost job for the Library Professionals can assume a significant part to serve the whole local area accordingly to characterize the different jobs of Library Professionals in this pandemic circumstance of COVID 19 is vital.
- By following the public authority rules Library Professionals can break the chain of Covid just as offer the various types of assistance distantly.
- For collecting the real information and convert it into valuable data that will help the entire local area of various fields precisely.

5. Customary roles of library professionals:-

- The Library Professionals' fundamental jobs are Customer Service, Community Outreach, Cataloging, and Administration.
- The Library Professionals can assume a basic part in making its clients' data educated and connect the computerized partition that exists at various levels.
- For present the clients with an open access framework/assets.
- For present the Library Professionals as an innovative watchman, as an educator, researcher, partner job between the various kinds of clients.
- At the present time in the Modern world, the job of library experts is changed over from conservator of information to facilitator of information in a successful manner. The principle significant elements of Library Professionals are distinguishing proof of inquiry/issue, to choose, to get, to put together, to save, and scatter data. Quick reaction should occur in all the previously mentioned territories. It is an extraordinary test for Library Professionals to stay at the forefront of the calling to serve the entire local area.

6. Jobs of library professionals in pandemic situation like covid-19:-

- To give the data with respect to the accessible different advanced stages for Users
- During the lockdown time frame in the America, "The Public Emergency Library" is created by the Internet document web journals which has a wide scope of assortment around 1.4million books on its computerized library stage.
- The Library Professionals can give different online computerized stages where clients can undoubtedly get to their data. These online computerized stage connections can be shared on association sites just as through web-based media stages•Library Professionals can make another application with uninhibitedly accessible e-substance to get to various assets on a solitary stage.
- In India, during the lockdown time frame, all individuals couldn't move starting with one spot then onto the next. The actual interface of Libraries previously shut down to follow the lockdown conditions yet numerous libraries all throughout the planet offer its computerized assortment for the entire local area for simple access. Assist those individuals who are curious about advanced apparatuses.Library Users who have library cards or not, can undoubtedly access and exploit accessible e assets like eBooks, e-diaries, and online projects offered by various colleges, different libraries like Panjab University, NDLI,JNU Delhi Public Library etc.

7. Some of Important online platforms are:-

7.1 UG?PG MOOCS:- Link: <https://ugcmoocs.inflibnet.ac.in/>:- SWAYAM is a program started by Government of India and intended to accomplish the three cardinal standards of Education Policy viz., access, value and quality. The target of this exertion is to take the best showing learning assets to all, including the most impeded. SWAYAM looks to connect the computerized partition for understudies who have heretofore stayed immaculate by the advanced transformation and have not had the option to join the standard of the information economy.

7.2 e-PG Pathshala:-

A door to every Postgraduate Course (<http://epgp.inflibnet.ac.in/index.php>): It is a drive of the Ministry of Human asset improvement (MHRD) under its National Mission on Education through ICT (NME-ICT) which is executed by the University Grant Commission (UGC). A entryway which centers around top notch colleges, universities in frameworks, The helpful investigation materials can be effortlessly downloaded by the various sorts of client for disconnected use with no limitation on downloads. Portable application based e-PG Pathshala Library is likewise dispatched by MHRD and NCERT which can be downloaded through iOS, android, and windows framework and can see the video, text, educational plan, and periodicals and furthermore tune in to sound of study material from class 1 to 12. The understudies of colleges, universities level can get simple admittance to all instructive material, including course books, periodicals, sound, video and so forth additionally print and non-print materials identified with study are accessible through e- PG Pathshala.

7.3 E- Shodh Sindhu:-

In light of the suggestion of an Expert Committee, the Ministry of HRD (presently renamed as Ministry of Education) has shaped e-ShodhSindhu consolidating three consortia drives, to be specific UGC-INFONET Digital Library Consortium, NLIST and INDEST-AICTE Consortium. The e-ShodhSindhu will keep on giving current just as authentic admittance to in excess of 10,000 center and companion inspected diaries and various bibliographic, reference and genuine data sets in various orders from countless distributers and aggregators to its part establishments including midway subsidized specialized organizations, colleges and universities that are covered under 12(B) and 2(f) Sections of the UGC Act.

7.4 DELNET (<http://www.delnet.in/>):

It was at first upheld by the Department of Scientific and Industrial Research, Government of India (DSIR), National Information System for Science and Technology (NISSAT). It was completely upheld by the National Informatics Center (NIC), Ministry of Culture, Government of India, Department of Information Technology, Ministry of Communications and Information Technology. It was enlisted as a general public in 1992. It advances the sharing of assets among the library and goes about as an extension by gathering, putting away, dispersing data, and helps in logical examination, specialized direction, arrange in assortment improvement, and works with reference, conveyance of records and trade of data to nearby, public and worldwide level. Public Program on Technology Enhanced Learning (NPTEL) (<http://nptel.ac.in/>): It is a joint drive of the esteemed establishment of India IITs and IISc. Under

this drive, different online courses of various fields are accessible on a solitary stage and affirmation in different themes beginning from designing to humanities.

7.5 SWAYAM:-

SWAYAM is the India's first Massive open online course stage which is a started by the Indian Government and exceptionally intended to accomplish the essential goals of Indian Education Policy. This stage can be effectively available whenever from anyplace. It gives a solid stage for information society and additionally gives an advanced unrest in the field of instructing. In this Covid19 circumstance this sort of stage is a fundamental item for public information development and gives a spine backing to youthful students. The principle objective of this stage is to give the best educating learning stage and taking in assets to understudies from class 9 to post graduation.

7.6 The courses accessible on SWAYAM stage are arranged into 4 sections –

- The SWAYAM is providing printed examination/perusing material in Text/picture structure which can be effectively downloadable.
- In between Some tests and tests which are for self-appraisal.
- For getting the uncertainty free from the students, an online conversation discussion is accessible on this stage. Constantly refreshing happens as far as sound video and media and best in class instructional method/innovation.
- Video talks by very capable employees.

7.7 National Digital Library of India (NDLI):-

Is a virtual storehouse of learning assets which isn't only a vault with search/peruse offices however gives a large group of administrations to the student local area. It is supported and guided by Ministry of Education, Government of India, through its National Mission on Education through Information and Communication Technology (NMEICT). Separated and unified looking is utilized to work with centered looking so students can track down the correct asset with least exertion and in least time. NDLI gives client bunch explicit administrations like Examination Preparatory for School and College understudies and occupation wannabes. Administrations for Researchers and general students are likewise given. NDLI is intended to hold substance of any language and gives interface backing to 10 most generally utilized Indian dialects. It is worked to offer help for all scholarly levels including scientists and deep rooted students, all teaches, all famous types of access gadgets and in an unexpected way abled students. It is intended to empower individuals to take in and plan from best practices from everywhere the world and to work with analysts to perform between connected investigations from different sources. It is created, worked and kept up from Indian Institute of Technology Kharagpur.

7.8 The subtleties of the different online computerized stage for various sorts of National Digital Library of India (NDLI) data are given underneath:-

- The National Digital Library of India (NDLI) (<https://ndl.iitkgp.ac.in>): It is the greatest advanced library of India .It is created as a task under the MHRD, India.
- NDLI has 48,582,080+ things in its vault. Things are accessible in excess of 400 dialects. 48 million things have been created by 9 million creators. In excess of 100 kinds of eLearning assets are accessible.

- The NDLI is having Web Courses: Web courses from various spaces like agribusiness, physical science, and so forth
- The NDLI is having Annual reports from 45 sources.
- As of the NDLI is having solutions of inquiry papers of various educational committees.
- The NDLI is having Data Set: Data sets from OECD.
- The NDLI is having 12+ lakhs reports obtained from 71 sources.
- The NDLI is having technical reports from 38 sources.
- The NDLI is having manuals from 20 sources.
- The NDLI is having albums from 7 Sources.
- The NDLI is having monographs from 22 sources.
- The NDLI is having technical manuals from 12 sources.
- The NDLI is having law decisions from 8 sources.
- The NDLI is having Learning Resource types:
- The NDLI is providing 64+ lakhs books..
- The NDLI is having Thesis: 6+ lakhs proposition by scientists from various foundations.
- The NDLI is having Audio addresses.
- The NDLI is having more than 30 million articles.
- The NDLI is having 30 lakhs video addresses.

7.9 NDLI prominent is having following links:-

- Twitter : <https://twitter.com/NDLIndia>
- Instagram : <https://www.instagram.com/NDLIndia/>
- Facebook page: <https://www.facebook.com/NDLIndia>
- LinkedIn : <https://in.linkedin.com/organization/ndlindia>

8. Different Roles of Library Professionals

- The library professionals help the clients searching for new openings, the individuals who lost or terminated by the organization during the lockdown.
- Many libraries are now giving jobs to jobless individuals searching for jobs.
- Many libraries are providing online operations.

9. Library Professionals is required various Skills in this pandemic circumstance which are given underneath:

- Perfect Marketing abilities
- Flawless Managerial abilities
- Usage of Information Communication Technology (ICT abilities)
- Usage of Library and data taking care of abilities
- Usage of Technical abilities
- Through Communication abilities

10. Findings:-

Library Professionals from around the world are now understanding the need of changing their jobs from traditional practice to multidimensional jobs. Accordingly, Library Professionals are presently assuming multidimensional and adaptable parts to fulfill the need and assumptions for social orders, associations, foundations, libraries and so forth and this is the need of the current circumstance in Covid19. In a pandemic circumstance, Digital stage is the most ideal

approach to serve the entire local area. Presently, Library Professionals are playing different incorporated/Multiple parts past their customary work. With the assistance of current advancements or instruments, we can give the e-assets during the lockdown time frame.

11. Conclusion:-

In this Covid19 pandemic circumstance, Library Professionals need to do every one of the things. Library Professionals and data experts should be prepared to meet the prerequisite of perusers whether it is for COVID 19 or some other pandemic circumstances. Social separating is the best way to control the transmission of this infection COVID 19 starting with one individual then onto the next. The social obligation of library experts is to give the data admittance to the clients. Data request is likewise expanding in this sort of pandemic circumstance.

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13. About Author:-

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Is Inclusion A Viable Alternative?

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Abstract:

In the present decade we have seen that there is a shift among the disabled students, now they are also attending the same school which the non-disabled does. As per MHRD Statistics, cited by World Bank there are approximately 30 million children which are out of school in India and the reasons are marginalized by poverty, caste, disability and gender. The reason behind the concept of inclusive education arise in the year 1944 when the term special need was emerging. It says that the school should fulfil educational needs of each child irrespective of their disabilities. Though we have seen that inclusive education is a controversial theme which some people support and some doesn't. Sometimes people perceive the concept of inclusive education in a different way. Today, How a teacher can meet out the needs of children with disabilities? How the disabled child can be provided with quality education? Therefore, in this research article the researcher will elaborate about the concept of inclusive education, inclusion as a viable alternative and measures for better implementation of inclusive education in India.

Keywords: Disabled, Inclusive Education, Special Needs, Quality Education

Emergence of The Term 'Inclusion'

Till the 18th century children with special needs (CWSN) were neglected throughout the world. Political reformers in medicine and education were inspired by political reformers of France and America so that attention can be paid towards the educational needs of disabled child with liberty, fraternity and equality (Chadda, 2003). According to UNESCO- at the UN-Committee inclusion involves a) philosophy which is based on a belief that each person is equal and should be valued b) "unending set of processes" where disabled people will be provided with equal opportunity to participate in community activities which is provided to non-disabled one. As the world was making efforts for the success of placing disabled children in regular school. The effort of the government of the India during the last five decades have been towards proving services to the children with disabilities which are comprehensive in nature. Therefore a program was included in Integrated Education (IE) by planning commission of India. A scheme was launched by Government of India in December, 1974 named as Integrated Education for Disabled Children (IEDC). Integrated Education for Disabled Children (IEDC) a centrally sponsored scheme was introduced so as to provide equal opportunities to disabled children in general schools and facilitate their intention. The efforts of government of India can be traced through National Education Policy, 1986 which focused on integrating the handicapped with the general community so as to prepare them for normal growth and help them in facing life with



courage. Further, world declaration on education for all was adopted during 1990 which gave boost to the ongoing effort as well. The Rehabilitation Council of India Act, 1992 initiated a training programme for the purpose of development of professionals which will respond to the needs of disabled students. The National Policy for Persons with Disability, 2006 makes an attempt to clarify the framework that is state, civil society and private sector must work so as to ensure that a disabled person must have dignified life. The Right to Education, Act, 2009 has to be read in conjunction with chapter v of the Person with Disability Act, 1995. This act ensures that disabled child are entitled to get free education up to the age of 18 years.

Introduction:

The literal meaning of the word 'inclusion' is 'to include'. Thus inclusive education means not only to include the children with diverse needs but to include children with disabilities to their maximum potential. The concept of inclusive education has aroused from Salamanca statement which is said as 'Framework for Action on Special Needs Education, 1994'. Inclusive education actually involves the aspects such as modification in structural organisation, philosophy, teaching strategy and curriculum. It is very well said that inclusive education is a part of creating an inclusive society. Inclusive education is said to be as an education where every child is taught under one roof whether the child is disable or normal. Inclusive education can be said as education that is not only for disable person rather to provide education to all children. In context of inclusive education special planning is required for bringing the students into mainstream education. For instance like special curriculum, specially designed classes and special infrastructure. Inclusive education means when schools, colleges and educational institutions are open for the students with diverse background such as under achievers, mentally retarded children, gifted children, delinquent children, backward children and slow learner. Therefore, teachers, schools and system are needed to bring the students with diverse need under one roof. Inclusive education involves three things presence, participation and achievement of learners (Ainscow, 2005, Engelbrecht and Green, 2007). It means including disabled children in those regular classroom which are designed for children without disabilities (Kugelmass, 2004). Regardless of the student's physical, emotional, learning or intellectual disability, equal opportunities for education must be given to all children (Loreman et al, 2005). It is said to be as an endeavour where recognition is needed to be given to the sameness of learner on the other hand regard must be given to differences and diversity among individuals (Norwich, 1996). According to Lipsky and Gartner (1997), inclusive education is not a reform of special education. The aim of inclusive education is to remove exclusion within and outside the school through modification of policies and legislation so as to promote reorganization of the educational systems and accepting the students irrespective of their differences (Rustemier, 2002, Rieser, 2009). Disability is not only the reason for difference, the other reasons could be related to colour or ethnicity, gender and size. Inclusive education recognizes such differences and try to bring creativity. Characteristics of Inclusive Education are as follow:

1. Inclusive education is not only meant for disabled children while it provides equal opportunities to the children with disability and without disability.
2. It is said to be opposite of segregation as segregation involves the disabled students should study in special schools while inclusive education focuses on to integrate all.
3. It is meant to welcome all the students regardless of their type of disability or severity.

4. Inclusive education identifies diversity in terms of different background of children.
5. Disabled students are taught with their peer group i.e. in the same age group.
6. The main aim of inclusive education is to provide equal educational opportunity to all students.
7. The staff is well trained for providing a quality education to the students in an inclusive environment.
8. Inclusive education focuses on creating a sense of belongingness among students.

Is Inclusion A Viable Alternative?

Integration itself indicates that segregated students are accommodated in school and classroom. It also seems to have one indication that schools are forced or requested to set up their school for the disabled as well. Placing exceptional children with non-disabled children without having proper arrangement in school can lead to a major disaster. The set up for inclusive education demands various things such as man, material, resources, curriculum flexibilities, programmes, activities and other support services. India with its vast population of exceptional children cannot achieve its target of providing free and compulsory education to all children up to the age of 14. Sometimes inclusion is criticized as well. But with proper planning and execution the disabled children can be provided with non-disabled one in least restricted environment and providing maximum reach. Through following ways inclusion can be made better:-

1. Full inclusion model can be accepted so that all children can be taught in government schools and aided schools.
2. Special schools will be considered for the specific type of students. However, NGOs and government shall provide incentives to the schools who are supporting inclusion.
3. The top most priority must be given to pre-service and in-service education of teachers and personnel so as to equip them with necessary knowledge, attitude and skills.
4. Essential services like special education teachers, resources, aids and equipment's must be provided as per the need of the disabled children.
5. Since classroom becomes heterogeneous because of inclusive education, hence the emphasis must be on designing suitable individualized curriculum, instead of giving common instruction.
6. The teacher must well practice the techniques of teaching in inclusive set up such as collaborative team approach, data based instruction, activity based learning and creative problem solving. These strategies can be applied to the non-exceptional children as well.
7. The teacher should not expect the same learning outcomes from the students of inclusive classroom.
8. Additional services such as individualised guidance, resource room facilities and support from special teacher can be arranged for exceptional children.
9. The responsibility is to help the exceptional children in leading their adult and community life. They must be helped out in adjusting in their physical and social environment.

Where Does India Stands Now In Inclusive Education?

According to estimates of UNESCO Institute for Statistics (UIS) there were 110 million of children out of school which went down to 73 million of children, which were out of school in 2010. As per data of MHRD, 2009 there are 8 million children which are out of school in India,

where they are marginalized by various dimensions such as gender, poverty, disability and gender. According to Deepa (2006), though the word inclusion may be there in education policy, but actually what we see is the difference between law and its implementation. Most of the schools don't have special educator for the disabled children even the Rehabilitation Council of India Act, 1992 indicates that disabled children have the right to be taught by special teacher (Deepa, 2006).

The constitution of India is dominated by the sentiment of equity as well as social justice (Chatterjee, 2003). Parental community is also seen to be resistant to inclusive education (Chatterjee, 2003). Due to several reasons such as lack of sensitiveness, awareness and education of inclusive education among the parents, it has made a negative impact on inclusive education. Even though the number of researches are done in the field of inclusive education along with the development of methodologies, though it is said by the inclusive educationist that these things have to comply with the culturally appropriate practices and precepts (CAPP) (Chatterjee, 2003). Ten percent of Indian population comes under the disabled category out of which two percent are mentally disabled people. In the recent years we have seen that a great initiative is taken, however in comparison to mainstreaming and integrated education, the special education is still at infancy stage in spite of DPEP and RCI (Lakshmi, 2003). In India, directly or indirectly the disabled people are discriminated.

Measures For Better Implementation of Inclusive Education in India (Singh, 2016):-

1. Right to Education (RTE) must apply to all citizens of India.
2. In Indian education system, a policy of inclusion is needed to be implemented.
3. For special education to be given in rural area, the teacher need to be trained as per the aim of the program.
4. Flexibility of inclusive education must be reflected through methods and materials which are used for teaching.
5. A support team must be provided to the teacher as a resource and the team should also develop strategies for the school so as to meet the needs of disabled children.
6. Education structures and methodologies must be provided by the school to meet the needs of all children.
7. Parents must be taken into consideration for decision making concerned to the child.
8. Adjustment must be made by school in advance regarding transport and architectural facility.
9. Student oriented services must be provided by the school as per the need of the students. For instance, uniforms, transport allowance, books etc.
10. Rather than seeing the disabled students with sympathy they must be treated equally as the normal children. They must be recognized on the basis of their talent.
11. Modification must be made in the examination system as per the requirement.
12. Toward educational system a well attitude of teacher must be formed for good practices.
13. In-service training programs must be provided to general as well as special educators in all the disabilities.
14. For teacher's preparation, planning must be done in terms of periodic evaluation of the training programs.

15. Parallel work must be done in terms of curriculum reform and training of teachers.

The expert group should develop the curriculum in which practice of special teachers must be included.

Conclusion:

It is said that success of inclusive education depends upon multiple factors such as teacher, infrastructure facility, curriculum etc. Therefore, issues related to the above said factors such as curriculum modification and infrastructural facility must be addressed. Inclusion will yield result when adequate preparation will be done. The community involvement is required for capacity building of inclusive education.

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Comparative Study of Gauss elimination method and Substitution Method in Chemistry

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Abstract:

In this paper, a formal and systematic method for balancing chemical reaction equation was presented.

In this paper, the chemical equation was balanced by representing the chemical equation into system of linear equations.

Particularly, the gauss elimination method was used to solve the mathematical problem with this method, it was possible to handle any chemical reaction with given reactants and products.

In this paper, there is comparison between Gauss elimination method and Substitution method to balance any type of chemical reaction.

Keywords: Chemical reaction, matrix algebra, substitution method, linear equation.

Method: Gauss elimination method, Substitution method, to show comparison in between both of these, use graphical method, and little bit survey by the help of students to find which method is time saving?

Introduction:

Balancing of the chemical equation is one of the initial subject toughs in most preliminary chemistry courses amazing subject of matter for mathematics and chemistry students who want to see the power of linear algebra as a scientific discipline ^[1]. Since the balancing of chemical reactions in chemistry is a basic and fundamental issue.it deserves to be considered on a satisfactory level ^[2]

A chemical equation is only a symbolic representation of a chemical reaction ^[3] A chemical reaction can neither create nor destroy atoms so, all the atoms represented on the left side of the arrow must also be on the right side of the arrow.

i.e. $A+B \rightarrow C+D$

This is called balancing the chemical equation [4]. The application of the law of conservation of matter is critical in chemistry education and is demonstrated in practice through balanced chemical equations [5]. Every student who has general chemistry as a subject is bound to come across balancing chemical equations. The substances initially involved in a chemical reaction are called reactants, but the newly formed substances are called the products. The products are new substances with properties that are different from those of reactants [6]. A chemical equation is said to be balanced, the number of atoms of each type on the left is the same as the number of atoms of corresponding type on the right [7]. Balancing chemical equation by inspection is often believed to be a trial and error process and, therefore, it can be used only for simple chemical reactions. But still it has limitations [8]. Balancing by inspection does not produce a systematic evaluation of all of the sets of coefficients that would potentially

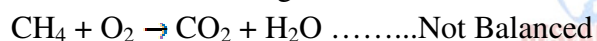
balance an equation. Another common method of balancing chemical reaction equation is the algebraic approach. In this approach, coefficients are treated as unknown variables or undetermined coefficients whose values are found by solving a set of simultaneous equations [9]. According to [5], the author clearly indicated that the algebraic approach to balancing both simple and advance chemical reactions typically encountered in the secondary chemistry classroom is superior to that of the inspection method. Also, in [10], the author emphasized very clearly that balancing chemical reactions is not chemistry; it is just linear algebra. From a scientific viewpoint, a chemical reaction can be balanced if only it generates a vector space. That is a necessary and sufficient condition for balancing a chemical reaction.

A chemical reaction, when it is feasible, is a natural process, the consequent equation is always consistent. Therefore, we must have nontrivial solution. And we should be able to obtain its assuming existences. Such an assumption is absolutely valid and does not introduce any error. If the reaction is infeasible, then, there exists only a trivial solution, i.e., all coefficients are equal to zero [6]. In Mathematics and Chemistry, there are several mathematical methods for balancing chemical reactions. All of them are based on generalized matrix form and they have formal scientific properties that need a higher level of mathematical knowledge for their application [1]-[16]. Here, we are presenting the Gauss elimination method and Substitution method, both are possible to handle any chemical reaction with given reactants and products. But here we check which method is very useful and time consuming to Solved problems are provided to show that this methodology lends well for both simple and complex reactions.

Main Result:

Problem 1:

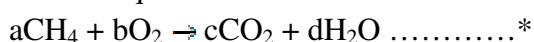
Balance the following chemical reaction



The equation to balance is identified the chemical reaction consist of three elements i.e. Carbon (C), Hydrogen(H), Oxygen(O)

Now to Assign the unknown coefficients (a, b, c, d) to each chemical species.

A balance equation can be written for each of these elements.



therefore, here three simultaneous linear equations in four unknowns corresponding to each of these elements.

Now algebraic representation of the balanced,

$C \rightarrow a = c \Rightarrow a - c = 0$1

$H \rightarrow 4a = 2d \Rightarrow 4a - 2d = 0$2

$O \rightarrow 2b = 2c + d \Rightarrow 2b - 2c - d = 0$3

Now firstly by Gauss elimination method,

$Ax = 0$

$$\begin{bmatrix} 1 & 0 & -1 & 0 \\ 4 & 0 & 0 & -2 \\ 0 & 2 & -2 & -1 \\ 0 & 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} a \\ b \\ c \\ d \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}$$

R₂ - 4R₁

$$\begin{bmatrix} 1 & 0 & -1 & 0 \\ 0 & 0 & 4 & -2 \\ 0 & 2 & -2 & -1 \\ 0 & 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} a \\ b \\ c \\ d \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}$$

R₃ + $\frac{1}{2}$ R₂

$$\begin{bmatrix} 1 & 0 & -1 & 0 \\ 0 & 0 & 4 & -2 \\ 0 & 2 & 0 & -2 \\ 0 & 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} a \\ b \\ c \\ d \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}$$

R₃-R₂

$$\begin{bmatrix} 1 & 0 & -1 & 0 \\ 0 & 0 & 4 & -2 \\ 0 & 2 & -4 & 0 \\ 0 & 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} a \\ b \\ c \\ d \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}$$

Now C₂ ⇌ C₄

$$\begin{bmatrix} 1 & 0 & -1 & 0 \\ 0 & -2 & 4 & 0 \\ 0 & 0 & -4 & 2 \\ 0 & 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} a \\ b \\ c \\ d \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}$$

Now, a-c = 0

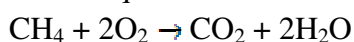
$$-2b + 4c = 0$$

$$-4c + 2d = 0$$

Solve these equations we get,

$$a = 1, b = 2, c = 1, d = 2$$

therefore equation * becomes,



$$\text{C} = 1$$

$$\text{C} = 1$$

$$\text{H} = 4$$

$$\text{H} = 4$$

$$\text{O} = 4$$

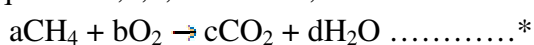
$$\text{O} = 4$$

This is required balanced chemical reaction

Now Secondly, Substitution method

Same problem

Equation *,1,2,3 becomes,



$$\text{C} \rightarrow a = c \Rightarrow a - c = 0 \dots\dots\dots 1$$



$$H \rightarrow 4a = 2d \Rightarrow 4a - 2d = 0 \dots\dots\dots 2$$

$$O \rightarrow 2b = 2c + d \Rightarrow 2b - 2c - d = 0 \dots\dots\dots 3$$

From equation 1 we get $a=c$

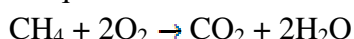
Substitute this equation in 3 we get, $4c - 2d = 0 \Rightarrow d = 2a$

i.e. $d = 2c$

now substitute $c = 1$ and $d = 2$ to verified this equation

then we get $a=1$ and $b = 2$

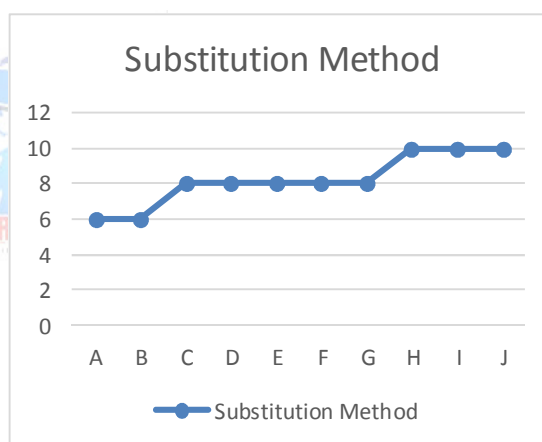
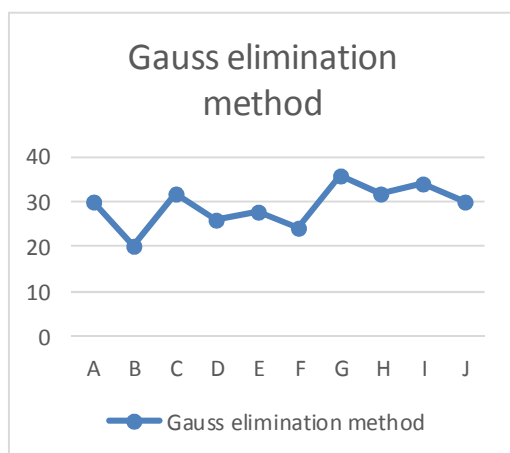
then equation * becomes



Which is required balanced reaction.

Also, we used the little bit survey along with these two methods. Means we take 10 students (A, B, C, D, E, F, G, H, I, J) and give them same problem and asking to solve this problem firstly Gauss elimination method and secondly substitution method and counting the time

So, graphs along with time and students to both methods



Conclusion:

By the graphs we conclude that Gauss elimination method is time consuming method than Substitution method. Because, in gauss elimination method graph there is much more variation in time, but in substitution method there is little bit variation in time. In gauss elimination method variation of time between students C, D, E, F, G otherwise in substitution method there is no variation in time between students C, D, E, F, G.

Therefore, we conclude that Substitution method is easy and time saving method as compare to Gauss elimination method.

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Big Data and Academic Libraries in COVID- 19 Pandemic: An Overview

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Abstract:

The quick development of information communication technologies like social networking and cloud computing generates a big capacity of data. In this COVID-19 pandemic as all the users of library are working and learning from home therefore academic libraries are facing many challenges. This paper discusses the characteristics and advantages of big data. It also focuses the challenges of academic library in the big data age. The paper summarizes concept of Big Data.

Keywords: Big Data, Academic Library, Big Data Technologies, COVID-19 Pandemic, etc.

Introduction:

The data has the characteristics of volume, velocity, veracity, value, scalability, variability, relational, extension, etc. Nowadays, big data has become a significant issue across different areas and received extensive attention in both research and practice. Big data is a field that treats ways to analyze, systematically extract information from, or otherwise deal with data sets that are too large or complex to be dealt with by traditional data-processing application software. Big data challenges include capturing data, data storage, data analysis, search, sharing, transfer, visualization, querying, updating, information privacy and data source. Users and researchers are now using the online platforms such as Google search, LinkedIn, Twitter, Facebook etc. to research, purchase of books and find new library services. Big data gives important challenges of getting out through and keeping up-to-date Librarians and users. This challenge has been arranged by the failure of many algorithms to perform well in search and filtering settings hence they instigated their failure in forecasting user preference, interest and change in taste. Big data in this scenario should be no exception hence the need for big data applications in libraries that offers predictive analytics of user reading habits, online services and applications that better understands the user's needs and requirements. Thus, big data better forecasts for patterns in habits, usage of systems and resources and future library planning.

Evolution of Big Data:

According to Acharya, S. (2015) 1970s and before was the era of mainframes. The data was essentially primitive and structured. Relational databases evolved in 1980s and 1990s. The era was of intensive applications. The World Wide Web and the Internet of Things have led to onslaught of structured, unstructured, and multimedia data.

Definition:

According to Gartner IT Glossary, "Big data is high-volume, high-velocity, and high variety information assets that demand cost effective, innovative forms of information processing for enhanced insight and decision making."

“Big Data is a technique to capture, store, distribute, manage and analyze datasets that traditional data management methods are unable to handle.”

According to International Data Corporation (IDC): “Big data technologies describe a new generation of technologies and architecture designed to economically extract value from very large volumes of a wide variety of data enabling high velocity capture, discovery and/or analysis.”

Sources of Big Data: Acharya, S. (2015) mentioned the sources of Big Data in her book are as follows:

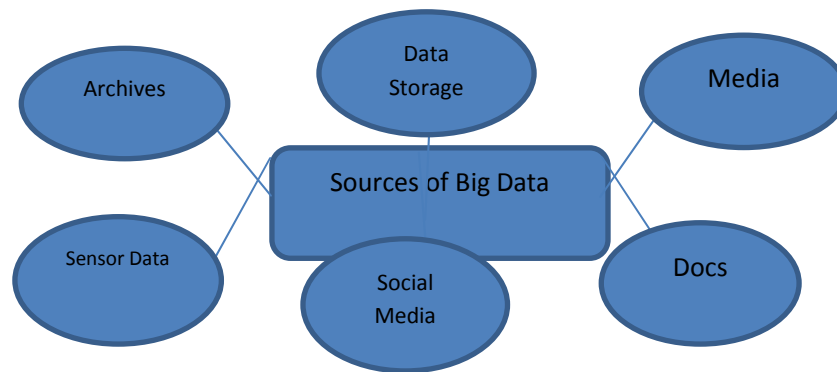


Fig. 1 Sources of Big Data

- 1) **Internal Data Sources:** The data present within Organization’s firewall. For e.g. file systems, SQL, MySQL, MS SQL Server, DB2, NoSQL and so on.
- 2) **External Data Sources:**Data residing outside an organization’s firewall. For e.g. Wikipedia, weather, regulatory, compliance, census, etc.
- 3) **Both Internal and External Sources:**
 - **Sensor data:** Car sensors, smart electric meters, air conditioning units, etc.
 - **Machine log data:** Event logs, application logs, audit logs, etc.
 - **Social Media:** Twitter, Blogs, Facebook, LinkedIn, You Tube, etc.
 - **Media:** Audio, Video, Image, Podcast, and so on.
 - **Docs:** Word documents, PDF, XLS, PPT and so on.

Characteristics of Big Data: The characteristics of big data are as follows:

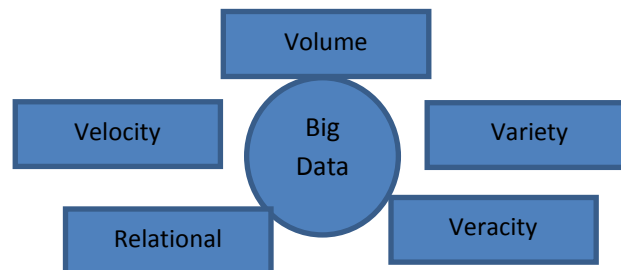


Fig. 2 Characteristics of Big Data

- 1) **Volume:** The quantity of generated and stored data. The size of the data determines the value and potential insight and whether it can be considered big data or not.
- 2) **Variety:** Variety deals with a wide range of data types and sources of data. There are three categories of data: structured data, semi-structured data and unstructured data.

- 3) **Velocity:** The speed at which the data is generated and processed to meet the demands and challenges that lie in the path of growth and development. Big data is often available in real-time.
- 4) **Veracity:** Veracity refers to biases, noise, and abnormality in data.
- 5) **Relational:** If the data collected contains common fields that would enable a conjoining, or meta-analysis, of different data sets.

Advantages of Big Data: there are some advantages of big data are as follows:

- Finding the root cause of failures, issues and defects in real time operations.
- Access to social data from search engines and sites like Facebook, twitter are enabling organizations to fine adjust their business strategies.
- Traditional customer feedback systems are getting replaced by new systems designed with Big Data technologies.
- Better operational efficiency.
- Detecting fraudulent behavior before it affects and risks your organization.

Challenges of Big Data: there are some of the most common challenges of big data are as follows:



Fig. 3 Challenges of Big Data

- **Data growing at an Exponential Rate:** Today, data is growing at an exponential rate. Most of the data we have today has been generated in the last two or three years. This high flow of data will continue to rise constantly.
- **Dearth of Skilled Professionals:** There is a dearth of skilled professionals who possess a high level of proficiency in data sciences that is vital in implementing big data solutions.
- **Security:** Security is also a big concern for organizations with big data stores. After all, some big data stores can be attractive targets for hackers or advanced persistent threats.
- **Data Quality:** How to maintain data quality? is a big challenge of big data.

- **Network:** In rural area, students facing network problems. They could not access each and everything which is available on Internet.
- **Economic Condition:** Every student could not purchase android mobile due to lack of money or poor economic condition.

The challenges of big data also include capture data, storage capacity, searching, sharing, transfer, analysis, presentation, security, visualization, etc.

Big Data and Academic Libraries:

There is a connection between library data and the web of big data, for instance the increasing amount of library collection data can be considered big data. Big data provides personalized, remote, real-time, and virtualized services to the library users. In addition, the rapid increase in volume, veracity, velocity, and variety of library data generated by different library tools offers innovative ways of understanding interactions with users in the library environment. In this COVID-19 Pandemic Big data enables library to be smart and user-friendly by providing personalized and intelligent services.

Conclusion:

In this way we can conclude that in Covid 19 Pandemic big data is very important for academic libraries therefore by using big data technologies every librarian should enrich the user groups of their respective libraries. In this COVID-19 Pandemic every librarian should provide services at the doorstep of every user of library by using tools and techniques of big data. Challenges are always part of every task; therefore, challenges should accept by the librarian and overcome on the same.

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Teaching and Learning Econometrics with Open-Source Software Gretl

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Abstract:

This article provides an introduction to the free open-source econometrics software Gretl and this software provides different opportunities for teaching at different levels. We can be seen as demonstrated step-by-step guide that uses a real-life data analysis as example. The results from the paper summarizes with Gretl, including both presential and online learning and combining teachers and student's points of view. Also, the academic outcomes benefit from the adoption of open-source software which is executed, distributed and improved freely. Finally, we have estimated a Monte Carlo Simulation with Gretl.

Keywords — Econometrics, Open-Source software, Teaching methodologies, Gretl

Introduction:

Ministry of Human Resource Development (MHRD) provides the opportunity of exploring new ways of learning and teaching, highlighting the role of students in the learning process. Over the years, we have observed the problems of accessing commercial software. The software in question may only be available on a company or educational network which can only be accessed from an office or networked PC and not from a home PC or laptop. Students might be convinced to do some experiential work at home but this is not feasible if they only have access to relevant software on the educational network. Given the price of commercial software we cannot expect to purchase such paid software from their own pockets. So, one possible solution is to use free software or open-source software.

Nowadays, the open-source software represents an important role as resource in teaching. However, it is not sufficiently explored as higher education teaching methodology. In some subjects with a very specific area, the commercial software is still preferred as compared to open-source software. It can be copied and redistributed free in the original or modified format provided that the recipients of the redistributed form also have these rights. In general, full source code for the original or modified form must be made available. This allows us, one to build and extend the work of others without having to start from basics. Open-source software is software that can be used, studied and modified without constraints.

In Economics and Business, Econometrics[1] which play an important role. The software listed in the index below covers most of the applications that an econometrician or economist might require. Following is list of some open-source Softwares for econometrics.

Name of software	Purpose	Weblink
Gretl	Easy-to-use econometric package. It is ideal package for elementary to intermediate econometrics.	http://gretl.sourceforge.net/
R	Comprehensive statistical packages	https://www.r-project.org/



JMULTI	Covers various univariate and multivariate time series analysis.	http://www.jmulti.de/
Scilab	Functionally similar to Matlab with a comprehensive econometrics' toolbox.	https://www.scilab.org/
Octave	Free version of Matlab.	https://www.gnu.org/software/octave/index
Maxima	Computer Algebra system	https://maxima.sourceforge.io/
LibreOffice	Office suite.	https://www.libreoffice.org/
LaTeX	Type setting program for producing books, papers etc. with mathematical and technical contents	https://www.latex-project.org/

Gretl[3] is a powerful teaching tool, providing our students a wide variety of skills. This paper presents a direction about the use of open-source software in Econometrics and specially in Applied Econometrics. The adoption of Gretl software allows the discussion about a complete set of educational, economical and technical advantages and some observed practical limitations. In practical approach, the refereed advantages are stressed when the students' results are analysed.

Econometrics is the application of statistical techniques and analyses to the study of problems and topics in economics. The term econometrics was invented in 1926 by Ragnar A. K. Frisch, a Norwegian economist who shared the first Nobel Prize in Economics in 1969 with another econometrics pioneer, Jan Tinbergen. Today, econometrics is a broad area of study within economics. This field changes constantly as new tools and techniques are added. The e-learning, understood as the use of new multimedia technologies and the Internet to improve the quality of learning has become increasingly popular during the last years.

Teaching and Learning with Gretl

From the teachers' perspective the use of Gretl provides several advantages, since this open-source software offers an easy intuitive interface, allowing different ways of working from interactive point-and-click to batch processing. This flexibility is one of the most outstanding characteristics of Gretl, offering teachers a good opportunity to re-think contents, methods and evaluation procedures. Gretl is an econometrics package, including a shared library, a command-line client program and a graphical user interface. User-friendly Gretl offers an intuitive user interface, it is very easy to get up and running with econometric analysis.

We can download the software from <http://gretl.sourceforge.net/> with version and visit <http://www.LearnEconometrics.com/gretl.html> for the latest version of this book with user's guide, data sets and script files.

Gretl allows to perform analysis from the pull-down menus or using proper commands that can be executed in the console or as a script using words only. More complex series of commands may require you to use the Gretl script facilities which basically allow you to write simple programs in their entirety, store them in a file, and then execute all of the commands in a single batch. There are several different ways to work in Gretl. Until you learn to use Gretl's rather simple and intuitive language syntax, the easiest way to use the program is through its built in graphical user interface (GUI) is shown in Figure 1.

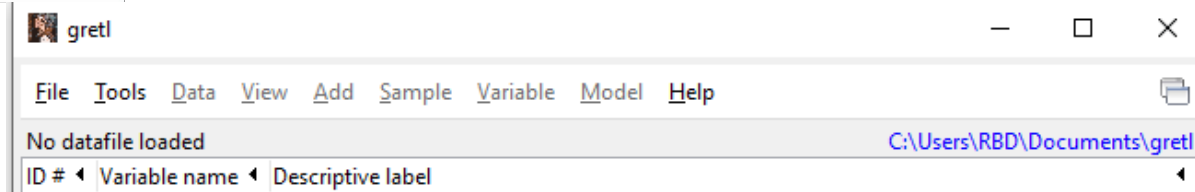


Figure : 1

Gretl offers a command line interface as well. In this mode you type in valid Gretl commands either singly from the console or in batches using scripts. Once you learn the commands, this is surely the easiest way to work. If you forget the commands, then return to the dialogs and let the graphical interface generate them for you.

Help and Manual

Gretl comes with a manual (in PDF format) and comprehensive internal help. Help is available from Gretl's console. A list of Gretl's available commands using the console and the help output on a specific command is shown in Figure 2.

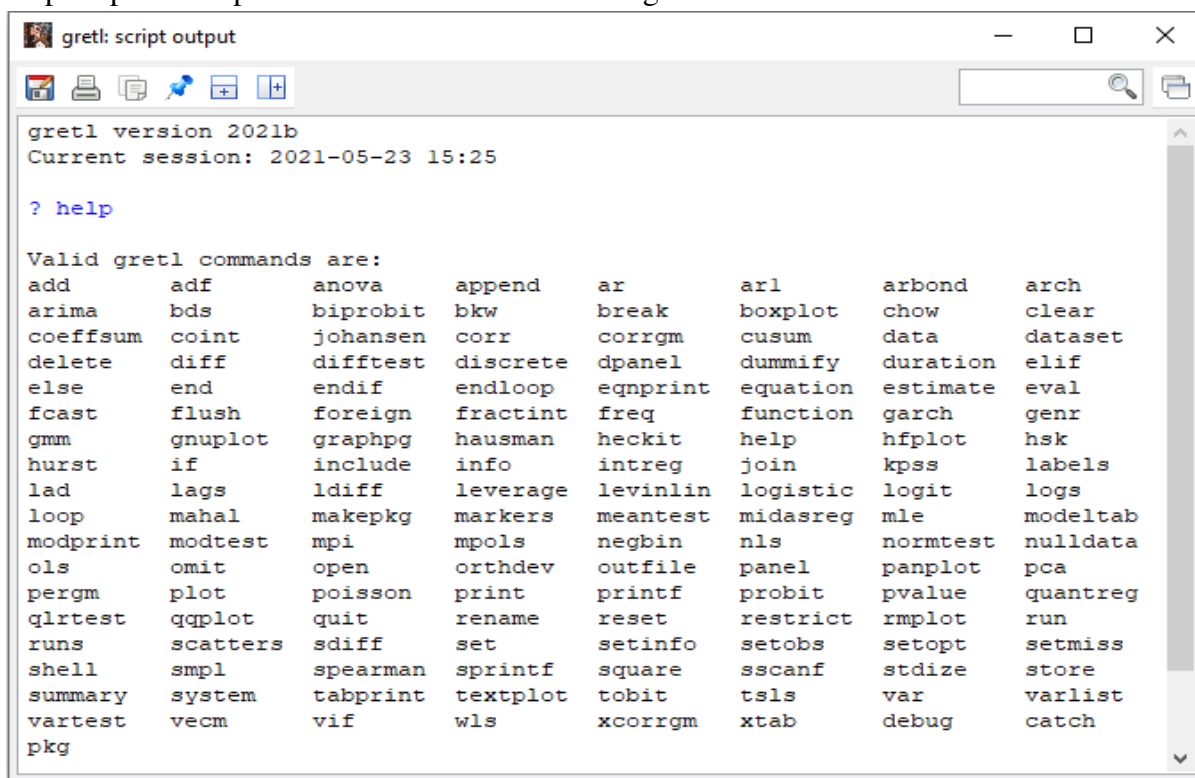


Figure : 2

Data Management

Capturing the data in econometrics and getting it into a suitable format that can be used by particular software can be challenging. From the teacher's perspective we must stress some additional advantages related to Gretl educational and research resources: the access to datasets associated with Econometrics texts as those of Ramanathan, Greene, Gretl and existence of an open scientific community. See Figure 3

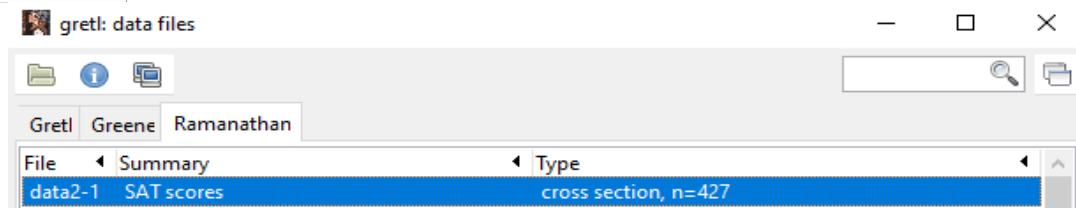


Figure 3

In this paper we will explore some of the data handling features of Gretl and show how to access and bring the data sets into Gretl and how to list the variables in the data set with results. From the main Gretl window click on **File > Open data > Sample file** as shown in Figure 4.

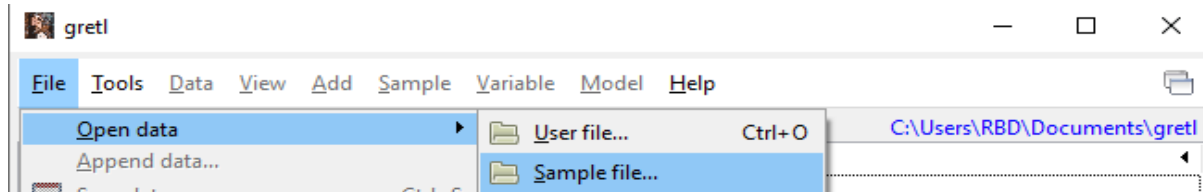


Figure 4

Illustration

Monte Carlo Simulation - A Monte Carlo simulation is a model used to predict the probability of different outcomes when the intervention of random variables is present and helps to explain the impact of risk and uncertainty in prediction and forecasting models. The first step in a Monte Carlo exercise is to model the data generation process. This requires what Davidson and MacKinnon [9] refer to as a fully specified statistical model.

Consider a regression function $E(y_i|\Omega_i) = \beta_1 + \beta_2 x_i$ where y_i is your dependent variable, x_i the independent variable, Ω_i the current information set, and β_1 and β_2 the parameters of interest. Here we discuss this data generation example with Gretl as follows.

Let us import food expenditure data is loaded from **food.gdt** using **File>Open data>Sample file** and choosing the food dataset from the sample files that accompany Principles of Econometrics, 5th Edition, with sample data set.

The simple linear regression model is $food_exp_i = \beta_1 + \beta_2 income_i + e_i$ $t = 1, 2, 3, \dots, n$ where $food_exp_i$ is the dependent variable, $income_i$ is the independent variable, e_i is random error, and β_1 and β_2 are the parameters to be estimated. The errors of the model, e_i , have an average value of zero for each value of $income_i$; each has the same variance, σ^2 , and are uncorrelated with any of the other residuals. The independent variable, $income_i$, must take on at least two different values in your dataset. If not, a slope cannot be estimated! The error assumptions can be summarized as $e_i | income_i \sim \text{IID } N(0, \sigma^2)$. The expression IID stands for independently and identically distributed and that each has the same probability distribution. Taking a random sample from a single population accomplishes this. If we take $n = 40$, $\beta_1 = 80$ and $\beta_2 = 10$ with $\text{IID } N(0, 90)$. After executing Gretl script as

```
# Monte Carlo simulation
open "C:\Program Files\gretl\data\POE5Data\food.gdt"
summary
set seed 3213789
loop 2000 --progressive --quiet
series e = normal(0,90)
```

```
series y1= 80+10*income+e
ols y1 const income
endloop
```

The food.gdt data are loaded and a seed for the pseudo-random number generator is chosen. A progressive loop of 2000 iterations is initiated. The errors are generated from normal variates having a mean of zero and a standard deviation of 90. These are added to the systematic part of the model that depends on the income variable in the data as well as the chosen parameters for the simulation. Finally, the regression is run and the loop closed.

Output :

```
observations range: 1 to 40
Listing 3 variables:
  0) const   1) food_exp  2) income
? summary
```

	Mean	Median	Minimum	Maximum
food_exp	283.57	264.48	109.71	587.66
income	19.605	20.030	3.6900	33.400
	Std. Dev.	C.V.	Skewness	Ex. kurtosis
food_exp	112.68	0.39734	0.49208	-0.14848
income	6.8478	0.34929	-0.62651	0.27973
	5% perc.	95% perc.	IQ range	Missing obs.
food_exp	114.97	481.44	173.48	0
income	4.4080	29.361	7.7825	0

OLS estimates using the 40 observations 1-40
 Statistics for 2000 repetitions
 Dependent variable: y1

Variable	mean of estimated coefficients	std. dev. of estimated coefficients	mean of estimated std. errors	std. dev. of estimated std. errors
const	79.3080	42.9547	43.4172	5.20604
income	10.0467	2.07931	2.09360	0.251038

We can see that the average estimate of the mean over 2000 samples of size 40 is 79.3, which is very close to our parameter, 80. Likewise the slope is very close to 10.

Conclusion

Gretl is a free open-source software for applied econometrics and full packages are released under GNU or Windows software. The updated packages, free availability, and ease of use of Gretl should inspire teachers or researcher to use it in teaching and in research methodology. Obviously, Gretl is still work in progress. However, the open-source nature of the

software should ensure that, as the program becomes more and more popular among econometricians, new econometric procedures will be added. So, Gretl is a powerful teaching & learning tool, providing our students a wide variety of skills and competences.

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Causes of Juvenile Delinquency in Adolescents in Delhi, India

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1. Introduction

Children are the rock of any nation on which it's future is built. They become the leaders of the country, the creators of national wealth, who care for and protect the human community of the land to which they are rooted. They increase their ability to think abstractly and develop their own views regarding social and political issues. They develop ability to indulge in long- term - planning and goal setting. They yearn for separate identity and independence from parents. This is the age when peer influence and acceptance becomes very important. They also develop strong romantic ideas, and tend to show indulgence in Love and long- term relationships.

2. Juvenile

The word 'juvenile' has been derived from the Latin word 'juvenis' meaning young. Juvenile can be defined as a child who has not attained certain age at which he, like an adult person under law of the land, can be held liable for his criminal acts. The juvenile is a child who is alleged to have committed /violated some law which declares the act or omission on the part of the child as an offence. (Black Dictionary of Law)

3. Delinquent

The word 'delinquency' has been derived from 'delinquere' in which 'de' means do away and 'liqueur' meaning to leave and to abandon. Delinquent is typically a young person who tends to commit crime, particularly minor crime or the one who violates the law. Moreover in 1942, it was said that a delinquent is a person who knowingly, intentionally and self-consciously violates the mores of the society to which he belongs".

4. Juvenile Delinquency

Juvenile delinquent is a person who is typically below 18 year of age. Juvenile delinquency is a legal concept of recent origin. Clyde B. Volder well expressed this view, he says 'juvenile delinquency refers to an anti-social act of children and of young people under age, such acts either specifically forbidden by law or may be lawfully interpreted as constituting delinquency, or as requiring some form of official action.

A delinquent or a child in conflict with the law/ norms is a child who has violated any of the law of the state or regulation of a subdivision of the state. A child who is habitually disobedient is uncontrolled by his parent, guardian or custodian or the one who is habitually truant from school or home. As a result, he might injure or endanger the morals or health of himself or others.

5. Adolescence

Adolescence is defined in several ways, physiologically, psychologically, educationally and legally. Physiologically, adolescence begins with the growth and hormonal changes associated with sexual maturity and end when there is no further growth. Psychologically, adolescence is period of transition during which cognitive, physical, personality and social changes occur. During this phase adult roles are practiced and a personal identity is formed.

Educationally, adolescence is the time spent in high school and college. Legally, adolescence ends with the assumption of adult responsibility. According to Erikson (1961) adolescence is a phase of life, which marks the "take off" from childhood to adulthood. The coming of age physiologically demands guidance for the social and psychological changes which must be faced and resolved before one can settle with satisfaction and as socially acceptable individual.

6. Juvenile Justice (Care And Protection Of Children) Act, 2015

The act has been passed by the Parliament of India. It aims to replace the existing Indian juvenile delinquency law, Juvenile Justice (Care and Protection of Children) Act, 2000, so that juveniles in conflict with law in the age group of 16-18, involved in Heinous Offences, can be tried as adults. The Act came into force from **15 January 2016**.

It was passed on 7th May 2015 by the Lok Sabha amid intense protest by several Members of Parliament. It was passed on 22nd December 2015 by the Rajya Sabha.

7. Classification/Types Of Delinquencies:

Juvenile delinquents have been classified by different scholars on different bases:

Howard Becker (1966) has referred to four types of delinquencies:

1. **Individual delinquency:** this refers to delinquency in which one individual is involved in a delinquent act.
2. **Group supported delinquency:** this refers to delinquency in which delinquencies are committed in companionship with others.
3. **Organized delinquency:** this refers to delinquency in which delinquencies that are committed by formally organized group.
4. **Situational delinquency:** this refers to delinquency which provides a different perspective, the assumption is that delinquency is not deeply rooted.

Eaton and Polk (1969) have also classified delinquents into five groups according to the type of offence. The offences are:

- (1) **Minor violations** (including disorderly conduct and minor traffic violations)
- (2) **Major violations** (including automobile thefts)
- (3) **Property violations**
- (4) **Addiction** (including alcoholism and drug addiction), and
- (5) **Bodily harm** (including homicide).

8. Causes Of Juvenile Delinquency

Three types of Juvenile delinquency causes are: -

A. Biological

B. Socio-Environmental

C. Psychological, Physiological and persona

A. Biological Causes

1. **Ocular Ailments:** It leads to irritability causing emotional instability and discomfort among children. Moreover, this may prevent them from acquiring sufficient knowledge hampering them from leading a normal life

2. **Nose and throat problem:** This may cause weakness and discomfort and may result in dislike-ment for work and school bunking. Obstructed breathing may result in mouth breathing and may, thus, give an appearance of inefficiency in work.
3. **Hearing Problem:** Such as deafness or difficulty in hearing makes the person concerned incapable for any work. His efficiency is greatly decreased which adversely affects his ability to work and he depends on others which may lead to antisocial behaviour.
4. **Speech Problem:** An individual with speech problem is pitted or laughed at in the society. Due to this feeling of inferiority may be developed which may lead to a desire to make up in criminal acts.
5. **Enuresis:** It involves a disorder of functions of the bladder. Sometimes it discomforts and even some time may lead to delinquency.
6. **Irritation:** Irritation caused by ailments such as different types of allergies, eczema, and irritation of sexual organs is also a significant factor resulting in delinquency.
7. **Headache:** It may cause irritation of temperamental though rarely may result in some sort of out bursts.
8. **Excessive strength:** A person who is possessed excessive physical strength and his mental trait being uncultured and not properly channelized, probability of his committing an act of offence becomes higher.
9. **Hypoglycaemia:** Hypoglycaemia caused by low level of glucose in blood disturbs the mental equilibrium and affects the level of consciousness, memory, and orientation. It may make the person liable to assault, violent behaviour, disruption of peace, suicide homicide, drunkenness, theft, mischief, arson and slander”.

B. Socio-Environmental

1. **Mobility:** It is the major factor which is liable for crime causation in the society. Nowadays communication and travel facilities have become easy due to industrialization and urbanization which have led to the migration of persons to new places. Chances of detection to these new places are low offers them opportunity for crime.
2. **Cultural conflicts:** The urbanization and industrialization have resulted in drifting of people from one place to another which has led to cultural conflicts between inhabitants and immigrants. Such cultural conflicts occurring between different sections of a society have resulted in deviant behaviour thus increasing the crime rate of that place. India also suffered from the same problem during Indo-Pak partition in 1947 and in Pak-Bangladesh times in 1971. That time there was increased immigration of “Refugees” from Sindh and NWF region in 1947, which created a barrier in the long-established social structure of Indian Society and resulted into massive increase in crime.
3. **Family Background:** This factor also encourages the Juvenile to commit for offence in the society. Sutherland said that “the family background has greatest influence on the criminal behaviour of offender or Juvenile. The Children divert themselves towards criminal tendencies

if they find their parents or members of the family behaving in the similar manner. A child who is grown up in a hostile aggressive parenting atmosphere becomes an easy prey to criminality”.

Some are the same factor which emanates from the family background are as under:

(a) Family Structure: The structures of the family are responsible for figuring out the personality/character development of the child. A healthy and educated family provide good atmosphere and encourages growth, confidence and makes him a responsible and sensible citizen. Delinquents mostly belong to poor and inadequate homes (Carr and Srivastava).

(b) Broken Homes: Broken home means a home where there is instability present in homes due any one of the missing family members like either the parent is dead or living separately or is divorced.

(c) Child's Birth Order in the Family: Lees and Newson (1954) found that sibling position could be an attributing factor for differences among the delinquent. According to their study middle children are likely to get less attention and care compared to older and younger children resulting in attention deficit disorder. Such children are more likely to get prone in criminal activities and their number is also considerably large in group of delinquents. The results of their study have received some support from the findings of Glueck's (1950) and Nye's (1958).

(d) Family Size and Type: It is also recognized as a factor in reason of delinquent behavior.

Delinquents mostly belong to joint and bigger families as compared to the smaller and nuclear families as less attention is likely to be paid towards children in bigger families. Glueck (1950) found “delinquent children were more frequently come from joint and larger families”. Andrew (1976) and Fisher (1984) also found similar results in their studies on juvenile delinquents.

(e) Parent-Children Relationship: The most significant factor in the behavioural development of a child is the relationship with their parents. The relationship with a family is important in shaping the inter-personal behaviour and cognition of the child (Glueck and Glueck, 1950 and Nye, 1958). According to Desai (1979), “the child needs to feel that there is at least one solid dependable fact in the changing confusion of his social relationships, that he need never doubt his parents" affection for him”. But in many cases, misunderstandings, hard feelings, and open conflicts occur between parent and the child.

4. Socio-economic condition: This condition is also a factor which leads to the child to commit the offence. Present day industrial progress, economic growth and urbanization have paralyzed our domestic life. The loose control over the wards has slackened this leaving them free to behave as they like. Now-a-days, money is the parameter to gauge or measure the social status of a man in society.

5. Neighbourhood: The influence of neighborhood is also having much to do with the type of crimes occurring in that area. Therefore, densely populated villages, towns and cities offer regular opportunities for crimes relating to theft, fraud, dacoity, burglary, kidnapping, cheating etc. The cases of theft and pick pocketing are common at public places like bus and railway stations. Another considerable characteristic of delinquency is certain anti-social activities in the neighborhood. It includes gambling houses, brothels, and similar other bad characters institutions.

6. Alcohol and Intoxication: Now-a-day, it has become a fashion in the youth to consume alcohol. Generally, people give a spoon of Brandy to a sick child who is suffering from cold and cough. They thought that the Brandy can be useful for cold and cough, but the use of alcohol in any manner causes heavy damage to the mind and body of the person or child, who consumed liquor. A child cannot identify the consequences of his acts of consuming alcohol.

7. Peer Group: The behaviour of an individual largely depends on his peers. Some of the individuals (mostly in teen ages) form gangs in which several individuals associate together in group activity which often emerges into criminal tendency. Boys and girls often learn techniques of committing crimes in gangs, it is a means of conveying techniques of delinquencies, of training in delinquency. If a child remains with other delinquents, then he gets more opportunities of engaging himself in criminal activities. He joins gang to secure everything which he does not get otherwise.

8. Nature of Society: The living condition of a society whether democratic, socialist or dictatorship, also determines the prevalence of delinquent behaviour of the children in that society. Also, the surroundings of people in society are one of the aspects of society which affect juvenile delinquency. For example, the rural and urban settlement in India is much dissimilar in terms of livelihood, education, language and living conditions etc. These dissimilarities seem to have differentially affected the frequency of delinquency and this side needs to be further research.

9. The socio-cultural conditions: The socio-cultural condition is also a contributing factor for juvenile delinquency. When a child living in a society, he meets to different types of persons some who were engaged in criminal activities. The anti-social element in the society tends to change the normal children into delinquents for their multiple benefits like to get their illegal work done and to earn profit by attracting them initially in petty crimes like theft, extortion, cheating, pickpocketing etc. This affects the future and character of these children and it also creates serious law and order problems for the administration also.

10. Cinema: Movies and social sites are also considered as cause of crime or delinquency because children are easily attracted by the movies. What they watch on the movies and Television screen they try to do in their real life. Now day movies are based on sexual crime and criminal actions scenes like dacoity, bank robbery, theft, hurt, rape etc. The parents must give attention to their children and be careful that what their children are watching on movies and Television and especially try to away them from cinema which contains undesirable pictures and crime scenes.

11. Role of Press: Press plays a vital role in creation of good and bad impressions on the mind of children. Children are generally paying attention to those headlines of newspaper and clipping of news channel which contain news of gambling/lottery, loot, robbery, rape, how to earn easy money etc. Children also learn how they can commit the offence and earn easy money and become rich. Cases of robbery, loot, kidnapping, gambling etc. reported on daily and shown repetitively are also misleading factors to the juveniles.

12. Cheap Literature: There is a common belief that the bad and cheap literature has a side effect on the minds of young people. Description of any crime in such readings directly gives them suggestions and technical procedures to be used for criminal activities. The effect of cheap literature on the minds of delinquent children has been stressed.

13. Physical Standards: Lombroso stress on the organic causes of crime and suggested several criminal types, such as criminals by passion and occasional criminals. Kretschme identified "body-mind" types: the cylothyme and schizothyme. He believed that the cylothymes were less serious delinquents and criminals than the schizothymes. Sheldon (1949) also linked the body-types to delinquency. He discovered three basic body types:

- i. Mesomorphs
- ii. Endomorphs
- iii. Ectomorphs

14. Mental makeup: Mental makeup of the child also conditions his behaviour to a large extent. Lots of researchers reveal that "a large proportion of delinquents are pathetic minded and deficient in intellect". According to Henry H. Goddard, the greatest Historian, "there are two basic theories of crime and delinquency. One refers to spiritualism and the other relies on worldly explanation."

15. Heredity: The factor of heredity is emphasized a lot when studying the cause of delinquent behaviour. According to Goring, "pathetic mindedness is the result of hereditary transmission". An opinion was expressed in a Seminar on juvenile delinquency that "delinquent parents breed delinquent children". Heredity and environment influence a child's behaviour to a large extent. "Heredity conditions what a child can do or not do, whereas environment influences what he does".

C. Physiological and personal

Criminal's psychological behavior play a significant role in the determination of delinquency. It is the psychology of a criminal which controls it mind, and the mind designed the criminal act which a delinquent intends or wants to do. There are some significant factors in act of anti-social behaviour.

1. School Factors

The school plays a significant role for the growth and development of a child, it is the school wherein the child has the closest contact with most children over the maximum period. In some schools' cruel treatment given by teachers creates hatred and annoyance among the children which forces them to abscond from the school and become delinquent. Bhatia pointed that "the unfavourable school conditions may include harsh and unsympathetic treatment which often aggravates the situation". According to Pathak, "School is usually thought as a constructive agency but when it fails to perform its designated functions, it may become by virtue of its negligence, a main contributor to delinquency."

3. Drug-addiction:

Drug-obsession among the juveniles provokes them to commit petty crimes. Taking of drugs by the juveniles now days is quite common. Addiction creates disturbance in family and creates hostile atmosphere in family. This atmosphere is highly perilous to the other child of the

family. The parents must take care of their children otherwise they may indulge in commission of offence.

3. Overcrowding: when the child sleeping with his parents in the same room he watches and hears those things which the better to do shielded. The shadow of family member jealousy towards others family member or any other negative discussion is not good for their growth and development of mind. The hostile and aggressive behaviour of the father, mother and any other family member may change the mind of child and this may also lead them toward crime/delinquency.

9. Some other causes of delinquency may be noticed as under:

1. Bad Company
2. Adolescent insecurity
3. Mental conflicts
4. Excessive social suggestibility
5. Love adventure
6. School dissatisfaction
7. Poor recreation facilities
8. Poor living condition
9. Vocational dissatisfaction
10. Sudden impulse
11. Physical condition

10. Conclusion

What if juvenile delinquency could be prevented? This thesis intended on examining previous research on crime of adolescents and increasing the knowledge of what contributes to desistance. It was hypothesized that a juvenile's home environment, school environment, and peer associations were the major contributors to crime in adolescents. Criminologists provided enough evidence to show that contributors to juvenile crime are family, peers, and school but they also enhanced my knowledge on the topic alone.

If a common ground appears, like negative parental relationships, lack of supervision, lack of commitment to school and family, and more commitment to friends and criminal activities, then provisions need to be set in motion to improve those relationships and societal bonds for each individual. If the parents would have paid more attention to the needs of their child and focused on how their decisions affected their lives than these individuals would have been in a better state of mind. As a result of the lack of parental connections, impulsivity, low self-control, and mental health issues became a result in these individuals from the lack of ties to social bonds and relationships to positive stimuli and the lack of positive reinforcement for good attributes. When individuals have no positive commitment to or relationship with their parents, they will look for other means to fill that void, which most of the time can lead to more commitment to friends and an increase in criminal activity. If criminologists and the scientific community, alike, can enforce better policies and preventative strategies to protect juveniles from the negative social bonds that they receive at home, then the potential to save and individual from crime is definitely a positive result.



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- 2017: 6.261
- 2016: 6.087
- 2015: 3.986

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Journal's character	Scientific
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