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     *E*minent academicians and educationalists providing fine education and an illustrious evolution with the changing times are the two pillars on which Universal Group of Instituions stand upon since being established in 2009. In this ever changing world, dynamicity of minds holds the most importance to habituate oneself. The Joint International Conference on **Emerging Trends and Innovation** with Globally Multidisciplinary Research and Education Association (GMREA) is a fine opportunity. The conference will not only succour the Researchers but all who strive to make a change be it experts of various fields, policy makers, stakeholders or students. To redesign, we need determination and zeal to learn and listen to fresh point of views, to grasp and to achieve. To give you an opportunity to hark to new ideas and trends is what we aim to achieve through this conference being held on an international level providing exposure to varied ideas that exist in the world. To embark upon it and understand distinguished techniques lies in your hand. With an interactive interface, we allow you to learn from different countries, universities on your own terms. We open the gates to a new culture, the one which is cohernt to ideas never heard of, theories never read of and allow you to seize the day by presenting your own work, getting feedback and take you one step forward towards your goal for this conference will help you in beind part of the circle, be known and explored. We all have experiences, we all have views. All we need is a pull from our bubble, a platform to project what we think and this conference stands as a pedestal to showcase your research. The Universal Group of Instituituons aims to share knowledge, illustrate the field of Multidisciplinary Research directed for academicians, researchers and scholars working in any aspect and adduce them to a world unexplored. These proceedings, I trust, will be an impetus to stimulate further study and research in all these arias.

We thank authors and participants for their contributions.

Your's Sincerely

Dr. Gurpreet Singh
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Dr. Virender Kaur
Director Academics

It's with deep satisfaction i write this foreword to the proceedings of International Conference on Emerging Trends and Innovations in Social Sciences, Enginnering, Management, and Agriculture & Medical Sciences held on 26-4-19 in Universal Group of Institutions in collaboration with Globally Multidisciplinary Research and Education Association (GMREA).The dedicated preparation led to a successful conference with broad participation. The papers contained in these Proceedings cover a wide range of topics. The authors have provided state-of-the-art contributions, and this volume could not be produced without their commitment to explore the emerging trends and innovations in higher studies. It also aims to encourage the advancement and exchange of knowledge and experience in the areas of various disciplines among academics, professionals and students.

We thank the key-note speakers of the penalaries, members of editorial board and committees for their cooperation in this conference in different ways.

Dr. Virender Kaur
Director Academics
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Dr. Kompal Wadhawan
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  *L*earning is not attained by chance; it must be sought for with ardour and attended to with diligence. To learn one must be determined to step out in the world full of unexplored fields and unchartered territories. It's only then one witness's augmentation widening their horizon. International Conference on Emerging Trends and Innovations in Social Sciences, Engineering, Management, Agriculture and Medical Sciences (SEMAM2K19) held in Universal Group of Institutions on   26th April 2019is a stride in the direction of development and advancement. We are very pleased to introduce the proceedings of the International conference with a hope that these proceedings will provide you with an extensive documentation of the original articles of archival value covering research and development topics, which span all areas of Emerging and Innovative Trends in higher education. In addition to new advances in traditional and more established areas of Teacher Education, we seek to include unfathomed findings on emerging and interdisciplinary issues giving all achievers amongst us an opportunity to master their grasp on everything that the world allows us to learn. The Journal is designed to ameliorate the emerging trends of area of study and pave a road for innovative methods and ideologies fabricating the Teacher's Education in a unique demeanour encouraging researchers and authors to submit fundamental and practical aspects together. Through a careful selection of manuscripts, our utmost goal is to adduce and acquaint everyone with all the issues related to theme, sub-themes and contemporary issues under one blanket in the finest way possible.

A venture can never be successful without guidance, persistence, expertise and cognition. Similarly, a proceeding cannot transcend to the top without having an outstanding and enlightening group of Associate Editors and Advisory Board members. I would like to take this opportunity to thank Dr Gurpreet Singh, Chairman, Universal Group of institutions, Dr. Verinder Kaur, Director Academics, UGI and Dr. Manju Dhingra President, GMREA. I am forever indebted to the whole organising committee for their devoted, zealous and professional work of countless hours. They form a truly remarkable group of colleagues, the best in their fields as prolific writers and exemplary teachers. I feel honoured to be a part of this journey which is a joint effort of all eminent teacher educators, authors and researchers for no one can whistle a symphony, it takes a whole orchestra to play it.

Dr. Kompal Wadhawan
Principal
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PROMOTING RESEARCH FOR SOCIETY

Dr. Manju Dhingra
President, GMREA

Being the **President** of **GLOBALLY MULTIDISCIPLINARY RESEARCH AND EDUCATION ASSOCIATION (GMREA)**. I would like to thank **Dr. Gurpreet Singh**, Chairman, Universal Group of Institutions, **Dr. Verinder Kaur**, Director Academics, UGI, **Dr.Kompal Wadhawan**, Principal, Universal College of Education, the members of organizing committee and editorial board for their constant support. I feel honored and privileged to serve the best recent developments in the areas of multidisciplinary research through this exciting program.

International conference on **Emerging Trends and Innovation in Social Sciences Engineering, Management, Agriculture and Medical Sciences (SEMAM 2k19)** organized by Universal Group of Institutions jointly with Globally Multidisciplinary Research and Education Association (GMREA) is an excellent and inspiring platform for the Researchers and Academicians to explore their research and then to bring together their ideas collectively in the form of the proceedings.

The conference represents the efforts of many people. We further thank the invited key-note speakers for sharing their insights with us. Finally the conference wouldn't be without the excellent papers contributed by authors. We thank all the authors for their contribution and participation in SEMAM 2K19.We hope this program will further stimulate the research and GMREA will always strive for opening the best of publishing opportunities.

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CONTENTS

Research Papers

TECHNOLOGICAL INNOVATION AND ITS IMPACT ON ECONOMIC DEVELOPMENT

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ABSTRACT

Economic Development Of Nation Is The Indispensible Part For Survival Of Any Nation.. No Country Can Survive Without The Growth Of The Economy. This Research Is Performed To Study The Concept Economic Development And How Technology Has Helped In The Growth Of The Economy Of The Nation. Economic Development May Be Defined As Any Act Which Helps In Improvement Of Economic, Political Or Social Wellbeing Of Population. It Is The Shift Of Nation From Poor, Low Income Economy Towards Rich, High Income Economy. The Research Discusses About The Government Initiatives To Make People More Technology Savvy. Economic Development Is Not The Only Solution For Growth Of Any Economy It Needs To Be Well Coordinated With The Sustainable Development. It Means The Nation Needs To Grow Economically With Depletion Of Our Natural Environment. Thus The Paper Also Gives Attention Towards The Side Effects, Issues Or Complexities Which Arise Due To The Use Of These Technologies And May Harm Our Environment. The Paper Suggests The Adoption Of Green Economy As The Solution To The Sustainable Economic Development. This Would Help In Real Long Term Growth Of Any Nation.

Keywords; Economic Development   Technology And Innovation   Sustainable Development   Green Economy

PROBLEM STATEMENT

- To study the concept of economy development and role of technology in economic development.
- To create awareness about government schemes regarding technology education.
- To create awareness about technology issues and need to shift towards green economy.

RESEARCH METHODOLOGY

The research is conducted using descriptive methodology and comprise mainly on qualitative data. The research is conducted to understand the way the things are. It mainly focuses on the conceptual understanding of the topic and relating it to world.

LITERATURE REVIEW

Kenneth w. Moffet has performed a research on economic development. He studied the impact of economic development and various challenges on political system, democracy and growth of human resources. The paper stated the relation between economic development and various industries. And on other hand show the relation between economic development and democracy of the country.

Olivier sertenaer in his research studied the definition and main concepts of technology advancements and innovation. The paper show the evolution of technology and its long journey from past to future. As the technological advancement is not yet complete and would continue in future. The researcher suggested the opportunities for future technical developments in India.

INTRODUCTION

Economic development

Economic development may be defined as any act which helps in improvement of economic, political or social wellbeing of population. It is the shift of nation from poor, low income economy towards rich, high income economy. It seeks to improve the quality of life of the communities. If a nation grows economically, it would result in high literacy rate in economic, and removal if problems like poverty and unemployment. Economic development is not the only solution for growth of any economy it needs to be well coordinated with the sustainable development. It means the nation needs to grow economically with depletion of our natural environment. Today's world is very much aware about the importance of our environment. Development of country at the cost of environment is not a solution but give rises to many more problems.

Role of technology in Economic development

Latest innovative technology is a life line for the survival in the world. No organization can survive without the adoption of technology and working towards innovation. Similarly, no economy or as country can stand in the world without the use of technology.

Technology is the base for economic development of the country. It helps in the enhancement of industries, education, medical and all other sectors of the economy. On other hand it also leads to improvement of standard of living of the people. Technology and innovation have resulted in the growth of our economy and have helped

in increased national income, per capita income and GDP of the economy which are the main parameters to measure economic development.

Technology has helped in the growth of the economy in following ways:-

1) Increased National Income
Technology advancements have helped in advancement of production. Larger number of units is produced with similar amount of raw materials. It has moreover made industries globally competent to trade in foreign market and fulfill foreign demand. This has resulted in increase in national income and maintaining favorable foreign exchanges.

2) Increased GDP
Increase in production of goods and services will automatically result in increase in GDP of the country. In past few years our GDP has tremendously grown. One of the main reason of this growth is improvement of technology and innovation.

YEAR	GDP
2019	6.2%
2018	7.3%
2017	6.68%
2016	7.11%
2015	8.16%

3) Increased Per capita income
Per capita income is the average income of the population of a country. Increased use of technology has improved the standard of living and has led to increase in per capita income. Technology help in producing same good at low cost which also increase the real income of the consumer as they can get the same goods at lower price.

4) Industrial efficiency
The use of technology helps in the increased efficiency of industries. Large number of units can be produced with machines that will of same efficiency. It would lead to reduced wastage of resources and will result in greater number of outputs with same number of inputs introduced.

5) Reduced workforce burden
Technology and advanced machinery help in reducing the burden of workforce. And would result in great amount of work done with minimum use of physical energy. It also helps in storing greater information with use of MIS and other database technology.

6) Increased productivity
Use of technology in industry results in greater units of outputs as already stated. It also makes the industries globally competent and results in increased demand of goods and services. With use of technology one can increase production at large scale and even cater to foreign demand.

7) Saving time
Technology results in saving time and quickly completion of work in reasonable time. Without technology the work which required large amount of time , can now be completed in few minutes with help of technology. As we can see while sending mails or connecting people.

8) Specialization and increased accuracy
Technology helps in division of work and helps in bringing specialization in various jobs. It leads to tremendous innovative trends in performing the same traditional functions which helped in greater accuracy and reliability.

9) Making globally competent
The country need to be technically advance in order to stand in the world of technology and innovation. Innovation and latest technology is not one time thing. The technique which is innovative today may be outdated tomorrow. Thus the companies need to be technically competent in order to be globally accepted.

PROGRAMMES IN INDIA TO MAKE POPULATION TECHNOLOGY SAVVY
SKILL INDIA
Skill India is a national policy which aims to promote skill development and entrepreneurs in our country. It was started in India in 2014. Various programmes were launched under skill India campaign which included

- Pradhan Mantri Kaushal Vikas Yojana PMKVY

The aim of this scheme is to provide skill training to the youth if the country at nil cost. It provided training for short period of time for around 2 to 6 months and also offers jobs based on various skills.

- Pradhan Mantri Kaushal Kendra PMKK

This scheme created many model training centers with up to date infrastructures. It aims to provide skill training with use of latest technology and equipments. It is spread around almost every districts in India.

- National Apprenticeship Promotion Scheme NAPS

This scheme motivated the employers and industries in encouraging youth to be apprentices and help them by providing on the job training which would result in ready workforce.

- Establishing Academic Equivalence

This scheme helped in providing training by coordination the academic education system and the vocational training system. MOU is signed between National institute of open schooling and Ministry of skill training and development in order to provide vocational training qualification which would have equivalence academic importance.

- Capacity building in long term skill development programme

It is a programme which aims to build capacity of skillful ecosystem. To provide skill training and technology development courses in ITI's and other infrastructures.

ISSUES RELATED TO THE IMPLICATION OF TECHNOLOGICAL INNOVATION

No matter the country has grown rapidly with the use of latest technology and innovation but is this the sustainable growth. This is the question by today's human resource with is much aware and educated. The increased use of technology has resulted in following issues.

1) Impact of technology on structural unemployment

Advanced used of technology in industries and various sectors have resulted in decrease in demand of human resources. It has further led to retrenchment of workers and has worsened the situation of unemployment in over populated country like India.

2) Regional inequality

Upgraded technology has further led to increase in Gap between rich and poor class of the economy. This has resulted in problem of Regional inequality in India. The one who can adopt technology and can make huge investment in technology tends to grow at rapid rate and on other hand backward areas which are not technological savvy are left much behind.

3) Negative impact on environment

Technology can have bad effect on environment by many ways. Many technologies use more resource and power which have resulted in over exploitation of natural resources. Many non renewable metals like Gold are used to make technology equipments. Technical waste also affects our Air, Soil and Water resources.

4) Climate change

Use of natural resources and gases in order to make technological advancements may in form of machines or advance cars have bad effect on our environment. It has resulted in depletion of Ozone layer and harmful chemicals in air which further led to change of our environmental climate cycle.

5) No sustainable development

Technological up gradation has no doubt resulted in economic development of the country but at a cost of our environment thus it cannot be said as a sustainable development.

6) Health Hazards

Technical advancement have resulted in many health problems one of this is most vigilant that is obesity. Technology has reduced the performance physical activities and has resulted in issues like heart problem, obesity and high blood pressure.

STRATEGIES TO IMPROVE TECHNOLOGICAL ECONOMIC DEVELOPMENT AS THE PATH TO SUSTAINABLE DEVELOPMENT

Coordination between technological economic development and sustainable development can be achieved with the adoption of Green economy. Green economy aims at economic development of country with the combined importance of technology and green methodology which save the exploitation of environment.

Green Technology

It is technology which is designed to reduce over dependence on harmful fossil fuels. Green technology can be brought with adoption of effective technical energies in addition to lesser emission of green house gases.

Green business

Green business refers to the efforts to produce, transfer and promote goods and services with use of technology like re cycling machine which would help in reduction of harmful material like plastics from earth.

Green ideas

It means coordination of eco friendly ideas in technological innovation which will help in overall growth of economy without depleting natural resources.

Green Buildings

It is the latest technology which aims at maximizing environmental performance as well as economic developments of buildings and other construction industries with use of natural lights, rain water harvesting techniques and solar panels.

Green Education

It aims to provide training to human resources with aim to promote technological advancements but not at a cost to environment. It aims to use technology in order to increase knowledge and awareness about environment.

CONCLUSION

Economic development is defined as any act which helps in improvement of economic, political or social wellbeing of population. Economic development is not the only solution for growth of any economy it needs to be well coordinated with the sustainable development.

Technology is the base for economic development of the country. It helps in the enhancement of industries, education, medical and all other sectors of the economy. On other hand it also leads to improvement of standard of living of the people. Technology and innovation have resulted in the growth of our economy and have helped in increased national income, per capita income and GDP of the economy which are the main parameters to measure economic development.

Technology should be designed in such a way as it leads to sustainable development as path of economic development by following the strategy of green economy.

Green technology which leads to green ideas, green business, green building and green education will result in sustainable development of the country.

The paper thus suggests the adoption of green economy as the solution to the sustainable economic development. This would help in real long term growth of any nation.

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ICT IN EDUCATION, HISTORICAL PERSPECTIVES AND WAY FORWARD

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ABSTRACT
Despite much hue and cry among various sections of society, especially parents sounding their concerns about internet addiction in their children. This paper tries to put forward the role of technology that has played in advancement of education and lists down the positive impacts of ICT on education sector as of now, rather than suggesting an isolationist approach between ICT and education. This paper pushes for more of an integrationist and rights-based approach for implementation of ICT in education. ICTs in education have potential to transform the framework of education across the world, it has a potential to evolve the traditional educational sector in to a beautiful learning and evolve organism as well as the potential to uproot its being and can be seen by home school kids in western countries.

Keywords: ICT, MOOCS, Internet Education, eLearning.

INTRODUCTION
Education forwards technology and technology forwards education

Communication is the basis of development of civilization; it is verbal communication that led to the development of modern cultures, cities and systems in the world. Communication is an intangible heritage which has led to transfer of knowledge through time and space, which has further led to development of a body of knowledge so vast that it encompasses a plethora of subjects, branches thereof and sub branches and so on.

Desai (2010) communication is integral to education, if an idea cannot be communicated; it cannot be put into practice and hence cannot be taught. The communication used to be verbal or written in olden times hence was limited to a particular area or was limited by time that is either you could spread an idea to a group of people who could listen to you or who could read the letters you sent even if it took months to reach. With the advancement of time and introduction of modern technologies a lot has changed in our lives.

Ali, Haolader, and Muhammad, (2013) classroom teaching is a core tenet of modern education and socialisation process, the values, morals, ethics engrained into the fabric of a child's character in classroom ensures the colourful cloth which we call society. The classroom teaching in India has followed Gurukul system from ancient times wherein all those Divjyas (entitled to upnayan or thread ceremony) were Shishyas and were taught by Gurus giving a religious fervour to the education system.

With the onslaught of western ideas due to colonialism and introduction of communication technologies like printed books, newspapers and pamphlets, the composite culture of India started absorbing the new colours, so much so that the age of old Gurukul and Madrassa system started getting replaced by modern schools (DAV movement, McCauley minutes, efforts of Ram Mohan Roy and Derozio).This education system encouraged a duplex mode of communication between students and teachers and the feedback more often than not appeared through a newspaper.

This system was a composite of Gurukul and western education but was soon stated for change. The technological impacts in the 20th and 21st century brought forward globalisation and shrunk the world to a global village. Education system was most impacted by internet. The teachers as well as students were exposed to a rapid and massive flow of information, making the class dynamics between students and teachers and teaching learning process.

Pathak and Manoj (2018) ICT has become very important prerequisite in every teaching learning process in our educational institutions, so that students can easily access through the internet were acquainted to a massive flow of information. ICT has become important tool through which teachers and research scholars upload their research papers, articles, videos and classroom lectures while approaching various electronic gadgets.

Ngeze (2017) has highlighted the role of information and communication in teaching and learning process and has introduced many innovative teaching learning experiences for both teachers as well as students throughout the world. This paper was conducted with the view to look into readiness of secondary schools to realizing integration of ICT in teaching practices, teacher's knowledge, skills and having of ICT devices. It was also found that the schools where ICT facilities are available, the student to computer ratio is high. In addition

teachers are ready to make use of ICT in teaching learning process if they have ample knowledge and skills to do so.

Hernandez (2017) conducted the studies with the aim to find out the main challenges and also gives an outline of the future of ICT and their relation with education. It instigates with the explanation of so called knowledge based society and how it emerged as an offspring of technology and has incorporated different areas and giving a way to the innovations in teaching and stimulating generation of new knowledge. It also highlighted the vital significance of each educational process and their importance in renovating the educational process.

Sarkar (2012) examined the role and impact of ICT on educational practices in higher education system in quite micro ways and its impact which is increasing considerable. ICT has become strong changing agent among many developing countries to improve their educational practices. It is apparent that the use of ICT in education has changed the scenario of educational system in its all dimensions.

Education was more or less one way traffic till the introduction of Information and Communication Technologies (ICT's) where the teacher taught and student learnt now this process has an evolutionary trend where both student and teacher teach and learn from each other, this has been made possible due to introduction of different ICT's in education system as follows:

1) INTERNET
As such for education system, internet may have proved disastrous as people may think they can learn whatever they want from internet but education is not just learning, its functions as an agent of socialisation makes society what it is, so incorporation of internet into education system has broadened its scope wherein it does not only impact particular societies but the whole globe.

What was being taught may be still relevant but how it is being, what values it inculcates are put to test every moment on a global pedestal .For example; from ancient times Gurus command was to be obeyed blindly like in case of Eklavya and Dronacharya but ICTs have changed the outlook, now Eklavya will only pay fees when Dronacharya is correct according to internet.

Internet has not only expanded what is being taught and how it is being taught in classroom but also has expanded the classroom to whole world. A person in far off areas has now access to the best of schools and colleges throughout the world without being physically present there. It not only has given a good chance of quality education to poor and people of far flung areas but also has connected the global body of knowledge to one huge classroom. This has been possible due to a number of ICT platforms.

2) MOOCS
Chauhan (2017) MOOCS are massive online open courses which use technology as a medium for what we call online learning. Education with technology is considered as most promising development in education. MOOCS are massive courses designed to support unlimited participation of people and are offered through online platforms to students over the world. In India currently NPTEL (National programme on technology enhanced learning), mooKIT offered by IIT Kanpur, IITBX of IIT Bombay and the latest started by mHRD in collaboration with Microsoft i.e. SWAYAM (study webs of active learning for young aspiring minds) are providing courses to people online over internet which were only possible to be studied in universities. They are at second number after MOOCS provided in USA like Khan Academy.

MOOCS have solved a number of problems in learning. Now one can learn a million new ways about some idea and one can make his voice reach a million new brains. The ICTs as such are making dreamers achieve their dreams.

3. E-LEARNING
Apart from MOOCS which acts as bridge between students and institutions a one can learn with the help of ICTs without signing up for utilisation of electronic technology outside of traditional classroom learning. In here the internet acts as teacher and the medium is ICT. The body of knowledge learnt using e-learning does not follow any curriculum or any testing pattern, whatever is learnt is for the betterment of one's own self, however in recent times, this randomised learning has proven useful in teaching of soft skill in India.

E-Learning has most impact the traditional learning systems as no particular framework exists for such learning, as such one may acquire knowledge but this knowledge may more often than not half backed medications carried out by various people using E-Learning.

In India where investments in education section form meagre 2.4% of GDP the infrastructure required for traditional classroom education and the manpower is always less than optimum, as such govt. initiatives like

EDUSAT, MOOCS, eLearning through TVs and Radios has expanded the horizon of premier institutes in India to its borders. Now not only can poor students learn from the best of the best but also same for free. As such part of budget to push formed implementation of ICTs in education sector, private sector also has its job cut out with new emerging players like UnAcademy, Byjus, Vision Academy increases the competition over government must provide for those who can afford to learn for private players.

ICTs in education have potential to transform the framework of education across the `world, it has a potential to evolve the traditional educational sector in to a beautiful learning and evolve organism as well as the potential to uproot its being and can be seen by home school kids in western countries. Now it's up to the initiatives discussed about and there out comes which can modern times with the help of ICTS making internet a classroom and make a classroom a fountain of knowledge for internet. Internet cannot take place of a teacher, although it has started to act as an agent of socialisation but the rowdy nature of information and the uncontrolled inflow thereof can turn a sinner into a saint and visa-versa.

The role of education as an agent of socialisation has been time tested; the impact of ICT should be such that it makes the colour of societal fabric woven by education for excellence and beautiful as it can be.

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ROLE OF ICT'S IN GOVERNANCE

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INTRODUCTION

Information and Communication technology is affecting us as an individual and as a society. Our options for education, entertainment, working and a variety of things that we do in our daily lives are radically changing due to development of information and communication technology. It is playing a vital role in the daily life of all communities by revolutionizing their working procedures in the governance. ICT's offer a unique opportunity to empower civil society to play its role more effectively and facilitate the performance of government functions. In the realm of government, ICT applications are promising to enhance the delivery of public goods and services to common people not only by improving the process and management of government, but also by redefining the age old traditional concepts. Today ICT use extensively within the process of governance for providing better citizen services and for enhancing efficiency, transparency and accountability of government departments and agencies. It is also called E-Governance.

E-GOVERNANCE

The World Bank defines E-governance as the use of information and communication technologies by government agencies to transform relations with citizens, business, and other arms of the government. It involves information technology enabled initiatives that are used for improving:

(i) The interaction between government and citizens or government and businesses: e-services

(ii) The internal government operations: e-administrations

(iii) External interactions : e-society.

E-governance is a kind of window of opportunity facilitating a much faster, convenient, transparent and dynamic interaction between the government and its people. It has also been referred to as i-governance – integrated governances as it integrate people, processes, information and technology in the service of achieving governance's objectives.

It should not forget that there exists an inherent dichotomy between the system of governance and technology. The use of ICT in governance, improves the reach, enhance the base, minimize the processing costs, increase transparency, and reduce the cycle times.

E-GOVERNANCE: AN INDIAN FRAMEWORK

In India, the main thrust for e-Governance was provided by the launching of NICNET in 1987 – the national satellite based computer network. This was followed by the launch of the District Information System of the National Informatics Centre (DISNIC) program me to computerize all district offices in the country for which free hardware and software was offered to the State Governments. NICNET was extended via the State capitals to all district headquarters by 1990. In the ensuing years, with ongoing computerization, tele-connectivity and internet connectivity established a large number of e-Governance initiatives, both at the Union and State levels. The e- governance models that have so far emerged in India have been utility driven and community based. They are meant to be used by a specific community residing in a municipal area/ town/ tehsil or district. Successes of these models are not only due to community support but incorporation of user friendly technology in terms of software support of local language/dialect as medium of interaction. Some Instances of E-Governance such as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Warana Project in Maharashtra, Online Income Tax, Online Central Excise, Unique ID and E-office has accelerated growth of respective areas and contributing to country's economic development. Similarly, at state level the various rural E-governance projects such as SETU Project in Maharashtra etc, projects that have been providing excellent services and saving time and money of people as well as of government and are contributing their might to the socio-economic development.

OPPORTUNITIES OF ICT IN GOVERNANCE

Monitoring

Proper use of ICT's can help to track day-to-day records, and progress in service delivery under various government programmes such as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), actual quantity of ration distributed to the beneficiaries under Public Distribution System (PDS), and so on, in inaccessible rural areas.

A remarkable example of this kind is the end-to-end information technology solution introduced by the state of Chhattisgarh to address leakages in PDS. Under this, operations at every level of the programme–from procurement of production to storage and transportation to state warehouses and fair-priced shops—have been computerized. There is a continuous monitoring at all levels via reports uploaded onto the web in real time, which has in turn led to enhance accountability of operations. Besides, helplines can record on-going reporting on the implementation status and post-implementation impact of government welfare programmes.

Grievance redressal

ICT tools have immense potential to help people grievance redressal mechanisms in a user-friendly and simple way. For example, helplines like Sanjog-- a government of Odessa's initiative, is very commonly seen serving as automated and web-based grievance redressal systems to enable seamless registration of feedback of the citizenry.

Even private enterprises are coming up with innovative solutions as far as using ICT in filing grievances is concerned. For example, e-portal 'RTI at Your Doorsteps' offers a very simple online mechanism to file RTI applications and even first and second appeals thereafter whenever required. It started functioning in Haryana in September 2010 and since them it has filed more than 3,000 RTI applications, 1,400 first appeals and 1,200 second appeals under RTI Act 2005.

Cost Reduction and Efficiency Gains

ICT's considerable potential to contribute to gain efficiency and cost reductions by substantially decreases the processing cost and reduce the number of inefficiencies.

Transparency, Anticorruption and Accountability

ICT in governance helps to increase the transparency of decision making processes. For example The Central Vigilance Commission (CVC) in India started an initiative to create a website with the objective of reducing corruption and increasing transparency by sharing a large amount of information related to corruption with citizens.

Increase the capacity of government

The use of ICT for the reorganization of internal administration transaction, communications, interrelationships and for easy information flow and transfer offers considerable opportunity to increase government capacity.

Our e-governance activities and initiatives

- The formulation of National e☐Governance Plan (NeGP) by the Department of Electronics and Information Technology (DEITY) and Department of Administrative Reforms and Public Grievances (DAR&PG) in 2006 has boosted the e☐Governance process.

- Indian Railways has started the internet reservation facility on its website http://www.irctc.co.in wherein one can get the railway reservation done through credit cards.

- Bhoomi is a self-sustainable e-Governance project for the computerized delivery of 20 million rural land records to 6.7 million farmers through 177 Government-owned kiosks in the State of Karnataka. It was felt that rural land records are central conduits to delivering better IT-enabled services to citizens because they contain multiple data elements: ownership, tenancy, loans, nature of title, irrigation details, crops grown etc. In addition to providing the proof of title to the land, this land record is used by the farmer for a variety of purposes: from documenting crop loans and legal actions

- *Gyandoot* is an Intranet-based Government to Citizen (G2C) service delivery initiative. It was initiated in the Dhar district of Madhya Pradesh in January 2000 with the twin objective of providing relevant information to the rural population and acting as an interface between the district administration and the people. The basic idea behind this project was to establish and foster a technologically innovative initiative which is owned and operated by the community itself. Initially, computers were installed in twenty village Panchayat centre's and connected to the District Rural Development Authority in Dhar town.

- Lokvani is a public-private partnership project at Sitapur District in Uttar Pradesh which was initiated in November, 2004. Its objective is to provide a single window, self sustainable e-Governance solution with regard to handling of grievances, land record maintenance and providing a mixture of essential services.

- eSeva (Andhra Pradesh) This project is designed to provide 'Government to Citizen' and 'e-Business to Citizen' services. Originally, it was implemented in the form of the TWINS (Twin Cities Integrated Network Services) project in 1999 in the twin cities of Hyderabad and Secunderabad. The highlight of the e*Seva*

project is that all the services are delivered online to consumers /citizens by connecting them to the respective government departments and providing online information at the point of service delivery.

- *Khajane* Project in Karnataka. It is a comprehensive online treasury computerization project of the Government of Karnataka. The project has resulted in the computerization of the entire treasury related activities of the State Government and the system has the ability to track every activity right from the approval of the State Budget to the point of rendering accounts to the government. The project was implemented to eliminate systemic deficiencies in the manual treasury system.

- A FRIEND (Fast, Reliable, Instant, and Efficient Network for the Disbursement of Services) is a Single Window Facility providing citizens the means to pay taxes and other financial dues to the State Government. It was launched in Thiruvananthapuram in June 2000 and replicated in other district headquarters during 2001-02.

Challenges for a successful implementation of ICT in Governance

While it is evident that E-Government and ICT in general are powerful drivers of growth but there is, many challenges which hamper the exploration and exploration of its opportunities. These challenges and barriers are:

- ICT infrastructure (e-readiness, computer literacy, telecommunication equipment)

- Policy issues (legislation)

- Human capital development and lifelong learning(skills, capabilities, education, learning)

- Partnership and collaboration(public/private partnership, community and network creation)

- Strategy (vision, mission)

CONCLUSION

The new economy underpinned by revolutionary change in communication and technology. The information and knowledge has become a key factor in economic competitiveness. Countries must pursue a more active role in the formulation of national policies and strategies to promote the information economy in order to reap huge benefits in terms of economic and social growth/development. E-Government and ICT is believed to play a fundamental role in this end .It offers the potential of reshaping the public sector activities and processes, building relationships between citizens and government, enhancing transparency, increasing government capacity and providing a "voice" for those outside the government.

EFFECT OF SUPERCONDUCTING CHANGE ON LATTICE ANHARMONICITY IN HIGH TC SUPERCONDUCTORS

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ABSTRACT

Superconductivity in mercury by Kamerling Onnes a large group of components, alloys and mixes were found to display superconductivity at low temperatures. For the regular superconductors the primary attractive microscopic theory was given by Bardeen, Cooper and Schrieffer (BCS Theory). As we would like to think, thermal expansion results should offer more straight forward proof of the anharmonic effects and in this way we have considered the temperature variety of the thermal expansion data of YBa$_2$Cu30-~t (6 m 0.15) (Y-123) and $Bi_2Sr_2CaCu_2O_t$ (Bi-2223) over a wide range of temperature both in the typical and superconducting phases.

Keywords: Superconductivity, alloys, electronic, magnetic and thermal.

INTRODUCTION

Superconductivity in mercury by Kamerling Onnes a large group of components, alloys and mixes were found to display superconductivity at low temperatures. In any case, the restricted srope of these traditional superconductors for their low progress temperature (Tc) started the look for mixes with higher Tc's. The disclosure of superconductivity at around 35 K in the oxide compound La-Ba-Cu-0 was trailed by finding a few other oxide frameworks. Y-Ba-Cu-0, Bi-Sr-Ca-Cu-0, Tl-Ba-Ca-Cu-0 and Hg-Ba-Ca-Cu-0 which have Tc's over the breaking point of fluid nitrogen. These came to be known as high-T (- superconductors. As far back as their disclosure, the fascinating properties of these materials and the system of superconductivity in them have represented a challenge to the experimentalists just as to the theoreticians. There have been numerous models which were proposed to clarify different electronic, magnetic and thermal properties of superconductors. For the regular superconductors the primary attractive microscopic theory was given by Bardeen, Cooper and Schrieffer (BCS Theory).

RESULT AND DISCUSSION

Researchers like Bardeen, Cooper and Schrieffer (BCS Theory) demonstrated that a conduction electron twists the lattice because of Coulomb collaboration and makes a virtual phonon. A second electron with the opposite turn of that of the previous one sees the lattice contortion by retaining the virtual phonon. Both the electrons developed a feeble appealing power through the trading of the virtual phonon and they shape a Cooper pair. These Cooper pairs which are framed because of these electron lattice electron associations consolidate into an express whose ground state energy is considerably less than the ordinary ground state energy and is isolated from it by a band hole. Despite the fact that the BCS theory could clarify the majority of the marvel saw in the traditional superconductors, it recommended a maximum limit of 40 K for the Tc of a superconductor. Consequently the revelation of high-Tc cuprate superconductors demonstrated the deficiency of the BCS theory in these materials.

The system in charge of actuating pairing in high-Tc cuprate superconductors keeps on being slippery. One of the potential candidates is the electron-phonon connection which as indicated by one perspective could be effectively large in view of the defective screening of the coulomb collaborations and would thus be able to prompt high Tc. Another perspective depends on the development of bi-polarons which can experience Bose-Einstein buildup to offer ascent to superconductivity. There is one more methodology which lays on the possibility that the large effective coupling consistent may have its beginning in the high lattice polarization brought about by the lattice anharmonicity. The bi-polaronic component may likewise be personally associated with this perspective.

Experimentally there have been a large group of exercises as of late to investigate the role of phounon in high Tc materials. A softening of the Raman mode at 335cm' has been seen at Tc in $YBa_2Cu_3O_{7-t}$ Particle directing investigations on $YBa_2Cu_3O_{7-t}$: and $ErBa_2Cu_3O_{7-t}$ demonstrate a phonon oddity because of the Cu-O atom vibrations. Beat neutron diffraction on $Tl_2Ba_2CaCu_2O_8$, and inelastic neutron dissipating measurements on Y Ba2Cu^0~ show nearby auxiliary mutilation at Tc in these materials. Polarized EXAFS results demonstrate that the relative dislodge ments of the pivotal oxygen in high Tc materials are not symphonious and change around Tc. Cu-K - edge polarized EXAFS data for $YBa_2Cu_3O_7$ demonstrate a hub oxygen focused lattice shakiness at Tc proposing a coupling between superconducting fluctuations and anharmonic phonons. Neutron reverberation

assimilation spectroscopy for Cu in Bi2Sr2CaCu206 demonstrates a fast decline in the dynamic energy somewhat above Tc and detailed neutron dispersing measurements for chose phonons in $Bi_2Sr_2CaCu20g$, likewise show significant anharmonic effects. As we would like to think, thermal expansion results should offer more straightforward proof of the anharmonic effects and in this way we have considered the temperature variety of the thermal expansion data of YBa$_2$Cu30-~t (6 m 0.15) (Y-123) and $Bi_2Sr_2CaCu_2O_i$ (Bi-2223) over a wide range of temperature both in the typical and superconducting phases. The data of YBa2Cu307^ {b = 0.15} superconductor have been taken For the situation of $Bi_{1.6}Pb_{0.4}Sr_2Ca_2Cu_3O_y$(Bi-2223) we have played out the thermal expansion measurements utilizing our three terminal capacitance cell. For both the cases we have done the data analysis utilizing our semi-classical model depicted in Chapter. We find that there is without a doubt an irregularity in the thermal expansion conduct of Y-123 and Bi-2223 superconductors which start to appear at a temperature to some degree higher than Tc. On account of Y-123 superconductor we attempt to ascribe this oddity to a lattice precariousness initiated by polaron arrangement. Bi-2223 superconductor demonstrates an inconsistency in the vibrational contribution to thermal expansion at the super-directing change temperature and in the superconducting phase the thermal expansion demonstrates the nearness of the two dimensional (2D) Gaussian fluctuations close to the progress temperature.

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INCLUSION OF INFORMATION COMMUNICATION TECHNOLOGY (ICT) MATERIALS IN TEACHING OF BIOLOGY AT SENIOR SECONDARY LEVEL: AN ANALYSIS

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ABSTRACT

This Study Intends To Identify The Impact Of Information And Communication Technology (Ict) Based Material In Teaching And Learning Biology At Senior Secondary Level. It Further Tends To Find Out That How Integrating Ict Skills In Biological Sciences Helps Teacher As Well As Students In Fostering Their Thinking And Learning As Per Constructivist Learning Theory. Biology Is An Optional Subject At The Senior Secondary Level But A Compulsory One At The Secondary Stage. The Absence Of Integration Of Ict Based Materials In Biology Subject Is The Major Lacunae In Biology Teaching And Learning Especially At Senior Secondary Level In The Initial Decades Of The 21st Century. In This Context, Analysis Of Usage Of Ict Has Become A Fundamental Element Of Present Life And An Indispensable Instrument In Most Of The Disciplines Of The Education. Incorporating Different Ict Based Teaching Material, Tools And Devices In The Classroom Proceedings Of Different Subjects In School Ethos Surely Promotes The Cognitive, Constructive And Holistic Development Of The Students As Revealed In The Findings Of Many Studies Worldwide. In The Present Decade Of 21st Century We All Witnessed Bizarre Hi-Tech Advancement In All Walks Of Our Lives Including Education System Over The Globe.

Keywords: ICT, TEACHING, BIOLOGY, SENIOR SECONDARY LEVEL, CONSTRUCTIVISM

I. INTRODUCTION

This study was on the development and usage of modern Information and Communication Technology (ICT) based materials for teaching biology at the senior secondary level. The contemporary decade of 21st century witnessed lots of changes and challenges in terms of educational transaction processes in our educational institutions universities, colleges and schools in comparison of our traditional classroom transactions for teaching and learning. In this present scenario of information age everything is on our fingertips coupled with any ICT gadgets like computer, laptop, tablets and Smart phones- detailed information about anything which can affect the human life is available within a short span of time. In my concern this is the boon for every human being, society, and nation. This is also very true for our education field, but as for as concern of Indian scenario it is in its infancy stage. So, we can say that we are living in a society where knowledge is prime and paramount concern. Studies revealed that inclusion of ICT tools in different academic subjects promotes learning. I also intend my study in Biology subject with the inclusion of ICT tools with objectives to promote constructivist learning theory at senior secondary level. ICT for the purpose of their better understanding and application may be properly classified into two broad groups, viz; traditional and modern. In traditional technologies, we may include the means and media like printed media, verbal information and knowledge and a variety of audio visual aids and equipment. In modern technologies, we may include the advanced and sophisticated means like digital video camera, multimedia personal computers, laptop and notebook, Multimedia projector (LCD or DLP), computer networking, internet and worldwide websites, computer mediated video and audio conferencing, video text, teletext, virtual classrooms virtual reality etc. It is the ICT that has made the impossible possible. Educators and policymakers believe that Information and Communication Technologies are of crucial importance to the future of education. The use of ICT is playing a quite vital role in the field of education in so many ways. It is providing immense help up and assistance to all connected with the task of education like students, teachers, guidance and counseling personnel, educational planner and research workers for performing their responsibilities as adequately as possible. Beside this it is also performing a great role in bringing desired changes and revolution in a big way in the whole system of formal and nonformal education and instruction. ICT based materials for teaching biology is an innovative teaching learning technique. Educational technologist recommends integrating ICT based materials with traditional classroom activities brings constructive learning. The worthiness of modern ICTs based teaching learning tools have been realized in recent decade.

II. LITERATURE REVIEW

Afari-Kumah and Tanye (2009) suggest that ICT sometime equally used as information technology (IT). The computer hardware, digital/analogue devices, and software applications are clubbed under the term IT. In support of the findings of this study exclusive inclusion of ICTs in educational activities from the perspective of a student, the Government of Ghana implemented the Information and Communication Technology for

accelerated development (ICT4AD) policy to improve their education system. Habib, L. et al (2014) cited that virtual learning environment (VLE) facilitate individualization of learning in the present age of globalised world. Dukić.et.al.(2012) revealed that internet/website usage is one of the most fascinating phenomena characterizing the information age. ICTs power our access to information, enable new forms of communication and serve many online services in the sphere of commerce, culture, entertainment and education. One of the great benefits of ICTs is that if it used appropriately, can improve the quality and quantity of educational provisions.

Despite of several benefits of using ICT, it also brings challenges. Binigimals (2009) outlined many barriers of integration of ICT in teaching and learning ethos. Bladergroen M et.al. (2012) discuss about lack of alignment among funders, project implementer and educator's without taking care of need of a student as main discourses. Choudhary, B. (2018) suggests through her findings that ICT helps in constructive learning.

III. OBJECTIVES
The objectives of this research have been:

1. To find out the opinion of teachers & student regarding the ICT based material used by them.

2. To study static attributes of the respondents,

3. To study availability of computers in sampled schools,

4. To study training ICT received by teachers' or not,

5. To study use of ICT in teaching learning process during classroom proceedings,

6. To study attitude of Biology teachers towards such integration,

7. To study Obstacles in integration of ICT in classroom instructional process.

IV. METHODOLOGY AND TOOLS USED
I used questionnaire and checklist for the collection of data. I was analyzed the findings using these ICT based materials in my population sample. The present study had following delimitations:

1. Sampling was done purposively with descriptive survey design for the present study.

2. Population sample was constituted with Senior Secondary level schools, teachers and learners.

3. Experimental time was limited for a short span of period.

V. PROBLEMS AND OBSTACLES IN THE USES OF ICT IN BIOLOGY
Most of our schools do not provide education through inculcation of ICT driven methodology. Lack of fund for such a great concern also hindered the process of inclusion of ICT in our classroom proceeding, so, we are more or less depends on traditional teaching learning methodology. Digitalization of education system in India needs reforms in such a way that it enables our curriculum makers, educator's, teachers and students to excel in the field of proper use of computers, software applications, different types of ICT tools. For this purpose skilled person are introduced in the education system and different types of tools related to ICT has been provided to the teachers and students at all level of educational institution. Though ICT has immense potential to inculcate knowledge among learners, its integration in teaching is still in its stage of infancy in India. The major obstacle in the implementation of ICT in school education system is the lack of telephone networks, proper electricity connections, non availability of proper rooms and buildings for the technological use.

VI. RESULT AND DISCUSSIONS
On the basis of responses obtained from the teachers sampled, result gave a response rate of 92.85%. The results are presented according to objectives of the present study to promote constructivist learning among the teachers and students. 34.6% teachers all of time using integration of ICT in their CR proceedings. 80.8% teachers strongly advised (SA) that integration of ICT in school teaching and learning process helps learners in their constructive learning as per attached table.

Table: Biology Teachers Inclination towards ICT inclusion in Class Room Ethos

Statement (N=26)	SA	
	Frequency	Percentage
(i) Inclusion of ICT based Material in CR Proceedings for Learning	21	80.8
(ii) ICT can be too compelling & waste of time of good learning	4	15.4
(iii) Positive learning can be enhanced by use of computer	19	73
(iv) Usage of ICT Material in Biology class can be beneficial for learners	20	77

CONCLUSIONS

In present scenario every human faces day-to-day dynamic confrontation in the arena of educational institution viz; universities, colleges and school in terms of lack of basic access to the Computer technology and appropriate integrational approach in curriculum which fosters constructive learning in them or in their ward/dependents. Instead of many difficulties, problems and obstacle associated with the ICT, we cannot overlook high demand of ICT in education especially in biology at senior secondary level in India where in each and every topic can be illustrated with the help of ICT based material to foster learning in teacher and students constructively.

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A STUDY OF DIFFERENCE BETWEEN FLEXIBILITY & ABDOMINAL STRENGTH AMONG SCHOOL GIRLS

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ABSTRACT
Early to bed and early to rise has gone away, if they will engage their logical and rational thinking, Interpretation ability, decision taking capacity etc. will improve. Study material is activity/ project based still depression, stress is often felt by children it may be due to lack of nutrition, heavy work load of syllabus, competition phobia, certain diseases etc. Research must be carried out in relation to all these issues as children are the future of not only parents but also society & nation.

Regular physical exercise and participation in games and sports help to improve physical fitness, which includes strength, speed, agility flexibility and endurance. Exercise helps in controlling obesity, specially a few grams of fat from the wrong places such as in the walls of the coronary and other important arteries. It aids digestion by reducing nervous tension and has a favourable effect on the level of function. It also improves the function of the lungs.

INTRODUCTION
In our education system education is child cantered, activity, project based. CBSE guidelines provides Physical Education as an compulsory subject from 9th to 12th class, it is a appreciable steps of board because sound body always possess sound mind. Early to bed and early to rise has gone away, if they will engage their logical and rational thinking, Interpretation ability, decision taking capacity etc. will improve. Study material is activity/ project based still depression, stress is often felt by children it may be due to lack of nutrition, heavy work load of syllabus, competition phobia, certain diseases etc. Research must be carried out in relation to all these issues as children are the future of not only parents but also society & nation.

Regular physical exercise and participation in games and sports help to improve physical fitness, which includes strength, speed, agility flexibility and endurance. Exercise helps in controlling obesity, specially a few grams of fat from the wrong places such as in the walls of the coronary and other important arteries. It aids digestion by reducing nervous tension and has a favourable effect on the level of function. It also improves the function of the lungs.

Physical fitness is very important aspects not only in the physical education but also essential part of the human life. Without the physical fitness a man cannot able to do something for himself so what he will do for others or to society. If a person is physically fit, naturally he will be motivated to do something. Kapil Dev says, "Behind my world records a great hand of the physical fitness was there, without the fitness I could not achieve this tremendous success." The physical fitness or condition is the totality of five motor abilities namely strength, speed, endurance, flexibility & coordinative abilities. Therefore the sports performance in all sports depends to great extent on these abilities.

The participation in games and sports provides opportunity to children for the development of strength, speed, endurance, agility, neuro-muscular skill and coordination through their engagement. Such engagements force the children to run, jump, bend, stretch, balance; think thus it meets all the requirements of an excellent form of physical activity. Various researches have been taken place in relation to physical, physiological, anthropometrical, psychological variable etc.

Five factors are responsible for physical fitness. They are known as prosaic or gesture factors. It includes agility, speed, strength, endurance, and flexibility. If a person achieves gesture capacity according to his capacity then only can he achieve physical capacity. Physical fitness programmes help a person to attain good shape, size and structure of body. Postural deformities are removed. It also keeps the weight of a person in check. A person becomes physically and mentally agile. Physical fitness and well being of a person makes his responses quicker and more accurate. Owing to this the quality of work done by him improves.

Health is one of the fundamental human rights. The international organization like the united-nations and world health organization have endorsed the principle. Unfortunately, health cannot be given or described, but it has to be actively acquired and won. Whenever a man is in a perfect balance with the environment and ahs an upper hand over the harmful factors like pathogenic micro- organic insets, physical and chemical agents he is

said to be healthy there is then normal functioning of his personal and social duties. The state of health is not absolute. Health cannot be achieved merely by talking a pill every day not by observing a few restrictions.

Selected health related physical fitness components.

1) Flexibility (Sit and reach test.)

2) Abdominal Strength (Bend knee sit-ups.)

PROCEDURE
In this chapter the procedure adopted for the selection of subjects, criterion measures, Reliability of data, Administrations of the test, designs of the study and statistical techniques for analysing the data have been described.

SELECTION OF SUBJECTS
The study was designed to find out the health related physical fitness among girls studying in two different types of schools of Faridabad. Age of the selected students was in between 12-15 years. Fifty Girls subjects were selected randomly from each school so a total of 100 students were randomly selected as subjects for this particular study.

The following schools were involved in the collection of data: -

1. D.A.V. School, Faridabad.

2. Manav Rachna International School, Faridabad.

CRITERION MEASURES
The criterion measures chosen for testing the hypothesis were as follows: -

1. **Flexibility:** - Sit and reach test was used and it was recorded in cm.

2. **Abdominal strength:** - Bend knee sit-ups test was used and it was recorded in numbers.

RELIABILITY OF DATA
Establishing the instrument reliability tester competency with the help of test retest method ensured the reliability of data.

INSTRUMENT RELIABILITY
The stop watches, the measuring tape and all the other instruments were used in this study were manufactured by renowned concern and compare their calibration was considered adequate for the purpose of this study.

TEST COMPETENCY
The scholar collected the data in the present study with assistance of physical education teachers and students. The scholar as well as other physical education teacher and students had many years of experience. Thus their ability to administrate the tests for this study was considered quite adequate.

Table–1: Reliability Coefficients of Test Retest Scores

S. No.	Test Item	Co-efficient of correlation
1.	Sit and reach test	0.86
2.	Sit-ups	0.91

DESIGN OF THE STUDY
The group consisted of 50 subjects from each school selected randomly. All subjects were tested for flexibility, Abdominal strength.

Table – II: Significant of Difference Between the Means of D.A.V. School, Faridabad and Manav Rachna Internation School, Faridabad Girls in Flexibility

Groups	Mean (M)	S.D.	Diff. B/W Mean (DM)	σ DM	't'
D.A.V.	11.58	5.07			
			0.33	0.19	1.73
M.R.I.S.	11.25	4.88			

't'$_{0.05 (98)}$ = 1.98

Table –II revealed that there is no significant differences exist among the girls of D.A.V. School, Faridabad and Manav Rachna International School, Faridabad in the flexibility, since the calculated 't' value 1.73 was found to be less than tabulated 't' value 1.98 at 0.05 level. Therefore there is no significant difference exist in flexibility among girls of D.A.V. School, Faridabad and Manav Rachna International School, Faridabad.

Graphical representation of variable flexibility among girls of two different schools is given in Figure 1.

Figure-1: Graphical representation of variable flexibility among girls of two different schools
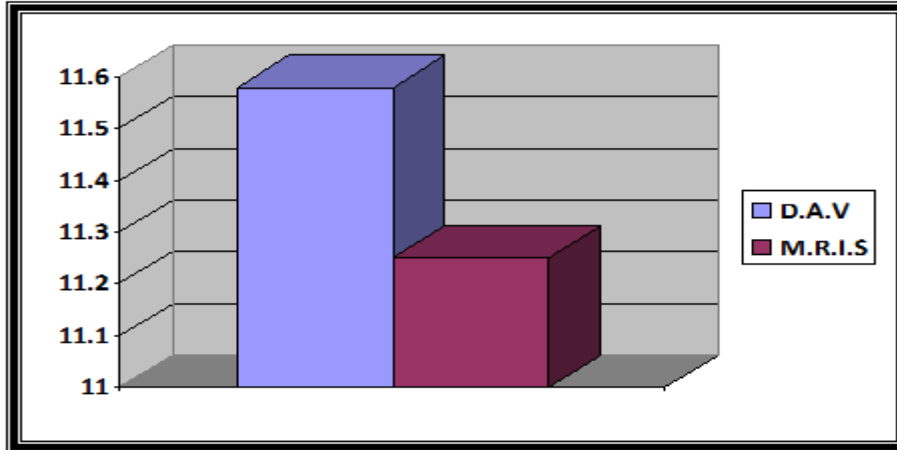
Table – III: Significant of Difference Between the Means of D.A.V. School, Faridabad and Manav Rachna Internation School, Faridabad Girls in Abdominal Strength

Groups	Mean (M)	S.D.	Diff. B/W Mean (DM)	σ DM	' t'
D.A.V.	11.28	5.36			
			0.26	0.32	0.81
M.R.I.S.	11.02	5.04			

't'$_{0.05 (98)}$ = 1.98

Table – III revealed that there is no significant differences exist among the girls of D.A.V. School, Faridabad and Manav Rachna International School, Faridabad in the abdominal strength, since the calculated 't' value 0.81 was found to be less than tabulated 't' value 1.98 at 0.05 level. Therefore there is no significant difference exist in abdominal strength among the girls of D.A.V. School, Faridabad and Manav Rachna International School, Faridabad.

Graphical representation of variable abdominal strength among girls of two different schools is given in Figure 2.

Figure-2: Graphical representation of variable abdominal strength among girls of two different schools
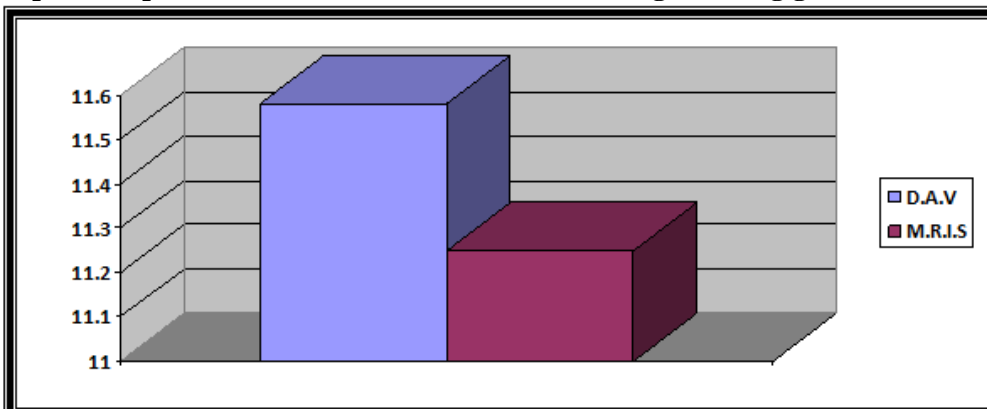
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RELATIONSHIP OF IMPULSIVE AND AGGRESSIVE BEHAVIOR WITH MOTOR ABILITY, MOTOR EDUCABILITY AND KINESTHETIC PERCEPTION AMONG PLAYERS OF INDIVIDUAL SPORTS

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ABSTRACT

The purpose of this study was to determine the relationship of Impulsive and Aggressive Behavior with Motor Ability, Motor Educability and Kinesthetic Perception among players of individual sports. The subject selected for this research work was 200 players from individual Sports studied in various universities of state Punjab. The subjects selected for this study had represented the intercollegiate. The variable selected for the purpose of this study was Impulsive behaviour, aggressive behavior, Motor Ability, Motor Educability and Kinesthetic Perception. The scores on Impulsive Behaviour and Aggressive Behaviour were obtained by using questionnaire prepared by Dr. S. N. Rai and Dr. Alka Sharma and Prof. Anand Kumar Srivastava respectively and for Motor Ability, Motor Educability and Kinesthetic Perception test Barrow Motor Ability Test, Jhonson – Metheny Motor Educability Test, and The Shuffelboard Distance Perception Test, was used respectively. To analysis the relationship of Impulsive and Aggressive Behaviour with Motor Ability, Motor Educability and Kinesthetic Perception among Individual Sports Players Pearson product moment correlation coefficient was used as a statistical technique at 0.05 level of significance. Findings of the study shows that relationship of Impulsive behaviour

With motor ability and kinesthetic perception was found negative and weak and with motor educability it was found positive but not to strong and in case of Aggressive behavior with motor ability and motor educability relationship was found positive but weak and as far as kinesthetic perception is concern it was negatively weak. So the result shows insignificant relationship of Impulsive and aggressive behavior with Motor Ability, Motor Educability and Kinesthetic Perception among players of Individual Sports.

Keywords: Impulsive Behavior, Aggressive Behavior, Motor Ability, Motor Educability, Kinesthetic Perception, Individual Sports

INTRODUCTION

Sports Psychology is an interdisciplinary field that draws on knowledge from numerous related fields like biomechanics, physiology, kinesiology, and psychology. It includes the investigation of how mental components influence execution and how interest in game and exercise influence mental and physical elements. Notwithstanding guideline and preparing of mental aptitudes for execution change, connected Sports Psychology may incorporate work with competitors, mentors, and guardians regarding damage, recovery, correspondence, team building, and vocation advances. Scholar is interested in knowing that whether the impulsive and aggressive behaviour of an athlete specially belongs to individual sports have a relationship with selected physical parameters. Further information collected by the researcher related to Impulsivity, Aggression, Motor ability, Motor Educability and Kinesthetic Perception has not research in various sports category namely Individual, Team and combat sports. Therefore, the investigator, in this study has directed this attention towards an understanding of the relationship of Impulsive and Aggressive Behaviour with Motor Ability, Motor Educability and Kinesthetic Perception among players of Individual sports.

OBJECTIVE OF THE STUDY

To find out the relationship of Impulsive and aggressive behavior with Motor Ability, Motor Educability and Kinesthetic Perception among players of Individual Sports.

HYPOTHESIS

There will be a significant relationship of Impulsive and aggressive behavior with Motor Ability, Motor Educability and Kinesthetic Perception among players of Individual Sports

PROCEDURE AND METHODOLOGY

The subject selected for this research work was 200 players from individual Sports studied in various universities of state Punjab. The subjects selected for this study had represented the intercollegiate. The selection of subjects was made on the basis of various sports categories by keeping purpose in mind. The subjects selected were in the age range of 18-28 years. The variable selected for the purpose of this study was Impulsive behaviour, aggressive behavior, Motor Ability, Motor Educability and Kinesthetic Perception. The scores on Impulsive Behaviour and Aggressive Behaviour were obtained by using questionnaire prepared by Dr.

S. N. Rai and Dr. Alka Sharma, 1988 and Prof. Anand Kumar Srivastava, 1988 respectively and for Motor Ability, Motor Educability and Kinesthetic Perception test Barrow Motor Ability Test, 1954, Jhonson –Metheny Motor Educability Test, 1938 and The Shuffelboard Distance Perception Test, 1966 was used respectively. To analysis the relationship of Impulsive and Aggressive Behaviour with Motor Ability, Motor Educability and Kinesthetic Perception among Individual Sports Players Pearson product moment correlation coefficient was used as a statistical technique at 0.05 level of significance.

RESULT AND DISCUSSION OF THE FINDINGS
The findings pertaining to descriptive statistics and product moment method of correlation technique for the various psychological and motor variables of six hundred sports persons have been presented in table no.1.1 to 1.2

Table-1.1: Descriptive Statistics of Individual Game Players in Relation to Impulsive and Aggressive Behaviour

	Individual Game	
	Impulsive Behaviour	**Aggressive Behaviour**
Number	200	200
Mean	13.30	10.60
Std. Error of Mean	.350	.168
Std. Deviation	4.959	2.372
Variance	24.593	5.629
Skewness	.003	-.473
Std. Error of Skewness	.172	.172
Kurtosis	-1.042	1.341
Std. Error of Kurtosis	.342	.342
Minimum	04	3
Maximum	23	17

Table 1.1 clearly depicts the descriptive statistics values for the individual game players in relation to Impulsive and Aggressive Behaviour, which shows that the mean for individual game players were found to be 13.30± 0.350 and 10.60 ± 0.168 respectively. Standard deviations were 4.959, and 2.372 respectively.

Table-1.2: Relationship of Impulsive and Aggressive Behaviour with Motor Ability, Motor Educability and Kinesthetic Perception among players of Individual Sports

	Individual Sports	Motor Ability	Motor Educability	Kinesthetic Perception
Impulsive Behaviour	Pearson Correlation	-.058	.006	-.022
	Sig. (1-tailed)	.207	.466	.380
	N	200	200	200
Aggressive Behaviour	Pearson Correlation	.026	.093	-.052
	Sig. (1-tailed)	.356	.307	.232
	N	200	200	200

Table 1.2 clearly depicts that the relationship of impulsive behaviour with motor ability, motor educability and kinesthetic perception among individual games was found weak with calculated value of -.058, .006 and -.022 respectively. As the level of significance is greater than the p-values .207, .466 and .380 respectively in individual games it can be assumed that calculated values are not significant enough and as far as aggressive behaviour is concern with motor ability, motor educability and kinesthetic perception among individual games was found insignificant and weak with calculated value of .026, .093 and -.052 respectively. As the level of significance is greater than the p-values .207, .466 and .380 respectively in individual games it can be assumed that calculated values are not significant

DISCUSSION OF FINDINGS
The scholar examined the relationship of impulsive behaviour and aggression with motor ability, motor educability and kinesthetic perception. In order to test hypotheses for establishing relationships Pearson's' Product Moment Correlation was computed with the help of SPSS 16.0 version.

The objective of the study is to find out the relationship of Impulsive and aggressive behavior with Motor Ability**,** Motor Educability and Kinesthetic Perception among players of Individual Sports. Negative relationship was between impulsive behaviour with motor ability in relation to individual games, which denotes that if impulsivity increases motor ability will decrease and vice versa. The findings are in contradiction with that of **Andrade M et.al. (2016)** where it was concluded that impulsiveness is related to tactical performance of U-15 youth soccer players. For impulsive behaviour and Motor Educability in individual sport negative correlation was found, which suggests that impulsive behaviour can decrease the motor ability of a player. This finding corroborates with that of **Swinnen S** et.al. (1986) where correlations between the reflection-impulsivity variables and gymnastic performance were generally low, it could be attributed to the fact that sports movements are often a tactical activity aimed at bringing desirable performance, on the contrary impulsiveness is not aimed at obtaining expected outcome with success, rather it is an unthoughtful action. Impulsive behaviour with kinesthetic perception among players of individual sports. On computing the data, it unfurled that there was statistically a significant negative relation between impulsivity and kinesthetic perception. Results showed that there was a weak positive relation of Aggressive behaviour with Motor Ability in relation to individual games. Relationship of Aggressive behaviour with Motor Educability among players of Individual, Team and Combat Sports. Data computation showed a positive but weak relationship of aggression with motor educability in relation to individual games. Aggression is negatively correlated with kinesthetic perception, though findings lack any literature evidence, it can be due to a notion that aggression influences kinesthetic perception of an athlete negatively by decreasing his attention and focus from performing his skills for favourable outcome.

CONCLUSION

On the basis of the analysis of data and findings of the study, following conclusions were drawn: -

1. An insignificant relationship of Impulsive behaviour with Motor Ability in Individual games was not accepted as findings reflected weak relationship between the variables.

2. An insignificant relationship of Impulsive behaviour with Motor Educability in players of Individual games was not accepted due to weak relationship between the parameters.

3. An insignificant relationship of Impulsive behaviour with Kinesthetic Perception in players of Individual games was not accepted.

4. An insignificant relationship of Aggressive behaviour with Motor Ability in players of Individual was not accepted.

5. An insignificant relationship of Aggressive behaviour with Motor Educability in players of   Individual games was not accepted.

6. An insignificant relationship of Aggressive behaviour with Kinesthetic Perception in players of Individual games was not accepted.

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CITY AND CINEMA – A STUDY BASED ON THE MOVIE *KAMMATTIPADAM*

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ABSTRACT
This research paper is based on the topic city and cinema – a study based on the movie Kammattipadam This research focuses on student community and student professionals who are interested in entertainment sector namely films. Kammattipadam is a Malayalam movie directed by Rajeev Ravi in 2016. The movie tells about the story of a gang of people living in Kammattipadam a suburb of the metropolitan city Kochi. The purpose of this research is to comprehend the relevance of the area Kammattipadam, the paper also tries to answer whether the story and characters showed in movie has any connection with real incidents happened in the history. Films are one of the powerful medium to show the thoughts, expressions, ideas, events to the whole world. If a city is depicted through a camera it becomes fictional and designable as films so there will be no difference between watching a movie and seeing a city. Thus cinema itself turns into an example for the portrayal of the city. The research has been conducted through a period of six months the and is done using qualitative analysis of the movie Kammattipadam

Keywords: City, Cinema, Kammattipadam, Characters

INTRODUCTION
City and cinema are historically interconnected. The growth of cinema can be traced on the heels of urbanization and industrialization. Early cinema production and demonstration was largely urban moreover; the city has proved to be a prosperous and diverse cinematic setting and subject. The correlation between cinema and the city can be analyzed in several ways. In part cinema provides an urban achieve or memory bank that throwback the changes in urban landscape. Concurrently cinema serves to produce the city both literally in the way that film production mold Los Angeles, Mumbai, HongKong,Rome and other centers of production and also by producing a festival urbanism through the setting up of bothfactory urban spaces and ideals of the city. Similar to other period film Kammattipadam also offered agateway to the life in a previous span. The movie had represented the life of a region named Kammattipadam in Ernakulum city from late 70s to 90s and exhibits the transmutation of the region and the people inhabitingithad well or gone

The realistic gangster movie Kammattipadam released on 20th may 2016 having 178 minutes as running time. The movie depicts the story of Krishnan who has been living away from his kith and kin in Mumbai gets aphone call from his friend ganga in Kammattipadam, he senses danger and leaves for Kochi. The movie explores the connection between mobsters andtheir blood stained lives and bonds. Rajeev Ravi shows how the equations change when money comes in the movie also analysis what happens when their personal and gangster parts collide through interesting characters. The story terms over many years beginning from the childhood of main charactersKrishnan (Dulquer Salman), Ganga (Vinayakan), Balan(Manikandan), with several minor to key events molding the plot at various moments. The movie shows the role of these characters in the development of the city Kochi.

This research paper tries to identify the major aspects regarding the cinema primarily the paper deals about the link of Kammattipadam in the emergence of the metro city Kochi along with this the correlation between the original people and the characters promoted in the movie will examine.

LITERATURE REVIEW
For Lewis Mumford, "The city is a fact in nature, like a cave, a run of mackerel, or an ant heap. But it is also a conscious work of art and it holds within its communal framework many simpler and more personal forms of art…The dome and the spire, the open avenue and the closed court, tell the story, not merely of different physical accommodations, but of essentially different conceptions of man's destiny" (Mumford 1937)

Clarke (1997) opines, "…the city has undeniably been shaped by the cinematic form, just as cinema owes much of its nature to the historical development of the city". City has always been presented as a dichotomy of city/village. While village represents the ultimate utopia, city represents everything opposite to it- sin, corruption, treachery etc.

The interrelation between the city and film is explained well by Mennel (2008, 15): "Films reflect such urban patterns in how they code neighborhoods as rich or poor or landscapes as urban or rural. They reflect class in

costume and setting, and in whether characters are positioned inside elaborate domestic spaces or outside in the urban public space

Fox (2006) furthers the argument by saying, "…city is often used as a metaphor for our dystopian excesses: corruption, sin, betrayal, segregation, alienation and entropy".

Lippmann (1922) opines that "Stereotyping arises out of the need to generalize in order to make sense out of a very complicated   environment. It allows people to easily categorize new things into comfortable spaces already defined by their experiences"

"The way spaces are used and places are portrayed in film reflects prevailing cultural norms, ethical mores, societal structures and ideologies" says Aitken &Zonn, (1994

"…cities, especially the Indian, depict vast disparities between the resourceful and the downtrodden members of our society in the most revealing form. Cities accommodate towards consumerism gradually converting all luxuries into life's necessities and on the other hand, the less fortunateinhabitants who can hardly be matched with the former in respect of living style, mannerism or cultural traits" opined Gill, (1994)

THEORITICAL FRAMEWORK AND METHODOLOGY
Qualitative analysis is used in the research. The research also contains Content analysis. Movie analysis along with article analysis is done. In-depth interview with the natives of Kammattipadam who witnessed the change of Kammattipadam to Ernakulum city.

OBJECTIVES
To find out the transformation of Kammattipadam to its present day state and how development change the life of the people living in Kammattipadam

REASARCH QUESTIONS
➢ To study the importance of the area Kammattipadam in Ernakulum city during 1970's?

➢ To examine whether the characters showed in the movie has any relation with the actual people in the history?

➢ To analyze the transformation of Kammattipadam depicted in the movie is same when compared to the history?

HYPOTHESIS
➢ Kammattipadam has its own relevance for the growth of the new city Kochi.

➢ The characters in the movie resembles the traits of people lived in Kammattipadam

➢ The evolution from Kammattipadam to Ernakulum city has been projected in the movie in reference to the past

ANALYSIS AND RESULTS
Kochi is a city of historical importance during the British period the port always used to serve trade purposes. In 1970s Kammattipadam emerged as the center of exporting spirit to all parts of Kerala. In this era the native traders in Kammattipadam were considered low caste people by the middleclass society and were looted easily in the trade. They used them for their own selfish motives can even formed gangsters. Among them some natives who lived their lives through farming also left their business and joined the gangster groups. The youngsters in the Kammattipadam community were rebellious as well as high in number but they never realized their strength due to their suppression and lack of education.

Kammattipadam used to be the heart of Kochi. Before 1970s Kammattipadam was a fusion of present Ponnurunni, Girinagar, Gandhinagar,Kadavanthra, Kochukadavanthra, Panampally Nagar, Kumaranasan Nagar, Jawahar Nagar(refer to appendix; q.no.1).This was the period when industrial growth had risen in cochin and was the beginning of constructing high story buildings showrooms etc. All these construction companies were reigned by the middle class so it was their need to evacuate the natives of Kammattipadam that the scheduled caste society as they already owned the gangster groups amongst those natives,they used them to make the natives flee from their own homeland instead of being expelled.

Kammattipadam got its name due to plenty of 'Kammatti' a certain sort of plant found there. The native farmers cultivated Pokkali a unique salient tolerant rice variety in their field. The emergence of the Ernakulum KSRTCbus stand and other developmental process like apartments, restaurants etc. devastated the field of native farmers, they lost their source of income they had no other way rather than joining the gangster groups headed by the middle class society(refer to appendix q.no. 2).

Fig-1: Early *Kammattipadam* in Directors view which cultivated 'Pokkali

The geographic structure of Kammattipadam included was fields with fresh water ponds and the regular custom of fishing during the intervals of cultivating seasons during1980 s. The whole place was flattened using soil and enclosed by walls after that started advancement of Kammattipadam to Kochi.Rajeev Ravi cites that before the birth of every city their lies a mysterious backstory that is what I have depicted through this movie. The characters like Krishnan, GangaBalan, Rosamma, and Surendran are the illustration of real life characters or the natives who ones lived at Kammattipadam keeping aside the romance the movie exactly represents the history of Ernakulum city.

Fig-2 : Natives engaged in fishing scene from the movie

Kammattipadam tells the story of a lost saga. During the late 1970s, Kammattipadam was the soul of Ernakulam city.

Akkanummaamalayonnum
Nammudathallaenmakane…
Eekayalkayavumkarayum
Aarudeyumallaenmakane…
PuzhupulikalPakkiparunthukal
KadalaanakalKaaturuvangal
PuzhupulikalPakkiparunthukal
KadalaanakalKaaturuvangal
PalakaalaParadeivangal
Pulayaadikalnammalumoppam
Narakichuporukkumividam…
Bhoolokamthirumakane…
Kalahichumarikkummividam
Ihalokam en thirumakane…

This is a song from the movie Kammattipadam, which depicts that no one is an eternal owner of this place(Earth). The lakes and the land (which metaphorically used to describe Ernakulam city) not belongs to human race. Every creature in the Earth have equal ownership status. This is a place where humans live with total hatred towards each other. The soul of this movie is conceived in this lyrics. The story depicts the life of the in habitants of Kammattipadam, who lost their life solely due to the exploitation by the middle class rich in the society. In most of the scenes we can see the transformation of Kammattipadam from its glorious past to the present condition. Director Rajeev Ravi presented the transformation of the place by portraying different stages (childhood, adolescence, youth and old age) of the character of Krishnan. The transformation of the place from field to flats is depicted in the movie. The movie starts with the rough reality of life which is used to reflect the life of the people in Kammattipadam. The power of cinema to influence people and even the culture of the place and the capacity to immerse the audience in worlds that even do not exist. Cinema with its different techniques can reflect new aspects of the places that we think we know. It is through such techniques that cinema allows us to better understand our world and our place within it. This is one of the greatest ability cinema holds to narrate about a place or a community.

The present day Kammattipadam is just a soul which represents the lost past of the place. The in habitants of the present day Kammattipadam lives without depending on their traditional working habits and they are separated from their natural livelihood. It clearly displays the period of time when the agrarian culture was diminishing. The communities who relied on agriculture became poorer and the next generations had to take the wrong path for finding some bread (refer to appendix q.no.4). From Rajiv Ravi's film Kammattipadam we can see the struggle for survival of the people in Kammattipadam. Kochi reached the present day epitome of development by destroying many livelihoods in Kammattipadam. Many inhabitants of the place states that they lost their lands mainly due to the developmental activities in Kochi, the flats, large buildings were all constructed by taking lands from them using tricks and forced them to sell lands at very low cost. The film Kammattipadam is not just a portrayal of a plain story but it is the real story which depicts how developmental activities destroys the dream of common people.

Fig-3: Natives became part of violence, in the background we can see Kavitha theatre which represent the growth of the city Ernakulam

The film Kammattipadam starts with the scenes of the city Bombay but it is indirectly opening to us the place of Kammattipadam located in Kochi. The real estate mafia took over the entire city and the city was built blocks by blocks. It is a bio pic of many people, the existence of a real period of time. The old Kammattipadam was actually the area which constituted the present day posh housing areas of the Kochi city. The place only have the saga of lose to narrate. The agony of unbalanced development is still haunting the lives of people in Kammattipadam. So the movie was indeed talking about a place that was drowned and dead. But it is perhaps a representation of a period, or a group of people who were suppressed, who had to give up everything under the influence of goons and real estate mafia.

Fig-4: Middle class becoming the rulers of the city. The figure shows the growth of them

CONCLUSION

The movie Kammattipadam constitutes the struggle for survival faced by natives when something of their own is taken away, this is the real face of development. Overlooking the developmental phases., numerous people get a new life but on the other hand innumerable people lose their lively hood this is not the story of Ernakulum city alone. The cities like Mumbai,Bangalore,Kolkata have their own untold stories. The affluences persuade the destitute ones and make money out of them. Another concept that can be seen in the atrocity of the wealthy and socio economic classes over lower working classes. Kammattipadam mostly exhibits the physical violence but it also shows various forms of violence such as mental violence which includes class conflicts racism castism and creed. Kammmattipadam is the amalgamation of all these but and it is a new form of visual expression which reach out as well as speakout the real story to the people.

Fig-5: The exploited Kammattipadam in directors view

Fig-6: Present Kammattipadam which shows the harsh reality of development

Fig-7: It is the last scene of the movie which shows the present Ernakulam City this scene itself shows the importance of kammattipadam in the city Ernakulam

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APPENDIX

In-depth Interview

I contacted Mr. Raghavan and Mr. Shibu (natives of Kammattipaadam who witnessed the transformation of Ernakulum city) for a knowledgeable discussion on the backstory of Ernakulum city, Kammattipaadam. Both of them are lived in Kammattipaadam during their childhood and observed the change of the village.

1.Which were the places which constitute old Kammattipaadam?

Present day, Ponnurunni, Girinagar, Gandhi nagar, Panampalli nagar and Jawahar nagar were the places which constituted old Kammattipaadam.

2. What was the real incident happened in Kammattipadam?

Development in the form of large buildings took over the proud and ethnicity of Kammattipaadam, which gradually resulted in the present condition of Kammattipaadam.

3. When development took over the place, what was the reaction of the people living in the village?

At the beginning we started fighting against them with the help of some comrades. As the protest from the part of inhabitants increased and this provoked those in power to control the protest of the people.

4. What is the current situation there?

Currently, Kammattipaadam had shrunk to a small street, where we can find some people who are struggling to meet their day to day needs. All the developmental activities had made this place hard to live. Most of the inhabitants who lived here earlier had quiet the place as they were struggling from poverty.

5. What was the real face of this place?

Kammattipaadam was the place which the first communist ministry in Kerala gave us. But after 1991, due to the rise of economic urbanisation we lost this place and it reached the hands of real estate mafia.

6. Did you watched the film 'Kammattipaadam'?

Yes. Every single event portrayed in the film was actually the real life we lived there. We can't resist ourselves from watching a film which narrates our real story. We are not sharing about who betrayed us or who dragged us to this much worst life condition. That will cause serious issues

CYBER DEFAMATION AND SOCIAL MEDIA ETHICS: A STUDY ON PROVISIONS GOVERNING ONLINE DEFAMATION IN INDIA

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ABSTRACT

Social Media is widely accepted across the world as it confers to more pleasure and makes life easier than ever. This aids in improving every individual's sense of connectedness with the real or virtual communities and leads to innovative communication. Observers has noted that these technologies are being violated by some users to a of a country based on the information published and the influence of the victim against whom the defamation was produced. The author has employed quantitative analysis in the paper through surveys regarding the recent cyber-crimes that occurred across India.

Keywords: Mass Media, Cyber Bullying wide extend by harming others intently. Although there are cyber laws to control these kinds of cyber-attacks, still invasion to privacy and safety are in a crisis. The paper aims to include how the violation of cyber ethics has harmed the standard living of common man and, to analyze at what extent these violation has crossed the limits and about the crimes in India due to cyber defamation. Cyber defamation harms the individual victim and also creates a bad impact on the community as a whole. When it comes to the nation as a whole, it widely affects the economy, Cyber Stalking, Defamation, Media Ethics, New Media

INTRODUCTION

Social Media as a web based technological innovation is always used to turn communication into interactive dialogues among institutions, communities, and individuals. These provide a wide range of opportunities to empower ourselves in the society. The communities and social interactions develop self-confidence and social skills. This can be used as a public way to present ourselves. Similarly, social media have some disadvantage also, because internet forces us to rethink about our privacy as more people depend on social media and internet. So, a social media user should be well aware about the positive and negative aspects of this developing technology. We should understand emergent needs and behaviors of people because we lack physical, face to face contact through social media.

If, a person publishes any kind of defamatory statement against an individual through internet on a website or by sending emails to another person as they have an intention the person they targeted can be also a form of cyber defamation. This lowers the esteem of an individual due to communication of the false statement. The statement can harm even special damages such as loss of business etc. that leads to harm. Individual's freedom of speech and expression should be exercised without compromising the individual's reputation before the view of public.

There are attempts to stop cyber-attacks and crimes all over the world including India. A person can file a civil or criminal suit in response to a defamatory statements.

According to the helpline law data's, the elements of Cyber defamation are:

- Harming reputation of an individually intentionally or not by defaming before others.

- In a front of a third person

- Through words (spoken or written), actions or visible representation.

Indian Penal Code 1860, Information Technology Act 2000, these are some provisions which helps us to file a case under Cyber Defamation in India. A fair comment that is based on true fact in existence at that time can be a defence for defamation.

The irresponsible harm caused to the reputation of any individual cannot be always rectified by the judiciary. Defamation laws should be sufficiently flexible to manage the crimes in India. People should be aware of these laws and think twice before posting a defamatory material. Defamation is a crime against society and the state has a duty to redress the hurt caused to its citizen's dignity.

LITERATURE REVIEW
Social Media Impact
Carley, K. M. (2013) stated that social media is considered as a highly beneficial environment for a word-of-mouth (WOM) that helps the propagation of new ideas and products mainly focusing the marketing communication.

Media Freedom
According to J S Ward (2011), the media freedom is completely depended on the country's media laws, the cultures tolerance of their right to free speech, and the definition of what is appropriate and what can be offensive. In many countries, journalist have initiated movements for increasing freedom, and learned how to navigate around limits. Around the world, a number of organizations, from freedom house to reporters without any borders, have advanced the idea of free press and free citizenry. The author suggests that, there is only one type of free press to be secured globally.

Cyber Defamation
Publishing any kind of defamatory statement against a person on a website or by sending emails with any sort of defamatory statement to spread the material to a huge mass with the intention to defame the person and if the statement can be registered as cyber defamation (helplinelaw. (n.d.).

Cyber Bullying
In the article 'A brief study on Cybercrime and Cyber law's India' defines the researcher has defined that Cyber Bullying occurs when a child, or anyone in teenage is harassed or otherwise mainly targeted by another teen using the platform internet, and any other kind of interactive and digital technologies or mobile phones. This can be considered as a minor case or can be solved within both sides, or at least the crime must be instigated by a minor against another minor only. If an adult is involved in this, it is plain and simply clear to be called as cyber- harassment or cyber stalking (Animesh Sarmah, Roshmi Sarmah, Amlan Jyoti Baruah, 2017).

Online Defamation in India
Defamation can be oral, written or any forms, when it comes to online defamation, a cyberspace is required to be known as cyber defamation or online defamation. By harming the reputation of any individual before a third party, it is accountable as defamation. When someone harms the reputation of any individual through a cyberspace, the fake information spreads and reaches in the hand of thousands of people which lowers the esteem of the individual. For this, a person may use any one thing internet or computer as a method to attack the individual. Defaming a person is a crime that comes under Indian Penal Code 1860 and the Information Technology Act, 2000. Besides all these, Section 499 of the Indian Penal Code also indulged in the offence of cyber defamation connected to the Information Technology Act to counter the offense of defamation. As a supporting element to these cyber laws, Sections 469 and 503 of Indian Penal Code also deals with the internet medium usage of affecting any person's reputation deeply (Valdaya.A, 2014).

OBJECTIVES
➢ To analyse the violation of cyber ethics in the present scenario and the impact of cyber defamation in India.

➢ To check whether online defamation has any impact in the rise of cyber-crimes in India.

RESEARCH QUESTIONS
➢ How did the transformation of internet from a mere facility to a need contribute to cyber defamation?

➢ Whether social media and cyber defamation affect the privacy and safety of individuals?

➢ Whether the present media laws are efficient to control cyber defamation in India?

HYPOTHESIS
H_1 Unawareness of social media ethics among social media users increase cyber defamation.

H_2 In India, there is a gradual increase in cyber-crimes and most of them have observed defamation cases in newspapers.

H_3 Crimes are evolving, yet a country like India lacks behind when it comes to laws and rules regulating cyber world.

THEORITICAL FRAME WORK
The theory used in the research is the social cognitive theory. This aims to understand social influence and its emphasis on external and internal social reinforcement. It also examines the person's actually ability to face the society through their essential knowledge and skills. This model helped to clearly understand that how people

responds to the behaviour when they see something on media. The social response can vary depending upon the accessibility, relevance, complexity, functional value and also the personal elements such as cognitive capability, value preferences for value and preconceptions. The research samples' experience shares different perspectives, expectations and expectancy. The theory identifies a close identification among the observers as it deals with self-efficacy.

METHODOLOGY

The researcher has used descriptive study with quantitative analysis in the research. The process includes survey (simple random sampling) and case studies to understand the awareness of cyber defamation and social media ethics among people. The survey questions were structured to determine social media usage, preferences, information about laws against defamation and opinions regarding Indian Constitution and law. Secondary data for the research have been collected from research analysis and results of earlier done surveys. An in-depth interview is also conducted to know the legalities behind cyber defamation and its related crimes.

RESEARCH DESIGN

Simple random method of sampling is used in the research to identify the H_1 that unawareness of ethics leads to increase in cybercrimes. 300 samples were collected from the rural areas of various age groups including both male and female. Most of them are college students as they spends more time in social media compared to others. The secondary data also supported the statements about legal procedures in online defamation. Several case studies are included to point the lack of Indian laws and also its deficiency in enacting it.

RESULTS
ROSSTABULATION OF RESPONDENTS ON AWARNESS AND UNAWARNESS OF ETHICS OF SOCIAL MEDIA

		Unawareness ethics		Total
		yes	no	
Follow ethics	Yes	28	6	34
	No	155	111	266
Total		183	117	300

Chi-Square Tests					
	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.349[a]	1	.007		
Continuity Correction[b]	6.372	1	.012		
Likelihood Ratio	8.118	1	.004		
Fisher's Exact Test				.008	.004
Linear-by-Linear Association	7.325	1	.007		
N of Valid Cases	300				

Table. 1 Cross Tabulation on unawareness of Ethics and people who follow ethics
a. 0 cells (0.0%) have expected the count less than 5 only. The minimum expected count is 13.26.
b. The result is computed only for a 2x2 table

The key result referred in the Chi-Square Tests table is the Pearson Chi-Square.

The value of the test statistic is 0.04.

As the 'p value' is lesser than 0.05, we can reject the null hypothesis and rather than that we can conclude that the social media users are not aware of ethics which leads to increase in cyber issues.

Online media has greatly influenced the people across India as the innovations in technology has provided with many opportunities. In the survey conducted, we asked the respondents whether they follow the social media ethics as a user. Most of them do not follow these ethics as they are unaware of any such kind of moral standards for using social media.

Using a Chi Square Test of Independence, the data clearly shows that unawareness of ethics is the reason for increasing crimes.

CROSS TABULATION ON CRIMES INCREASING IN INDIA AND MEDIA REPORTED

		Media Reported		
		Yes	**No**	**Total**
crime increasing in India	Yes	124	41	165
	No	58	68	126
	2	2	7	9
Total		184	116	300
Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square	31.530[a]	2	.000	
Likelihood Ratio	31.908	2	.000	
Linear-by-Linear Association	31.345	1	.000	
N of Valid Cases	300			
Table. 2 Cross Tabulation on crime increasing and news reported a.1cells (16.7%) has given the expected count less than 5. And the minimum expected count is 3.48 from the result.				

The value of the test statistic is 0.00 by the chi-square.

Since the p value is less than 0.05, we reject the null hypothesis rather we concluded that the crimes are increasing in India and people have observed it through newspapers and other medium.

The above data proves that in India the cyber-crimes are increasing a lot. Most of the samples have observed them in newspapers and other media platforms. They believe that the reason behind this is lack of Indian laws related to defamation and the improper enactment of existing laws.
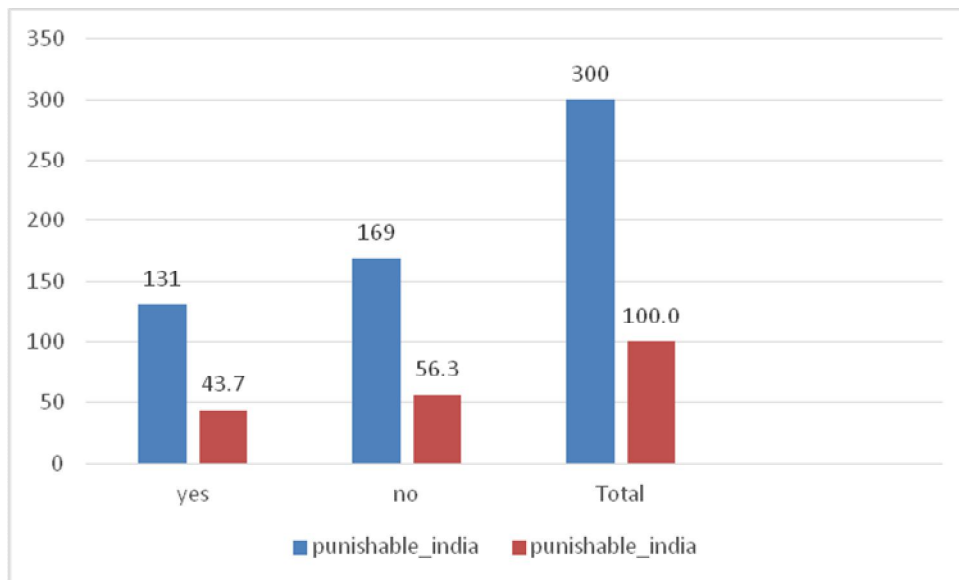
Figure-1: Response About Indian laws related to online defamation

The Fig 1.1 shows that Indian laws are not enough to punish for crimes related to defamation according to the respondents with highest frequency of 'no' (n=169) with the distributed percentage of 56.3 and distributed percentage of 43.7 with frequency of 'yes' according to the respondents. Most of them believe that Indian laws are not enough to punish defamation crimes in India.

Most of them believe that Indian laws are not enough to punish defamation crimes in India. They consider it as an essential step to reduce crimes. The respondents prefer the restructured Indian laws or the proper enactment of existing laws.

CASE STUDY
1. Kalandi Charan Lenka Vs State of Odisha, 16/01/17

The petitioner applied under Section 439 to release on bail who is alleged to involve the offence under Section 354-A/354-D/465/469/506/507/509/of IPC read with Section 66-C/66-D/67/67-A of Information Technology Act. The victim girl was harassed through obscene messages on her father's cell phones, written letters containing vulgar languages imputing the character of victim girl. Other than messages affecting the characters of victim girl but also connected the other male members to have sex with the victim girl. A fake Facebook account in the name of victim girl with morphed naked photographs of victim girl with the intentions to outrage her modesty. Even pamphlets imputing her character was pasted in the front of hostel. Messages came from different numbers to her mobile numbers and she was mentally shocked, suffered from trauma. Case was filed under cyber cell of the crime branch and the victim was examined under Section 164 Cr.Pc. The petitioner was released on bail of Rs 50,000 (i) should not commit any offence through electronic form while on bail. (ii) Not to threaten the victim woman and her parents. (iii) And should not visit the town where the victim and her family resides.

2. SMC Pneumatic (India) Pvt. Ltd. Vs Jogesh Kwarta Suit No. 1279/2001 (Delhi Court)

In the above mentioned case, the defendant named Jogesh Kwarta was an employee of the Plaintiff Company and he started defamatory to his employers. He also sent defamatory statements to various subsidiaries of this company all over the world as he wanted to defame the institution and also the organisation's Director Mr. R.K Malhotra. After the continuous torturing the plaintiff later filed a suit against those permanent injunction acts for sending these kind of derogatory e-mails. After hearing the detailed arguments of counsel for plaintiff, the court also restrained the defendant from publishing, and causing any defamatory information in their own actual words with the intension to harm anyone in the plaintiff in the cyberspace that is derogatory or abusive against them.

3. State of Tamil Nadu Vs Suhas Katti, February 2004

The case is related to posting some obscene, and annoying message about a divorcee woman in the yahoo message group. The posting of the message in the cyber platforms resulted in annoying phone calls to the lady. The victim's negligence to marry the accused resulted to this insult in the social media. The defence argued that these mails would have given by ex-husband or herself to get rid of this man. This is the first case that was categorised under Section 67 of ITI Act 2000 in India. The accused was later found guilty under the sections 469, 509 of IPC and 67 coming under IT Act 2000 and the accused was later sentenced for the offence to undergo Rigorous Imprisonment (RI) for 2 years under the section 469 IPC and have to pay a fine of Rs.500/- and for the offence u/s 509 IPC, he was sentenced to face one-year simple imprisonment and was also convicted to pay fine of Rs.500/- and for the offence u/s 67 of IT Act 2000 the culprit have to undergo RI for 2 years and to pay fine of Rs.4000/-.

IN-DEPTH INTERVIEW

Indian laws are available for online defamation, but they are not much applicable in trial. This may be due to attitude of the police that people are not approaching them to file a case. In some situations, these files are not reaching till magistrate. Even though the provisions are there, the enforcement of law is inactive. Both civil and criminal cases comes under Section 499 to 502 including Indecent Representation of Women, IT Act 2005. Other than this Right to Privacy, Right to Life and Equality can also be considered.

DISCUSSION

The research focusses to examine the unawareness of cyber ethics among the social media ethics and also points that the Indian laws are not enough to punish for these crimes. Even though the provisions are identified, they are not implemented as such. The study examined the users' impact on increasing internet penetration impact. In the research paper 'Ethics and Mass Media: A philosophical perspective', the author John Babu stated that the social norms should be sensitive and caring people so that they can present a reliable, balanced and constructive picture of the world. Media has to maintain the ethical values and should be serving more as a social agent than as a vehicle of entertainment. The social media users are increasing and so are the cybercrimes also. It should be noted that a mobile screen has limited the thoughts of people. From the research, it is clear that most of them believes that Indian laws are not enough to punish when compared to other countries. But the fact also points that the existing laws are not being implemented. This research is to explain the threats of social media that is raised due to unawareness of ethics and it also shows the lack of Indian laws to punish the crimes involved with defamation.

CONCLUSION

The rise of newly developed technologies has led to the rise of many cyber-crimes in India. There are no national boundaries in internet which creates technical and legal complexities for investigating these crimes.

Defamation will struck the balance between freedom of expression and reputation. In India, most of the social media users don't follow the ethics as they are unaware of them. The users have observed in newspapers that cyber-crimes are rapidly increasing in the nation. The survey conducted proves that Indian laws are not enough to punish the crimes and they are not practiced accordingly when required.

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IMPACT OF CRIME FILMS ON YOUNGSTERS: A STUDY ON SELECTED MOVIES

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ABSTRACT

Cinema is the most powerful and popular medium in the representation of crimes these days. A movie can influence audience both positively and negatively. On one hand, representation of crime film portrayed its effect on social context. If the message or content of the movie is not reached correctly people may have a negative impact on the content of the film. There are movies that show how to plan and do crimes which influence the youngsters badly.

This research paper focuses on crime films where the central theme is Crime and Violence. Specifically, two such movies were selected for the study: Robinhood(2009) and Drishyam(2015). A study on the consequences and the causes of cinematic representation of crime in movies is done. It also focuses on examples citing such incidence that clearly shows the negative influence these movies have on the audience. Both quantitative and qualitative form of the analysis method is used to examine its influence on youngsters.

Keywords: Crime, society, Malayalam movies, negative impact

INTRODUCTION

Cinema is one of the most influential mass medium. The history of cinema began years back. People around the world started watching movies as its content stay close to the lives of common people. The history of indian cinema starts with the great filmmakers like Sathyajith Ray, Rithwik Ghatak, and others. They have given a new definition to the Indian cinema through their varied way of approach. The golden age of malayalam cinema industry begin with Adoor Gopalakrishnan, T V Chandran, Shaji N Karun, and others.

A speech quoted by former PM Jawaharlal Nehru that " the influence of the films in India is greater than newspapers and books". Movies take inspiration from real life incidents at the same time and influence the audience in shaping their attitude. It is also considered as a form of entertainment which influences all age catagories.Its influence depends on the content of the movie sometimes not in a good way.

The culture and style of the Indian Cinema have changed with the development of new generation movies. The representational aspects of cinema takes a new form of art in the course of time. This uniqueness gradually started attracting a wide audience. Even the film personalities who are part of the new generation Malayalam cinema accept the point that sensationalism is a media generated content in the new generation cinema. This study focuses on Malayalam crime thriller movies and their effects on youngsters. Crime thriller movies always had an influence on Malayalee movie lovers. The general behaviour of the audience is to learn or imitate actions on watching movies. On watching crime movies there is a chance to develop a negative behavioural tendency in viewers especially the adolescent. Media can also influence the viewers in shaping anti-social behavior, drug, obesity, depression, suicide, crime etc. At the same time, it is said that media cannot be completely blamed but they make considerable contributions to this.

There are two theories that support the role of media in youngsters according to Coyne and colleagues. The effect of media on youngsters is proved with the support of Social learning theory and the Cultivation theory. The Social Learning Theory explains that people learn by observing others and from their surroundings. This is how a person develops his character. In Cultivation Theory, media affect people's perception. It shapes viewer's perception of social reality by watching things from media or television which they claim to be true.

There are many movies that portray crime but the way of representation of it need to be analyzed and studied. There are examples that watching movies has influenced youngsters to do the crime. If movies fail to convey the exact meaning, there are chances that the message of the movie is misunderstood. On the other hand there are crime movies with good content. It is difficult to generalize the point that crime movies are of negative content but at the same time cannot neglect the argument completely. Here the study examines the content of the movie and also analyses its impact on youth.

LITERATURE REVIEW

Criminal dramas influence society's perception of crime, ideas about crime and criminal justice system (Sparks, 1995)

Cinema is the most powerful and popular form of representation of crime.It is a harmful act, one who does crime is a criminal by public opinion. It involves hurting one's moral sentiments(Garofalo,1914)

The concept of crime varies from different culture from time to time with complex pattern(The Encyclopedia Britannica, 1985)

When positive and negative responses are inforced, the individual is likely to perform positive or negative feedback (Bandura, Ross & Ross, 1963, p. 3; Mowrer, 1960).

The screen writers have the freedom to pen down anything of their wish but it can be dangerous for the native people when its influence them badly. The writers are not restricted from writing things of their wish (Surette, 1998).

Many people think that mass media generates violent thinking behaviour among individual and media is responsible for such societal and social perceptions (Akers, 1973; Bandura, 1973, 1977, 1978, 1979; Bandura, Ross & Ross, 1963; Earles et al., 2002; Grusec, 1992)

Crime films are complex with different sides of objectives and is difficult to understand (Benyahia, 2012; Hardy, 1997; Leitch, 2002; Rafter, 2006; Thompson, 2007)

The complex effect of crime movies and their over representation in media has incorrectly influenced the society's view on crime movies and lead them to do violent act (Heath &Petraitis, 1987).

Crime has been the central theme in oral culture, myths, fables, literature and theatre for long. The history of crime and criminal justice system have a long representation in culture (Cavender&Jurik, 2014, 2016; Greer & Reiner, 2012).

Crime films are recognised as a special genred film which is seperated from the other catagories. These movies exaggerate the crime content and create tension between social order and its violation. It also brings the comforting safety of the good and the obsession of evil to the viewers (Leitch 2002).

Film is one of the major source through which people get the basic idea about crime. The crime content in media and movies are popular criminologywhich has a greater social significance than academic criminology (Rafter (2007).

THEORITICAL FRAME WORK

The theory used in the research is the Social learning theory and cultivation theories. The Social Learning Theory explains that People learn things from the surrounding through observation of different sources. They learn a new behavior, value, and attitudes from society. In Cultivation Theory, it cultivates and shapes the viewer's perception of social reality. It is said that they cultivate behavior by watching virtual fictional things from media or television which they claim to be true. The theory also tells that media help children to satisfy their needs. These theories guide the research to understand how children get influenced by media. Watching films do influence children to learn and imitate actions by observing the characters in the movie.

METHODOLOGY

The type of research tool selected for the study is the Random sampling method and Content analysis. The process of selecting the population depends on the Random sampling method. The people who are interested in watching crime movies were selected through the process for the study and were given the questionnaire. Two Malayalam crime thriller movies such as Drishyam and Robinhood were taken for the analysis.

OBJECTIVES

• To understand the level of preference on watching crime movies by youngsters.

• To analyze the representation of trends portrayed in movies.

• To explore the influence of movies on youngsters in committing crime.

RESEARCH QUESTIONS

➢ Do youngsters prefer crime movies?

➢ Do the trends portray in the movies influence youngsters in committing crime?

➢ Do crime films have negative influence on youngsters?

HYPOTHESIS

➢ Crime thrillers movies get more preference among youngsters than other genre of movies.

➢ Movies induce the youngsters to do crime in society based on a relevant to the scene of crime portrayal in the movie.

➢ Crime Genre movies give much negative influence among youth which leads to increase in crime.

RESEARCH DESIGN

The simple random method of sampling is used in the research to collect data. Over 200 respondents of age group 20-28 were selected for the purpose of the study. The data was collected from the respondents with the help of a set of questionnaire. The questionnaire method was selected as the appropriate measure for doing this study for the Quantitative part. The questionnaire was distributed personally and randomly to the respondents with a good amount of persuasion and explanations about the contents of the questionnaire. The fields in the questionnaire were collected personally from the respondents during the survey. Questions related to crime films were asked to respondents. Content analysis is done to determine the representation of crime sequences and scenes in the movies. In qualitative analysis in-depth interview of a psychologist and a police officer is conducted to analyze the behavioural changes in teenagers and the increasing involvement of youngsters in criminal activities.

VARIABLES OF THE STUDY

Taking the purpose of study into consideration and the type of research to be carried out, the following variables were taken into consideration. These variables are categorized mainly under two broad categories- Independent and Dependent

A. Independent variables

These variables are defined as constant and usually do not change. It is assumed to have a direct effect on dependent variables. The independent variables are as follows:

- Age

B. Dependent variables

It is what is measured in the experiment. These variables are usually fluctuating and mainly depend on independent variables. The dependent variables are as follows

- Movie watching habit

- Frequency of watching

- Genre of films

I. QUANTITATIVE ANALYSIS
To understand the level of preference on watching crime movies by youngsters

Fig 1: shows the preference of youngsters on watching different genre of movies
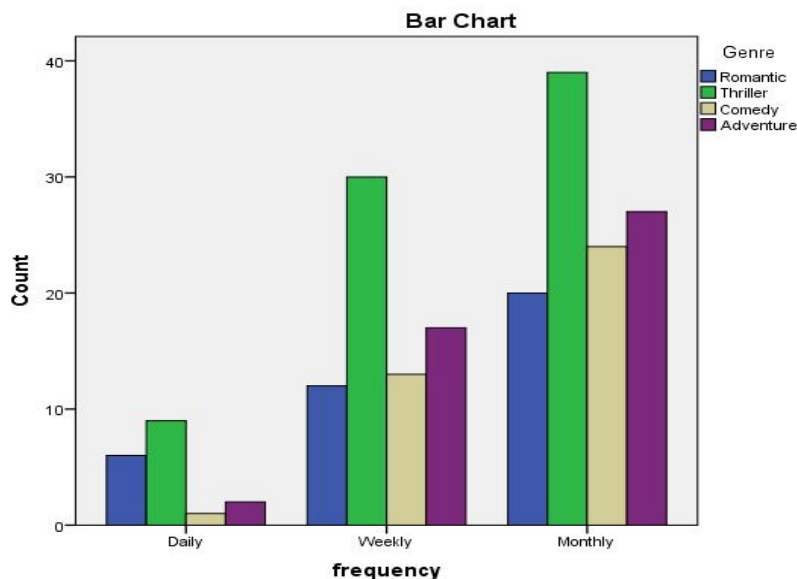
The figure shows that youngsters watch romantic, thriller, comedy and adventure movies. Out of it the majority of youngsters prefer crime thriller movies compared to the other genres. Along with it, thetable also point out that there is an increased monthly frequency of movie watching habits in youngster.

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Genre	200	1.46	1.046	0	3
frequency	200	1.46	.656	0	2

Genre

	Observed N	Expected N	Residual
Romantic	38	50.0	-12.0
Thriller	78	50.0	28.0
Comedy	38	50.0	-12.0
Adventure	46	50.0	-4.0
Total	200		

frequency

	Observed N	Expected N	Residual
Daily	18	66.7	-48.7
Weekly	72	66.7	5.3
Monthly	110	66.7	43.3
Total	200		

Test Statistics

	Genre	frequency
Chi-Square	21.760[a]	64.120[b]
df	3	2
Asymp. Sig.	.000	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 50.0.		
b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 66.7.		

The key result in the Chi-Square Tests table is the Pearson Chi-Square.

The value of the test statistic is 21.760[a]for Genreand 64.120[b] for frequency.

The note for this statistic pertains to the expected cell count assumption (i.e., expected cell counts are all greater than 5): no cells had an expected count less than 5, so this assumption was met.

Because the test statistic is based on a 3x4 cross tabulation table, the degrees of freedom (df) for the test statistic is

df=(R−1)∗(C−1)=(4−1)∗(3−1)=3∗2=6

The corresponding p-value of the test statistic is p = 0.000.

Majority of youngsters prefer to watch crime thriller movies with an increased monthly frequency. In the sample dataset, the respondents were asked their preferred genre of movies and frequency of movie watching habits. There were four choices for genre of movies: Romantic, Thriller, Comedy and Adventure ; frequency: Daily, Weekly and Monthly. This study wants to test for an association between the preferred genre of movies and frequency of movie watching habits in youngsters using a Chi Square Test of Independence.

The p value obtained using Chi-Square test is 0.000, since the p value is less than the chosen significance level (a=0.05), we can reject the null hypothesis. Rather, we conclude thatthere is an association between genre and frequency of watching movies.

To explore the influence of movies on youngsters in committing crime
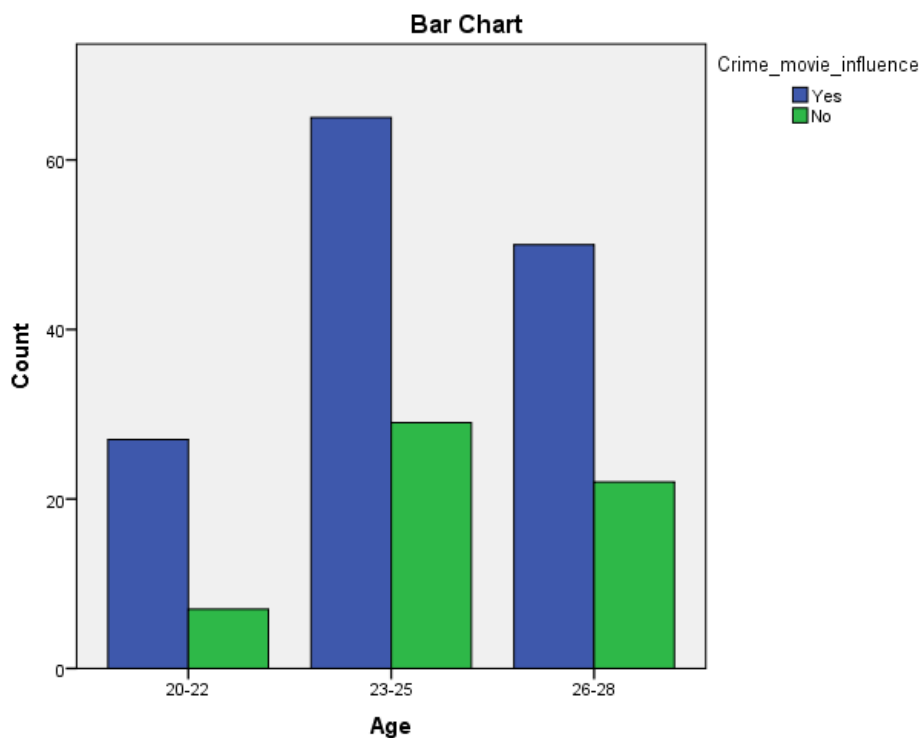
NPar Tests

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
Crime_movie_influence	200	.29	.455	0	1

Crime_movie_influence			
	Observed N	Expected N	Residual
Yes	142	100.0	42.0
No	58	100.0	-42.0
Total	200		

Test Statistics	
	Crime_movie_influence
Chi-Square	35.280[a]
df	1
Asymp. Sig.	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 100.0.

The key result in the Chi-Square Tests table is the Pearson Chi-Square.

The value of the test statistic is 35.280[a]

The footnote for this statistic pertains to the expected cell count assumption (i.e., expected cell counts are all greater than 5): no cells had an expected count less than 5, so this assumption was met

Because the test statistic is based on a 3x2 cross tabulation table, the degrees of freedom (df) for the test statistic is

$df=(R-1)*(C-1)=(3-1)*(2-1)=2*1=2$

The corresponding p-value of the test statistic is p = 0.000

Since the p-value is less than our chosen significance level $\alpha = 0.05$, we can reject the null hypothesis, and conclude that there is an association between genre and frequency of watching movies.

The influence of crime movies on youngsters in committing crime has proved to be correct as the majority of respondents agreed to the statement. (Table:2) In the sample test, the respondents were asked about the influence of crime movies on youngsters in committing crime. There were two answer choices: Yes and No. This study wants to test for an association between the influence of crime movies on youngsters in committing crime the using a Chi Square Test of Independence. The p value obtained using Chi-Square test is .000, since the p value is lesser than the chosen significance level($a=0.05$), so the alternative hypothesis is proved.

II. QUALITATIVE ANALYSIS

A. Drishyam

Synopsis: Dishyam is a Malayalam thriller film in 2013 casting Mohanlal and Meena in the lead roles. The movie is written and directed by Jeethu Joseph. Esther Anil, Ansiba Hassan, Kalabhavan Shajon, Asha Sarath, Siddique, Neeraj Madhav and Roshan Basheer played supporting roles. Georgekutty (Mohanlal) is a common man who is an orphan and had dropped out of school. Now he is a businessman who runs a cable TV service in the village. Meena (Rani) is his wife and they have two daughters, Anju (Ansiba Hassan) and Anu (Esther Anil). He watch movies regularly in his office.

Anju went to a nature camp where she was photographed in the bathroom by a hidden phone. Varun (Roshan Basheer) who is the son of police general Geetha Prabhakar (Asha Sarath) is the culprit. He threatens Anju with the photographs. He came to her home where he was accidently killed by her mother. They disposed his body in the compost pit. Later when George kutty comes home they said about the incident. He plans to save his family from the law. George kutty take them to Thodupuzha to pray in church to create false evidence. Varun's cell phone and his car was disposed, which is seen by constable Sahadevan (Kalabhavan Shajon). Sahadevan dislikes Georgekutty.

On the other side Geeta starts investigating about his missing son. She get to know about Georgekutty and starts questioning his family. He taught his family to be prepared. On questioning he displayed the bill of the restrauent, bus tickets and other evidence to prove that they were on a trip on the day of varun's murder. They landed in trouble when Geeta gets to know that Georgekutty had faked the documents. They were taken in custody and constable Sahadevan brutely questioned them. At last Anu revealed that his body was disposed in the composit pit. After digging the pit , they find the carcass of the calf.villagers and his relatives complains to media about the brutal act of police officers. Sahadevan was suspended and Getta resigns from her post.

Later, Geetha and Prabhakar (Siddique) meet Georgekutty to ask forgiveness for their act and asked them about their son. Georgekutty then incidentally reveals that his family has committed a crime and left the scene. Now in remand, Georgekutty comes to the newly constructed local police station to sign the register. As he leaves, a flashback shows him hiding Varun's body in the foundations of the police station.

IMDb Rating -8.8/10

Character role in the movieDrishyam : Mohanlal is in the role of Georgekutty, a man who just managed with his school education to make it big with his hard work. He now runs a cable TV business in his hometown called Rajakkad, a few miles away from Thodupuzha. He is supported with his family including his wife Rani(Meena) and his daughters Anju(Ansiba) and Anu (Esther).

Varun the villain character in the movie is accidentally killed by Georgekutty's wife when he came to blackmail them. On knowing this he then made fake evidence to prove that his family was on a trip to Todupuzha on the day of the murder. He recreated the scene with the help of the movie that he had watched and this clearly shows as of how movie influences the character to hide the crime. At the end of the movie the actor hide Varun's body in the foundation of the police station.

REPRESENTATION OF REAL LIFE CRIMES

Alappuzha: Alappuzha police arrested a 25-year -old youth Mobin and his cousin from Edathua for killing their friends.The main accused Mobin said that he and Linto killed Madhu after watching the movie Drishyam over 17 times. According to district police, Madhu contacted Mobin's sister many times and Mobin didn't like it. They both plan to kill Madhu. Later, Mobin killed Linto as he was the only witness to the murder. Mobin, Madhu and Linto got together at night on April 19 with friends and drank together., Madhu, Linto and the main accused Mobin continued to drink after everyone left the house. At that time, Madhu flashed a torch light on Mobin's face. They attacked Madhu, who was chocked to death by the duo using an insulated cable, " said the police chief.

Nilambur: A woman was brutally raped and murdered in Nilambur congress office. She was an employee in the office and went missing on february 5. Later her decomposed body was found by the police near a pond in

Nilambur. The police arrested two people in connection with the case.The accused have confessed that the created the plan after watching the movie" Drishyam". They were inspired by the planning of the crime which helped them to cover up the murder. Ater the incident ADGP Sen Kumar had critised the movie Drishyam and strongly expressed his fears on the message that the movie popagate to the audience reported The Times of India.

In the movie, a youth gets murdered and he try to hide his body in a gunny bag and bury it. Here the alleged killers put the woman's body in a bag and dumped in a pond tied a sone to make sure that the bag does not surface reported Gulfnews. Apart from this, the women's SIM card was discarded on a railway track at Angadipuram, located 40 km away from the crime scene.

Ayodhya:. A man missing case was filed with Ayodhya Nagar police station on December 25, 2015 by Sumitra, the wife of the deceased. After investigations, the victim's body was found floating in Hathikeda Dam. Indrapal Singh and his nephew Dharmendra Singh were arrested by the police. On questioning they confessed about their planning and inspiration from the film "Drishyam". They have used the similar technique to dispose of the body of the victim. The film Drishyam in Bollywood released in 2015 served as an inspiration for a criminal to plot a real-life murder

B. ROBINHOOD
Synopsis: Robinhood is a 2009 Malayalam crime film casting Prithviraj Sukumaran in major role. The movie is directed by Joshiy and written by Sachi-Sethu. Narain, Bhavana, Jayasurya, Biju Menon, and Samvrutha Sunil plays supporting roles. Venkatesh (Prithviraj) is an entrance coaching professor and Abhirami (Samvrutha Sunil) is one of his students in the coaching center who has crush on him. Venkatesh robs the automated teller machines (ATMs) of Imperial Bank of India using fake debit cards by night. With the help of a satellite connector, he has been robbing for the past three months.

The case is investigated by (Jayasurya) as ACP Harris. Nandakumar Menon (Biju Menon) who is the managing director of the bank is unhappy with the way of investigation. The frequent targeted robbery from his bank has made the investigators in doubt. On the other hand the other banks are not yet a target. To find a way out Nandakumar Menon plan to appoint a private Detective Alexander Felix (Narain) for the investigation. Apart from his way and appearence, Felix is a shart investigator. Nandakumar appoints the senior system manager Roopa(Bhavana) to assist him. Soon they both shifted to the same apartment next to Venki. Slowly they three become friends. Felix is unware that venki is the culprit. Later he had a doubt on venki's behaviour and shares his doubt with Roopa. They started to follow his path. Felix understood that something is spying their plans and Roopa was caught for cheating. He finally finds the culprit and learned the story behind Venki's revenge. The flash back reveals that Venki was the employee in Nandakumar's bank where he finds out the misplaced bank records. On knowing that Nandakumar will be red handed for the looting, he trapped Venki and convicted him. He was defamed in the public. On seeing this his father had a heart attack and passed away. After his jail term he came back to revenge with the help of Roopa, his fiancee. On knowing the truth, felix tried to help his friends from the crime. In the end, Nanadakumar is handcuffed and convicted for his crime.

IMDb Rating–5.7/10

Character role in the movieRobinhood: Inspired by the original classic the film sees Prithviraj as a genius physics teacher who leads a double life. He turns an ATM burglar by the night and targets a particular bank. With the help of a satellite connector, he hauls the details of the customer operating the bank ATM. He recreates the card and uses it for withdrawing money. He does all for a reason towards the end of the film, the reason is revealed. Prithviraj is taking revenge on Biju Menon's character for wrongly implicating him earlier and at the end, it is Biju who is caught by the police, not the real culprit.

Representation of real-life crime stories

Thiruvananthapuram: In a film style ATM robbery, 20 people lost about Rs 4.5 lakhs in Thiruvananthapuram. following messages has been received on their phone intimating them about transactions, which they had not carried out.

The police suspect that three foreigners are allegedly involved in the ATM frauds in Kerala, where 20 people fromThiruvananthapuramlost about Rs 4.5 lakhs . The money was reportedly withdrawn from ATMs in Mumbai and Delhi. . From the CCTV video obtained three people attaching an electronic device at the ATM counter, enabling the fraudsters to collect the PIN code and card details. The device that was fixed above the ATM machine, had a micro camera and another device was placed in the card slot of the machine. According to the police, the micro camera might have helped in getting the ATM PINs

This is one of the biggest ATM heists that the state has witnessed and the modus operandi followed is eerily similar to a 2009 Malayalam movie Robinhood starring Prithviraj.

Kerala police found that a micro camera had been placed which helped them obtain the secret code. When fraudsters have your card details, they make a duplicate card and loot your bank account.

DISCUSSION

The primary purpose of this research is to find out the influence of crime movies on youngsters. With an indept interview conducted Dr Shalini, a Clinical Psychologist in Don Bosco Hospital enclosed in appendix (1.2) stated that psychologically the adult age is an age of confusion, where the transformation takes place inside a teenager to form an adult. At this age, they are confused about their identity which creates a tendency to get influenced by their surrounding from what they see or listen. This makes them model their peer group members and start imitating them as a new trend. This is why thriller crime movies have high rating in theatres. Even after knowing that it is crime and negative in content youngsters believe that they get acceptance among peer on doing such things.

She pointed out that Basically youngsters at this age need attention and they act or does accordingly which can be positive or negative. Youngsters who go for the trend of wearing a bindi to match the outfit with an expectation to hear that she looks beautiful is an example of this. An adult molds his character at an age of 18 years. A child at his very young age who develop negative behaviors will have different brain function where they react according to the mental state of mind, creating an anti-social person. They find it difficult to solve problems compared to others at their age. The brain does not stimulate stable thought in mind. So they react without thinking.

According to Selvaraj C R, a Senior Civil Police Officer, youngsters try to imitate what they see in films and this reflect in their style, way of talking, fashion, costumes. Youngsters start imagining themselves relating to the movie. They imitate without understanding that it might leave negative impressions on them where they place the heroes in their minds. One who watch such movies are more likely to have decreased responses and feel hostile that might lead to violent behaviour.

In movies where crime and murders are shown, they learn the tricks and tactics used in the film in a wrong way. This can lead them to commit crimes purposefully. Even though our younger generation is educationally qualified, they have a tendency to imitate things from movies. Movies are actually the trend setter in society. For example, in many films bike and car stunts are performed which lead to severe accidents. Even a child speaks abusive languages knowingly or unknowingly from movies. These action stunt performances, costumes fashion trends are developed and imitated through movies.

Along with it there are evidences of some real incidence related to the movies. Alappuzha police arrested a 25-year -old youth Mobin and his cousin from Edathua for killing their friends. The main accused Mobin said that he and Linto killed Madhu after watching the movie Drishyam over 17 times. According to district police, Madhu contacted Mobin's sister many times and Mobin didn't like it. They both plan to kill Madhu. Later, Mobin killed Linto as he was the only witness to the murder. Mobin, Madhu and Linto got together at night on April 19 with friends and drank together., Madhu, Linto and the main accused Mobin continued to drink after everyone left the house. At that time, Madhu flashed a torch light on Mobin's face. They attacked Madhu, who was chocked to death by the duo using an insulated cable, " said the police chief.

In an another case a womanwas brutally raped and murdered who was an employee at the Congress office in Nilambur. Since 5 February she was missing and her decomposed body was found in a pond near Nilambur. The Kerala police arrested two people in connection with the case.

The two accused in the murder case seem to have been influenced by the recently-released Malayalam film, "Drishyam" in covering up the murder. It was after ADGP T P Sen Kumar had criticised "Drishyam" and expressed his fears the murder has happened.He believed that the film could give out a wrong message to the audience. His fears seem to have come true with the two accused involved in the real-life murder were inspired by movie to hide the crime.The accused have confessed to the police that their modus operandi to dispose the victim's body was inspired from "Drishyam," reported The Times of India

The discussions here proved that youngsters copy and imitate trends portrayed in movies thereby creating an influence on their behaviour.

CONCLUSION

The survey conducted shows that the effect of exposure to crime films will have an influence on youngsters to commit criminal activities. The research experimented on two Malayalam crime movies which had an above average rating in the theatre. The survey pointed out that the majority of them are interested in watching crime movies. Along with the respondent's analysis, in depth interview and news stories that quoted real-life crime stories proved that the audience get influenced on movies and they copy trends portrayed in it.

Mostly in crime movies, there is no legal system instead they show stories of villainous heroes who have committed a crime and manage to escape from law and order. The survey conducted indicated that even though the respondents could justify the movie and its content from a common man's perspective on the other side they have agreed that there is a violation of law and order. The respondents of varied age group unanimously agreed that there is an influence of crime movies on youngsters. The research concluded that there are crime movies that spread negative messages in the society which influences the youngsters to do similar crimes.

LIMITATIONS

The survey done to attain data for the research is limited to youngsters in Kerala. The research only focuses deeply on the selected movies. And is limited to Malayalam Crime movies. Detailed analysis of crime movies and its influence on youth from other states will provide further data.

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APPENDIX
1.1 Research Questionnaire

Section A

1 Age Group – ☐ 20 -22, ☐ 23 -25, ☐ 26 -28, ☐ 29-31

2 Do you watch movies – ☐ Yes, ☐ No

3 Frequency of watching – ☐ Daily, ☐ Weekly, ☐ Monthly, ☐ None

4. Genre of films preferred by the youth – ☐ Romantic , ☐ Thriller Crime , ☐ Comedy ☐ Adventure

5. Did you watch the movie Robinhood (2009) - ☐ Yes , ☐ No

6. Did you watch the movie Drishyam (2013) – ☐ Yes , ☐ No

7 If yes, what attracted you in these film – ☐ Concept , ☐ Director , ☐ Casting ☐ Technological innovation, ☐ Moral

8 Do youngsters copy trends portrayed in movies – ☐ Yes, ☐ No

9 If yes, what kind of trends do they copy – ☐ Fashion , ☐ Behaviour, ☐ Values , ☐ Technology, ☐ Action/stund

10 Do you think that crime movies give good moral to the society– ☐ Yes, ☐ No

11 Can you justify the movie based on its content – ☐ Yes, ☐ No

12 Do you think that the law and order are violated in these movies – ☐ Yes, ☐ No

13 Do you think that the crime movies influence the youth in committing crime – ☐ Yes , ☐ No

14 Rank the movie Robinhood – ☐ 1 , ☐ 2, ☐ 3, ☐ 4, ☐ 5

15 Rank the movie Drishyam - ☐ 1, ☐ 2, ☐ 3 , ☐ 4 , ☐ 5

1.2 In-depth Interview
.**Dr Shanili (MSC, Mphil, Clinical Psychologist), Don Bosco Hospital, North Paravur**.

- Have crime movies influenced youth?

According to Dr. Shalini, youngsters face many psychological problems nowadays. The age group 18-26 is considered as an adult age even though they are not completely transformed as adults. So psychologically it is an age of confusion, where the transformation takes place inside a teenager to form an adult. At this age, they are confused about their identity which creates a tendency to get influenced by their surrounding from what they see or listen. This makes them model their peer group members and start imitating them as a new trend. This is why these movies have a high rating in theatre. Even after knowing that it is crime and negative in content youngsters believe that they get acceptance among peer on doing such things. This is the major reason behind such issues.

- The movie Drishyam and Robinhood put forward a message to the audience that the accused can manage to escape from law and order. Do you think that this messages affect the society?

The movie Drishyam is a problem solving one where the character in the movie does a crime to resolve the unexpected thing that happens in their life. The villain character in the movie is a youngster and what is shown in the movie is his desire to take a girl by creating a plan to abuse her. In the movie, both hero and villain play negative character roles.

- How does an individual commit a crime?

There are incidents where adults knowingly or unknowingly fall in crime. There are also chances for a person whose parenting is strong with a good personal relationship, academic excellence and a good social moral relationship may fall into negative groups unknowingly. On the other side, there are children who knowingly do the crime. This happens when they do not receive attention and acceptance. Even family or academic issues affect the self-esteem of the children letting to think in the wrong way.

Basically, youngsters at this age need attention and they act or does accordingly which can be positive or negative. Youngsters who go for the trend of wearing a bindi to match the outfit with an expectation to hear that she looks beautiful is an example of this. An adult molds his character at an age of 18 years. A child at his very young age who develop negative behaviors will have different brain function where they react according to the mental state of mind, creating an anti-social person. They find it difficult to solve problems compared to others at their age. The brain does not stimulate stable thought in mind. So they react without thinking. The personality changes along with the psychological factors such as broken family social-cultural backwardness will lead them through these problems. Studies have found that youngsters who face similar kind of problems easily commit a crime.

- Do you think that youngsters imitate from movies?

Positive and negative thoughts are part of an individual's mind. Positive thoughts from family, school and surroundings help in molding good personality. This is different for a person who is brought up from criticism, rejection and avoidance. For example, if a flower is given to the first category of youngsters, they imagine it to be their family, good thoughts etc. The second category imagines the same flower in the form of acceptance and it gives a feeling that they are being cared. Both feelings are different. The same happens while watching movies, they copy or imitate the characters to receive acceptance in society. This is how changing trends happen in society.

- Do you think that there is lack of awareness?

The lack of basic awareness is one of the major reason for this problem. The primary level should start within the family. Id, ego and superego are the different states of mind. Moral ego in our mind help to decides what is right or wrong. Id is our wish or the hidden desire where ego and superego controls a person thereby generating a feeling in the mind that you are doing wrong. The moral ego helps an individual to decide what is right or

wrong by controlling your action. It is developed primarily from family, secondary from school and from society and peer groups.

2. Selvaraj C R, Senior Civil Police Officer, North Paravur

- What kind of cases are majority of youngsters involved in?

Crime committed by youngsters have been increasing nowadays. Youngsters are mainly influenced by movies, TV shows and so on. They learn anything from media rapidly out of interest. According to Selvaraj, crime files recorded involve majority of youngsters in snatching and drug cases. It is also true that youngsters imitate movies thereby creating positive and negative influences. Today movie create a big space in a common man's life. The content of the movies includes social issues, violence, real life stories, crime, love, family etc. Movies are actually a way of understanding the society as it represents ourselves and it provide us a moral value.

- Do youngsters imitate trends from movies?

It actually depends on the way how they understand the movie. For a person who consider watching 3 hours movie to enjoy his leisure time find it worthy. At the same time there are others who even feel that he is still a hero after watching the movie.

Coming to the negative side, current films are mostly of crime, thriller, action, romance etc. So they try to imitate what they see in films and this reflect in their style, way of talking, fashion, costumes. Youngsters start imagining themselves relating to the movie. They imitate without understanding that it might leave negative impressions on them where they place the heroes in their minds. One who watch such movies are more likely to have decreased responses and feel hostile that might lead to violent behaviour.

In movies where crime and murders are shown, they learn the tricks and tactics used in the film in a wrong way. This can lead them to commit crimes purposefully. Even though our younger generation is educationally qualified, they have a tendency to imitate things from movies. Movies are actually the trend setter in society. For example, in many films bike and car stunts are performed which lead to severe accidents. Even a child speaks abusive languages knowingly or unknowingly from movies. These action stunt performances, costumes fashion trends are developed and imitated through movies.

Everything depend on a person watching the film. It is necessary that younger generation should learn good things from the movies not letting the bad things affect the mind.

VERBAL TO VISUAL: A SEMIOTIC ANALYSIS OF *EAT PRAY LOVE*

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ABSTRACT

The research intents to undertake a semiotic analysis of the film adaptation of the memoir Eat Pray Love, written by Elizabeth Gilbert with the same title. The study examines the adaptation process of transferring the verbal text to visual text. The basic discourse on adaptation studies will ponder into the changes occurred in the incorporation of difference in plot, characterization, setting and other narrative elements in the source text. The study aims to look into the alterations made in plot, settings and characterization in the film adaptations of the novel Eat Pray Love while it is transferred into a film. It uses a descriptive qualitative analysis on the reconstruction of data from one form to another.

Keywords: Eat Pray Love, writer, semiotic analysis, adaptation, characterization, film maker.

INTRODUCTION

Novels, which are considered as an established source material for a long time, have been conceived as raw material for various films. While readers create their own mental image of characters and settings of the literature, these images get conflicted with those created by the film makers as they are brought on the screen according to the imagination and ideas of the film maker. Films do not require much of mental works as they exploit the thinking power of viewers by infusing images into minds of audiences through created visual and sounds. Watching a film provides a sensory experience than reading.

Literary adaptation is the adapting of a literary source (e.g. a novel, short story, and poem) to another genre or medium, such as a film, stage play, or video game.

Adaptations are attempted for varied purposes. It may be to provide the literary work a wider audience; to popularize certain culture and personalities, to comment or develop an ideology or social messages etc.

According to Dudley Andrew, adaptations from prose to screen can be classified into 3 types.

- Borrowing: it does not include replication of original work; instead the viewers are provided a reconstructed plot with added powerful aspects.

- Intersection: it attempts to present the original work with a new life given to it in the cinema involving aesthetic forms and better cinematic techniques of that age.

- Transformation: it aims to reproduce important or essential parts of the original text with plot recreation, modifications etc. but keeping the original source as the skeleton.

The book is better than movie is a common statement heard when comparing the literal source with its adaptation on screen.

Eat, Pray, Love is a memoir written by American author Elizabeth Gilbert on the year 2006. The memoir talks about the author's trip to 3 different places after her divorce and her discoveries during the travel. The book contains three divisions with 36 fragments in each, which elaborately explains all her feelings, observations. It is a first person perspective where the reader gets a complete knowledge on the author's feelings and thoughts. It uses present tense and past tense to denote the memories.

Ryan Murphy co-wrote and directed the film based on the memoir on the year 2010 starring Richard Jenkins, Julia Roberts as Elizabeth Gilbert, James Franco, Javier Bardem etc. There are a few similarities and differences in the adapted work concerning the plot, signs and symbols, characterization and moral values comprehended by viewers as the adaptation was a transformation where the source was regarded only as a reference.

LITERATURE REVIEW

This Chapter provides studies done by scholars over the years on adaptation, which were published widely and presents theories, which are relevant for the study. The findings of film theorists are thoroughly evaluated which states that the adaptation vion is interrelated between literature and film. Mentioning the close relationship between literature and cinema, Brian McFarlane talks about "the pervasive nature of the interest in this confluence of two art-forms"[12]. Morris Beja 1973:54 quotes that the rule of the story is so powerful that the image which is said to be the major constituent of film vanishes behind the plot it has woven…so that cinema is only in theory the art of images[13]. James M. Welsh and Peter Lev opined "After a century of cinema, movies have changed

substantially, both technologically and stylistically, but after a hundred years, mainstream cinema is still telling and retelling stories, and most of those stories are still being …calculations and accounts"[20]. Greg Jenkins (1997:8) observed the adaptation "is a presence that is woven into the very fabric of film culture". He also says "Adapting a best-seller for the movies is like carving flesh down to the bone. You keep the skeleton, then apply rouge and silicone until the creature looks human"[10]. Bluestone says about the adaptations made in understanding the limitations of film medium by a successful screenwriter inmakinga serious adjustment to set up different conflicting conventions". He (1973/1957:62) writes: What happens…when the filmist undertakes the adaptation novel, given the inevitable mutation, is that he does not convert the novel at all. He viewed the novel as a raw material. According to him, language is a medium consisting of "three characteristics of time – transience, sequence and irreversibility", but in film "the camera is always the narrator… with the chronological duration of the viewing and the time-span of narrative events". He states, film and novel are time arts, whereas the formative principle in the novel is time and in the film it is space. He also discusses "the two media's differing ability to handle time and space, we need concern ourselves only" (1957:49)[5]. Bela Balazs, (pp.246-247) state that: It's also said that the literary foundation of any new art, script, is as much specific, independent literary form as the written stage play-there is nothing to prevent them from being literary… entirely new form. He also mentions that "a film script writer adapting the play may use the existing work of art merely as raw material, regard it from the specific angle… and pay no attention to the form once already given to the material. (p.263)[3]. Film scholar, Jean Mitry (1971:7-8) wrote that: Time in the novel is constructed with words. In the cinema it is constructed with actions. Novel creates a world while the cinema puts us in the presence of a world[8]. André Bazin said "artist's vision should be ascertained from the selection he makes of reality. The novel and the drama are not raw material to take from and render visually". According to him, Cinema adaptation intensifies and reveals nuances and details of its literary source. He (1997:41) wrote that, "A novel is a unique synthesis whose molecular equilibrium is automatically affected when you tamper with its Form"[2]. Linda Seger presents an in-depth study of some adapted films and tries to find out why certain films based on great novels became box-office failures whereas certain other films based on not-so-popular novels became runaway successes. She says "The adaptor is sculpting out everything that isn't drama, so the intrinsic drama contained in within another medium remains" (p.2)[16]. Robert Stam focused on the "parasitic" quality of adaptations that draw from the success of the original text, and assume that because adaptations are newer art form, and are "of the body", they must essentially be for a lower class of viewer that would not appreciate the original format of a work[19]. Marciniak (undated: 60) addresses: In order to be seen as a good adaptation, a film had to come to terms with what was considered as the "spirit" of the book and to take into account all layers of the book's complexity[11]. Barthes (1977:79) states "narrative is present in myth, legend, fable, tale, novella, epic, history, tragedy, drama, comedy, mime, painting, cinema, comics etc. My task which I am trying to achieve is, by the power of the written word, to make you hear, to make you feel, to make to see"[15]. Kracauer says that, the failure of an adaptation doesnot liein the film, but rather in sources, that are considered either "cinematic or uncinematic". The book Theory of Film says that, the "redemption of physical reality" is the only true purpose of Cinema[17]. He even says "adaptability of a novel depends not so much on its exclusive devotion to the material world as on its orientation towards contents which still fall into the dimensions of psychophysical correspondence"[7].

THEORETICAL FRAMEWORK AND METHODOLOGY
This research employs a qualitative method to analyze various factors related to semiotics and uses Pierce's semiotics theory to elaborate the analysis.

Semiology is the word used for the science of signs explicated by Swiss linguist Ferdinand de Saussure. Semiotics was first explained by the American philosopher Charles Sanders Pierce. It takes linguistics to be a model and assign linguistic concepts to other phenomena. Semioticians treat texts like languages. Signs and relations are considered as the two key notions of semiotic analysis.

Semiotics can be considered as the queen of interpretive sciences, the key that unlocks the meanings of all things great and small. Semiotics has been applied to films, medicine, theater, architecture, and a moderator of other areas that are concerned with transfer and communication of information. Semiotics is the phrase used for the science of signs. Semiotic analysis is a way to explain how a person finds meanings from the codes. Signs and relations are 2 key notions of semiotic analysis.

Sign is something, which stands to somebody for something in some respect or capacity. Saussure calls sign a combination of concept (signified) and a sound image (signifier), a combination that cannot be separated. He suggests that the relationship between signifier and signified is arbitrary, unmotivated, unnatural. Pierce focused on three aspects of signs: iconic, indexical, and symbolic dimensions. (Berger, 3-6)

Sign in a visual text are closely connected with the mis-en-scene. Thus, characters, setting, plot, motives and symbols all become the inherent signs.

RESEARCH METHODOLOGY

OBJECTIVES
◦ The aim of the research is to do a semiotic analysis and prove that, the film maker needs to bring changes or differences into the plot as his goal is different from the writer.

RESEARCH QUESTIONS
◦ To conduct a semiotic analysis of *Eat Pray Love*.

◦ To identify the various plot alterations made in the adaptation.

◦ To study the similarities and differences in characterization and settings with respect to the book and its adaptation.

HYPOTHESIS
◦ As novelist function on linguistic medium and filmmaker, on audio-visual medium, the reconstruction of data from one form to another will demand certain changes in the plot or story line.

RESEARCH DESIGN
The research uses a descriptive qualitative analysis.

THE RESEARCH METHOD INVOLVES:
◦ Reading and watching *Eat Pray Love* repeatedly to get rooted understanding of the content.

◦ Analysing the characters and their roles.

◦ Taking notes on important details/parts of the book and the film.

◦ Arranging the data into several parts based on various classifications.

◦ Interpreting the data

◦ Reaching a conclusion

ANALYSIS AND FINDINGS

SOURCES OF DATA

Primary data include
◦ Printed book of *Eat Pray Love* and;

◦ The corresponding adapted movie by Ryan Murphy (2010).

Secondary data include
◦ journals, articles, and books related to the topic and;

◦ Various websites and relevant information from the internet.

• CHARACTERS
Every single character in literary source has different roles. A character who has a significant role in a story is known as the main character, while, all other characters are called supporting character. Supporting characters' act in helping or supporting the main characters or to complete them. Characterization is the way in which an author defines the characters of his story. There are different ways in which a character could be analyzed. They can be through the author's description about the character, through a description of his surroundings, considering his behavior, in behalf of the character's opinion about himself, the view in which a character thinks, descriptions on how other characters think or talk about him, regarding the way in which other characters react to him and so on.

The following interpretations are discovered, as per analysis of characters in the book and movie. More than 50 characters are described in the book while around 42 characters appear in the movie.

Table-4.1: Table Listing Characters According To Their Order Of Appearance

BOOK		MOVIE	
1.	Elizabeth (Liz)	1.	Elizabeth (Liz)
2.	Susan	2.	Delia
3.	Liz's husband	3.	Steven
4.	God	4.	God

5.	David		5.	David
6.	Guru		6.	Guru
7.	Giovanni		7.	Giovanni
8.	sofie		8.	Sofie
9.	Luca spaghetti		9.	Luca spaghetti
10.	Giulio		10.	Giulio
11.	Maria		11.	Maria
12.	Richard from Texas		12.	Richard from Texas
13.	Plumber from New Zealand		13.	Tulsi
14.	Tulsi		14.	KetutLiyer
15.	KetutLiyer		15.	WayanNuriyasih
16.	WayanNuriyasih		16.	Tutti
17.	Tutti		17.	Felipe
18.	Felipe		18.	Corella
19.	Corella		19.	Lawyer
20.	Lawyer		20.	Nyomo
21.	Nyomo		21.	Old man
22.	Old man		22.	Deborah
23.	Deborah		23.	Swami Shiv
24.	Arturo		24.	Seva office woman
25.	Seva office woman		25.	Armenia
26.	Armenia		26.	Clothing store lady
27.	Delia		27.	Madhu
28.	Ian		28.	Ian
29.	Dario		29.	Andy
30.	Liz's Mother		30.	Girl at the bookstore
31.	Acquaintance		31.	Play walk out
32.	Brian		32.	Woman in play
33.	Editor from women's magazine		33.	Laundry mate
34.	Yoga teacher who introduces Ketut		34.	Man at Storage building
35.	Iva		35.	Land lady
36.	Psychiatrist		36.	Paolo
37.	Celeste		37.	Rijul
38.	Elizabeth writer		38.	Ruffina
39.	Elizabeth food writer		39.	Leon
40.	Catherine		40.	NYU student
41.	Giuliana		41.	Paola
42.	Uncle Terry and aunt Deb		42.	Claudia
43.	Linda			
44.	Mario			
45.	Simona			
46.	Guilia and Sarah			
47.	Paolo and Giuliana			
48.	Store lady			
49.	Roommates in ashram			
50.	Teenage Indian boy			
51.	Mr. Panicar			
52.	Bob			
53.	Sean the dairy farmer			
54.	Nick			
55.	Nun			
56.	Mario / Nyoman			
57.	Ann			
58.	Big Ketut, Little Ketut			
59.	Stefania			
60.	Yudhi			

The main character, Elizabeth Gilbert (Liz) in the beginning of the story is described as a sad, depressed woman who is physically and emotionally unwell. As the story progress, she is seen to be healthier and happier. While the book declares in the character gaining a lot of weight, even though she speaks of it, it's probably not experienced in the movie.

A lot of important characters are omitted in the movie. Some of the important characters like Sean the dairy farmer, Dario, plumber from New Zealand, Linda, Catherine, Susan, Iva, Yudhi, big Ketut and Little Ketut, Mario, Simona etc. does not arrive on the scene. While new characters are introduced in the movie like Rijul, Leon, Andy, the woman seen at the laundry and so on.

There are also variations in the roles and names played by the characters in the movie. The character Susan, who plays the role of Liz's best friend, is replaced with Delia. Giovanni who plays the role of tandem exchange partner in Italy plays the role of both he and his twin brother Dario. When the book does not mention any name for her husband, he is named as Steven in the movie. There are also differences in the delivery of dialogs by the characters in the movie when compared with the book.

- **EVENTS**

This book is networked like a traditional *japamala,* dividing the stories into 108 tales, like the beads. These tales again are divided into 3 segments about Italy, India, and Indonesia, the countries the writer travels during the year. Italy signifies pleasure, India; devotion and Indonesia, balance.

Italy
1. Liz meets Giovanni
2. Flashback to Friend's baby, House, Prayer
3. Communication with god
4. David and Happy times
5. Divorce and lawyer, Sad times (David)
6. Learns Italian, Break up with David
7. David's guru is introduced, Guru's place in New York
8. First Bali trip, meets Medicine man through yoga teacher
9. Plans on Italy, India, Indonesia, divorce settlements, Iva
10. Italy happens
11. First meal, Observations, Reads Italian newspapers, Bookstore, talk with Celeste, Library
12. Luca spaghetti is introduced
13. Italian class
14. Praises Italian
15. Depression and loneliness
16. Talks about depression, psychiatrist
17. Fights depression, Self-appraisal
18. Yoga stopped
19. Talks on friends (Italy), Elizabeth, Sofie, Giovanni, Maria and Giulio (through Anne), Luca Spaghetti, Giuliana
20. Talks on family, Compares Italians and Americans, thinks on what to do in Italy
21. Talks on Love
22. Soccer game with Luca
23. "Attraversiamo"
24. Augusteum
25. Lost (Shipped books)

26. Pizza from Naples, Gains weight

27. Emails David, talks to Giovanni about David

28. Catherine

29. Talks on marriage and baby

30. Travels to bologna, Florence, Venice, Sicily, Sardinia, Naples, Calabria (6 weeks' travel)

31. Florence, Uncle terry, aunt deb, Linda, Venice

32. Roman woman, what's your word?

33. Luca's birthday

34. Weight gain (new jeans)

35. Sicily, Syracuse

36. Goes back – repacking

India

37. Meditation, Arturo

38. About Yoga

39. Roommates, About ashram, People

40. New year in Ashram

41. Scrubbing floor, Corella

42. Mind and meditation (conversation)

43. Groceries!

44. Richard from Texas, Dairy farmer from Ireland

45. Tries meditation, Blue energy

46. Religion and blue energy

47. Dreams, tension

48. Thoughts on David, Control issues

49. Self-talk on childhood

50. Deborah

51. Thumps up

52. Gurugita

53. About Swamiji

54. Dedicating Gurugita to Nick

55. Stay at ashram

56. Thinks on renovating meditation room, Mosquito bites

57. God, faith

58. Ticket story, what to pray

59. Tulsi, Indian marriage

60. Richard's story, Terrace (plumber)

61. Richard leaves

62. Decide to be silent

63. Key hostess

102. Liz's birthday celebration

103. Wayan wants more money

104. Felipe and Liz

105. Ketut and Liz (rituals)

106. Wayan buys plot

107. GiliMeno

108. Back to Bali.

Out of 108 events in the book, around 60 events are only presented in the movie. The movie begins with the eighth event of the book and the whole movie is arrayed in a different sequence of order. The events which the film maker found interesting or appealing are only displayed in the film. Events like Liz and her divorce, relationship with David, Luca's birthday, her stay in the ashram, Ketut and his rituals etc. are similar to that of the book. A few important events related to wayan and purchase of land, story of Big Ketut and Little Ketut, trip with Yudhi, visit by Catherine are excluded. There are some also alterations made in the plot. Many scenes are added in the place of omitted events from the book. Some of them include Indian wedding and rituals of Tulsi, phone call received from David, a barber shop scene in Italy, trip with Leon in Bali and so on. There are a lot of variations in the settings and the film does not show a lot of places she visits and their scenic beauty is omitted.

- **MOTIFS**
A lot of meanings are depicted through signs and symbols in the book.

◦ Italy itself denotes pleasure. In Italy Elizabeth symbolizes lust through food. She is shown eating a lot of food. When people are shown attracted to other people, she is attracted to different food like pasta, pizza and gelato. In Italy she gains weight and becomes physically fit. Italy symbolizes pure pleasure and gives her the lesson "appreciation of pleasure can be the anchor of humility".

◦ Food is another symbol that indicates physical fitness, health and pleasure.

◦ India is symbolized by devotion. India is used to denote relationship with god, religion and inner peace. Meditation is used as a symbol to show mental stabilization. India represents the lesson "god dwells within you as you"

◦ Indonesia signifies balance and love. People of Bali are pointed out to denote love and affection. The rituals and healings of KetutLiyer depict balance of good and bad in one's life. Bali convey the message "nothing is coincidental"

◦ The floor is used throughout the movie to symbolize the main character's helplessness feel. She is seen knelt down on the floor to symbolize her hitting the bottom of emotional breakdown. Elizabeth is shown sobbing on the floor seeking for help from god, later beside the bed of David, in ashram after bad dreams and so on. The symbol floor is used to denote herself and later she is shown scrubbing the floors in India. This action of scrubbing and cleaning the floor symbolizes cleaning herself from all the miseries and sadness she faces in life through devotion and meditation. Liz is also said to kiss the floor later illustrating her gratitude towards her cleansed and happier soul.

◦ Water is the symbol the author use to symbolize comfort. Rain, fountains, beaches and boating denotes the way in which water can heal a person's mind.

◦ Depression is a sign that is used to show her unhappy married life.

◦ God is a sign that the author use to demonstrate one's inner self and confidence.

LIMITATIONS OF THE STUDY
This study does not declare to give a full picture on such a widespread topic as the relationship between literature and film is broader. But it aims to shed some light on a few similarities and differences between the two media.

DISCUSSIONS AND CONCLUSIONS
Adaptation is a process of replication with a modification. Each adaptation deals the story in a unique manner. The success of an adaptation depends on the skills of filmmaker in satisfying the anticipations of the viewers. As the literary source is considered as a manual or instruction, the film maker or adapter as a portrayer can

choose or ignore the events or elements from the plot. These various changes that a film maker makes not only speak on the limitations of the two distinctive medium, but also reveal the advantages of visual over verbal medium. This helps in picturising a period or location, settings of the that time on which the story is originally set on, easily, which a reader without proper knowledge cannot understand the true meaning of the subject. The film makers may additionally change or manipulate and redraw elements to expand the scope of the adaptation as the point of view and motive of the film maker is different from the author of the literary source. Also the rating and success of a film is different from that of novels. But sometimes this can lead to failure in transporting the real spirit or idea of the particular novel.

Based on the analysis, it is found that the book is taken only as a reference for the film making. Merely a few events from the book is shown in the film as it is a combination of transformation and loose form of adaptation and not a faithful adaptation of the book. A complete fidelity of the book is not possible due to the difference in time, space and setting. Film adaptation gives concrete representations of the characters and other factors while the novel provides abstract representations, because it enables the reader to have their own imaginations on the elements and plot. Everything presented in the film comes in the film maker's point of view or the perspective in which he wants his audience to view. While transforming the contents from verbal to visual medium, it demands for a change in the plot and story line.

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APPENDIX

References of events from the movie

- **ITALY: PLEASURE**

(Elizabeth's attraction towards food)
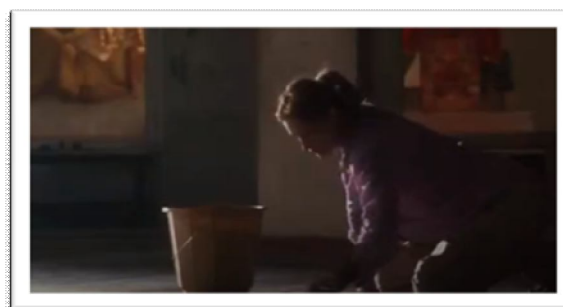
- **INDIA: DEVOTION**

(Meditation and prayers as part of mental stabilization)

- **INDONESIA: BALANCE**

(Rituals depicting balance of good and bad in one's life)

- **FLOOR: SELF**

(Cleansing one's soul and body symbolised through scrubbing floors)

STUDENTS' PREFERENCE ON TRADITIONAL AND MODERN EDUCATION

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ABSTRACT

Internet has revolutionised the model of teaching as well as education to a great extend over the past 100 years which resulted in the substantial transformation in the educational sector worldwide. The transformation in the system makes us review the model of educational system and the typology of the classroom, as well as how effective the current educational system will be to students pursuing their higher education. This paper aims on the analysis of both traditional and modern education techniques for imparting knowledge to the students in the most beneficial and productive way. The model of teaching has shifted from the use of blackboards and chalk in the old traditional system to use of smart boards and overhead projectors in the modern form of education. The paper concludes by stating students' preference on traditional or modern education and their perception over the transformation of educational system. The author has employed quantitative analysis to evaluate the students' preference in the paper.

Keywords: Educational system, blackboards, smart boards, transformation, traditional education, modern education

INTRODUCTION

The educational framework that exists today is much advanced from the one which was a few years back. With the ever-changing needs of the people, the educational sector is compelled to transform by overcoming the limitations in the system. Education is a vital part of our life which helps us to build up a good personality as well as to lighten the challenges faced in life. Education is not merely concerned with learning and attaining high scores in exams. The knowledge attained from schools and colleges is not the complete one. It is actually one of the ways to come across new things which we are not aware of and heighten the level of our knowledge by disseminating it to others. The knowledge which is imbibed in us can only be increased by sharing. Education paves the way for better job opportunities and prospects in career growth. Only a well-educated citizen can distinguish between the good and evil or right and wrong in the society. In this technologically advanced era, the learning methods and practices are evolving and improving from an educational perspective. The invention of new technologies and innovations have undergone advancement in all fields especially in the education sector which aim at providing education to children as well as young people systematically. Increasing the level and standards of advancements in education will have a positive effect on education itself and also benefit the whole society. Education is maintained by the public which in turn, maintains the general public. Our system of education solely relies on the commitment and diligence of all society for its effective functioning, where parental participation, along with powerful community and society support, are quite essential for accomplishing their aim or purpose of life.

More than primary and secondary educations at school, the quality of higher education students receive at their college have a major impact on their profession as well as their daily lives. In the olden times, people were not much aware of the importance of the graduation and post-graduation education but today people make great priority on choosing the institutions to pursue their higher education. The education sector has let the students free to opt for any form of education they like which is most convenient to them. The traditional chalk and talk lecture approach having students as the submissive receivers of knowledge and information disseminated by educators will not be apt for the present generation. Students are after the advanced technologies that reduces their stress and burden of studying. The conventional teaching style has its own merits, but it is highly beneficial that instructors use a varied range of methods and programmes in order to heighten students' involvement during lecture sessions.

In education, the result of advancements can be estimated by learning strategies, formal and informal evaluations, self-assessment by students and examination results. There is a need to enhance education of instructor, professional growth and durable training thereby raising the quality and methodology of imparting knowledge. Also, the educational institutions are required to provide the most favourable learning ambience, along with study materials as well as proper context or environment which is mandatory for attaining high outcomes in exams for every student.

TRADITIONAL EDUCATION
Traditional education is the most conventional form of learning system which has been in use for more than 100 years. It was the Gurukul system which brought out the concept of traditional learning where the teacher or guru imparts their knowledge to the students or disciples regarding customs, religions and traditions. The knowledge is imparted mainly by the means of oral recitation. In the olden days, the prime objective that education performs was to convey moral principles, vocational abilities and the customs or beliefs in a society that makes them aware of the social system in which they are a part of. Traditional education literally means the guidance which is required for being an ideal human being. It is more of a teacher-centered approach when it comes to academics as it involves mostly one way form of communication. Students only learn what they are taught by the instructor which mostly results in mugging up of facts peculiarly for their competitive exams. The conventional form of learning is mostly associated with the blackboard and chalk method which is quite often followed by the present generation modern educational institutions. It also provides students to have face-to-face interactions with teachers helping students complete their works on time. In spite of the innovations took place in technology, traditional form of learning is still the appropriate option for those who are into face-to-face interaction. Communicating with the instructors on a frequent manner can be prompting and helps to build up a good and friendly relation between the teacher and the students.

MODERN EDUCATION
In the era where technologies are welcomed, modern or online education is the most technologically advanced form of learning which incorporates the technologies like internet, projectors etc. The emergence of modern education was mainly after the evolution of internet and the World Wide Web. Internet has caused a major revolution in the field of Information and Communication Technology. It was more of a boon to people especially to the students. It is far different form traditional form of education which is still prevailing in most educational institutions. Modern education is carried out in a very formal manner. Students find modern classrooms which uses smart boards and overhead projectors to educate them as more interactive and interesting as it incorporates multimedia content like images, audios, videos etc. for in depth understanding of the concepts in their syllabus. The education sector has got really advanced with globalization and new innovations are on their way to be implemented to the students to transform the educational system into an efficient and interesting one. Online education is a student-centred approach of learning. The student gets more focused in the areas where they need to improve and gives them deep knowledge about any topic. It also offers flexibility to learn from anywhere at any time accordingly with an individual's pace and convenience.

LITERATURE REVIEW
Upasana (2014) stated that in traditional education, students require to attend their classes in person and on the campus. It may be a better choice for those students who are not really a tech-savvy or needs to enjoy interacting with teacher and professor face to face.

Woo and Kimmick (2000) pointed out that Internet using students were significantly more stimulated in their studies in spite of any notable distinction in marks or contentment among the learners which was proven from a study conducted.

E-learning is termed as the form of learning accompanied with latest technological innovations and gadgets that provides aid as well as ease to the learning process of an individual. E-learning also refers to acquiring or passing valuable information with the help of the most modern technologies like computer, laptop etc. (Laurillard, 2006).

Johnson and Johnson (1985) opined that modern education not only has a favourable impact on learners' involvement but also has appreciative impact on stimulation, lecture room interaction, participation and student's interest in studying.

It is significantly proven that integrating any types of innovation during lecture as teaching tool is capable of enhancing the acquisition of knowledge through study and academic results of students (Gulek and Demirtas, 2005). The new methods possess an influential effect on the learning method of the students.

Significant class commitment, greater attentiveness in the topic of study along with effective comprehension of hard notions and topics was reported by the ones who considered their teachers as effectual utilizers of new age advancements (Caruso & Kvavik, 2005).

McGlynn (2008) stated that involvement of the learner is very crucial for scholastic inspiration, determination and graduation. Students who are clearly involved are capable of having empowering learning experiences.

Cheryl L (2010) points out that the way tutors teach the students these days clearly shows how percipient and

diligent the learners have become on their studies and subject matter. The technology has started to play a prominent role in assisting instructors for interactive classes.

Student contentment is regarded as one among the five pillars which includes quality, teacher's satisfaction, efficacy of studying, entry and profit of the institute. Proper contentment on the learning process can have a major impact on the results of the individuals (Moore, 2002).

In a study, students learned better in both modern and traditional environment thereby developing increased passion and dedication for their subjects (Davidson and Kroll, 1991). Keeler and Steinhorst (1995) too found that vast majorities of learners victoriously finished their degree in the modern lecture rooms.

According to Silcock and Brundert (2001) personalised learning method is the one that uses guidance from instructor to ease the burden of students. It is a process where the learners themselves work hard to find solutions for their knowledge acquisition requirements, setup competitive aims, search for study materials, adopting new learning methods and assessing their own results.

lTHEORETICAL FRAMEWORK

The theory used in the research is uses and gratification theory. It is an audience-centered approach that helps to analyse how mass media helps to fulfil the needs of its users. Uses and gratification method highlights great inspiration and utilize the media content that can meet the needs of the users.

METHODOLOGY

Quantitative analysis is carried out in the research. Qualitative analysis is done by conducting questionnaire survey in simple random sampling and analysing the result obtained. The questions are designed to examine the kind of educational system used in colleges, check their accessibility and analyse the widely preferred type of education among the students. The research also analyses how students perceive both traditional and modern education.

OBJECTIVES

- To find out the students' preference on traditional and modern education.
- To examine the type of education students receive at their institutions.
- To analyze whether students are satisfied with their current educational system.
- To evaluate if modern education is accessible to all.

RESEARCH QUESTIONS

- ❖ How do students perceive over a transformation in the educational system?
- ❖ Whether the modern education is accessible to all the students?
- ❖ What is the nature of traditional and modern education?
- ❖ Which kind of education do the students feel as stressful?

HYPOTHESES

- Students prefer modern form of education than traditional form.
- Modern kind of education is easily accessible to students of all age groups.
- Most of the educational institutions offer the Traditional model of education to the students.
- Students are not satisfied with their current system of education.

RESEARCH DESIGN

Simple random sampling, the basic technique of sampling is used. The survey was conducted among college students above the age of 18 years and 200 data samples were collected. The first hand primary data collected are from urban and suburban populations of Kerala with the help of questionnaires. A method of purposive sampling was used to determine whether all the respondents were college going students falling in the age group 18 to 26 to fill out the questionnaires.

FINDINGS AND ANALYSIS

To examine the type of education students receive at their institutions Current_educational_system		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Traditional	114	57.0	57.0	57.0
	Modern	34	17.0	17.0	74.0

	Both	52	26.0	26.0	100.0
	Total	200	100.0	100.0	
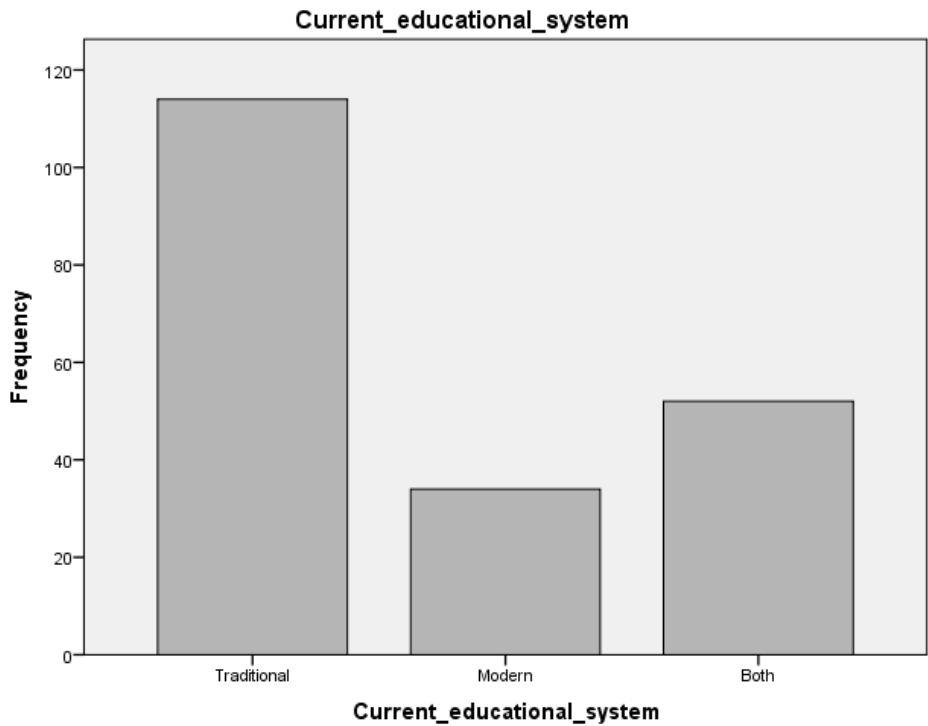
Fig-1

The figure 1 depicts the type of educational system used in the colleges whether traditional, modern or both. It is analyzed that 57% of the students have traditional form of educational system in their college while 17% and 26% of the students is found to have modern and hybrid (combination of both traditional and modern) form of educational system.

Chi-Square Test

Current_educational_system			
	Observed N	Expected N	Residual
Traditional	114	66.7	47.3
Modern	34	66.7	-32.7
Both	52	66.7	-14.7
Total	200		

Test Statistics	
	Current_educational_system
Chi-Square	52.840[a]
df	2
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 66.7.	

The key result in the Chi-Square Tests table is the Pearson Chi-Square.

The value of the test statistic is 52.840[a].

The expected cell count assumption is met by the statistics (i.e., expected cell counts are all greater than 5) which clearly shows that none of the cells had an expected count less than 5. Hence the assumption is proven.

The p-value of the test statistic is p = 0.000

Out of the three options: Traditional, modern and both, majority of the respondents opted for traditional education. This study wanted to analyze the current educational system in the institutions using a Chi-Square Test of Independence.

The p-value acquired using Chi-Square test is 0.000, as the p value is less than the chosen significance level (a=0.05), the null hypothesis can be rejected. Data shows that most educational institutions employ traditional form of learning system for imparting knowledge to the students.

To analyze whether students are satisfied with their current educational system

satisfaction		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	78	39.0	39.0	39.0
	no	122	61.0	61.0	100.0
	Total	200	100.0	100.0	
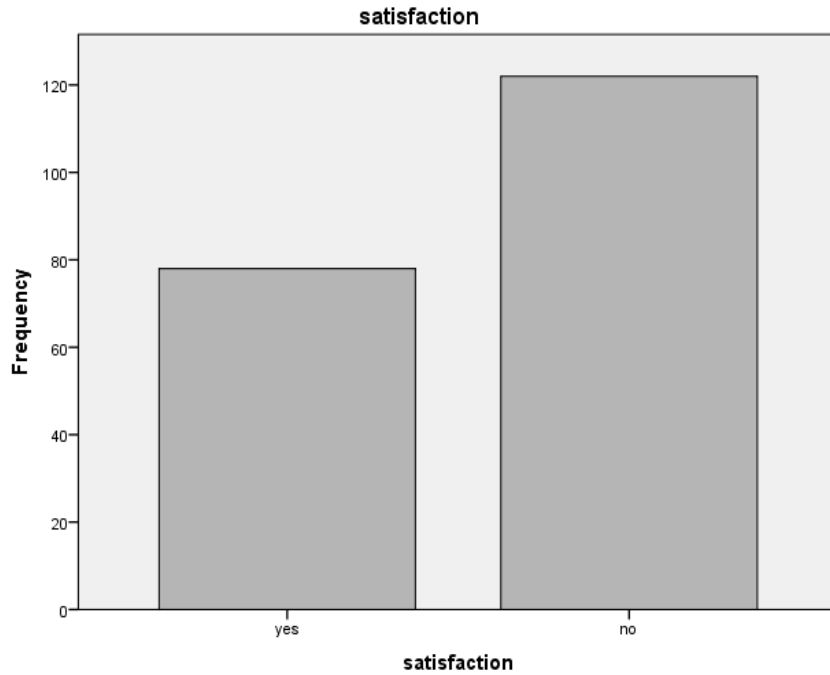
Fig-2

The Figure 2 shows the degree of satisfaction of the students regarding their current educational system. A majority of the students, 61% are dissatisfied with their current system of education whereas only 39% are satisfied with their current system.

Chi-Square Test

satisfaction	Observed N	Expected N	Residual
yes	78	100.0	-22.0
no	122	100.0	22.0
Total	200		

Test Statistics	
	satisfaction
Chi-Square	9.680[a]
df	1
Asymp. Sig.	.002
a. 0 cells (0.0%) have expected frequencies below 5. The minimum expected cell frequency is 100.0.	

The result in the Chi-Square Tests table is the Pearson Chi-Square.

The value of the test statistic is 9.680[a].

None of the cells had an expected count less than 5 which satisfies the assumption of expected cell count (i.e., expected cell counts are all greater than 5).

The p-value of the test statistic is p=0.000

The respondents were to opt whether they are satisfied with the current model of learning by the educational institution in which they study. A large proportion of the students expressed their dissatisfaction with their learning system by opting for the option 'no' from the options provided in the questionnaire given to them. This study wanted to test whether the students are satisfied with their current educational system using a Chi-Square Test of Independence.

The p-value obtained using Chi-Square test is 0.002, since the p value is less than the chosen significance level (a=0.05), we can reject the null hypothesis. It is thereby proven that the students are apparently dissatisfied with their current model of learning.

To evaluate if modern education is accessible to all

Accessibility_modern					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	yes	190	95.0	95.0	95.0
	no	10	5.0	5.0	100.0
	Total	200	100.0	100.0	
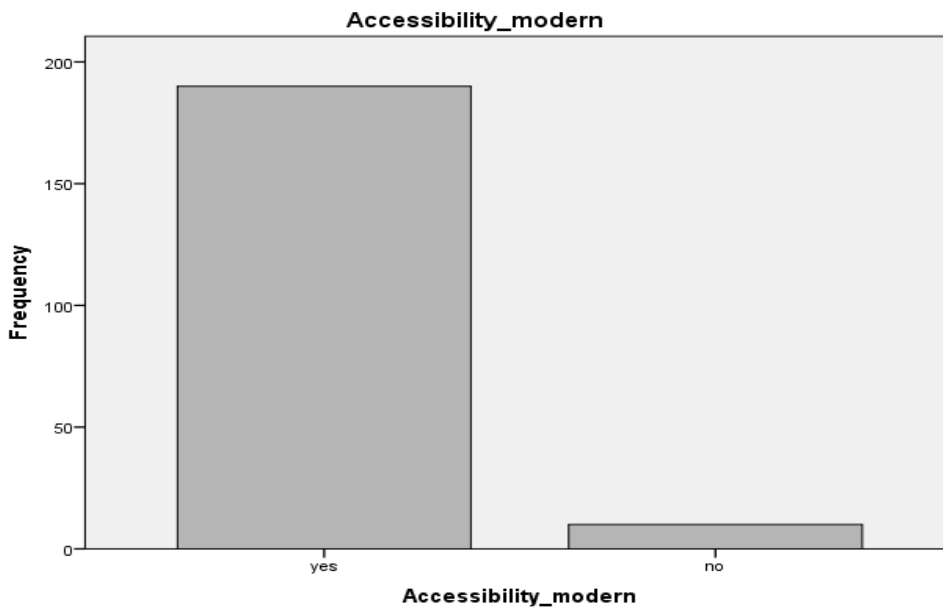
Fig-3

The Figure 3 depicts the accessibility of modern form of education to the students. Only 5% of the students expressed that they have no access to the online form of education unlike the majority 95% students who have full access to the online education through the form of internet and gadgets for accessing it.

Chi-Square Test

Accessibility_modern			
	Observed N	**Expected N**	**Residual**
yes	190	100.0	90.0
no	10	100.0	-90.0
Total	200		

Test Statistics	
	Accessibility_modern
Chi-Square	162.000[a]
df	1
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies below 5. The minimum expected cell frequency is 100.0.	

The result in the Chi-Square Tests table is the Pearson Chi-Square.

The value of the test statistic is 162.000[a].

None of the cells had an expected count less than 5 which satisfies the assumption of expected cell count (i.e., expected cell counts are all above 5).

The p-value of the test statistic is p=0.000

The respondents were left out with options 'yes' or 'no'. From the options provided, majority of the students chose the option 'yes' which clearly shows that they have full access to the online education system which uses internet and they can easily access it anytime they want. This study wanted to test the accessibility of modern education to the students using a Chi-Square Test of Independence.

The p-value obtained using Chi-Square test is 0.000, since the p value is less than the chosen significance level (a=0.05), we can reject the null hypothesis. Hence it is proven that modern form of education is easily accessible to all the students.

To find out the students' preference on traditional and modern education

Students_preference_traditional_and_modern_education					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	traditional	26	13.0	13.0	13.0
	modern	146	73.0	73.0	86.0
	both	28	14.0	14.0	100.0
	Total	200	100.0	100.0	
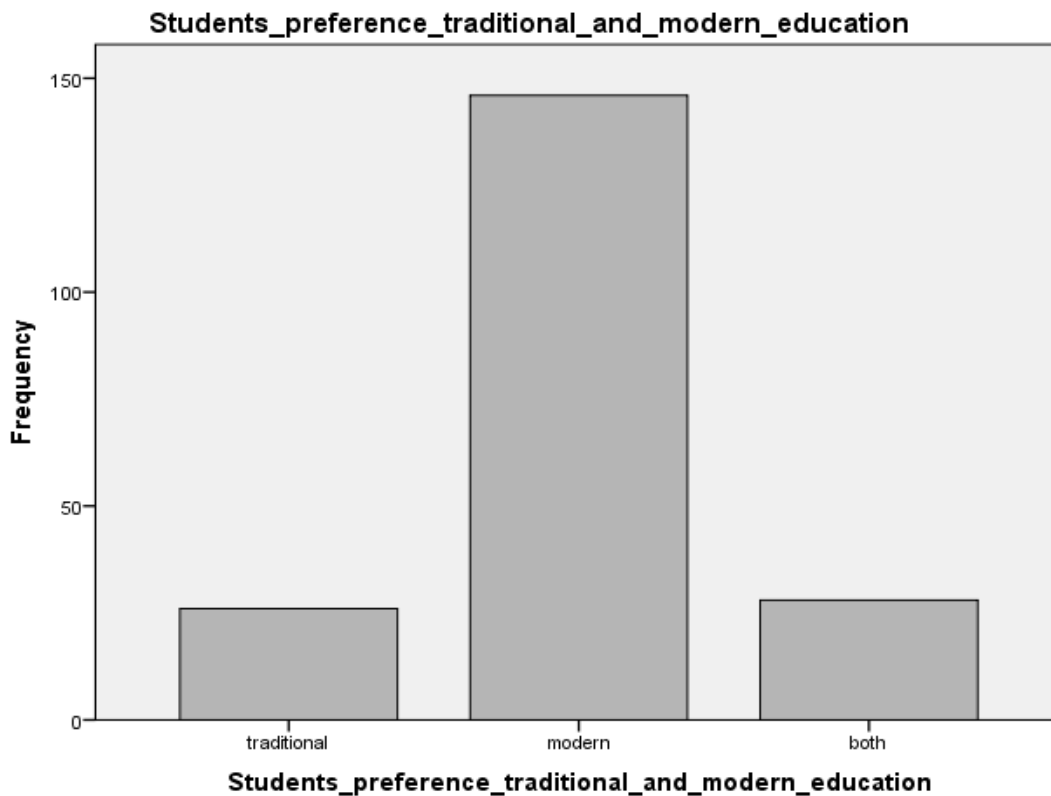
Fig-4

On analyzing the survey results, it is found that a majority of the youngsters opted for the newly advanced form of education rather than the conventional kind of education. Almost 73% of the respondents of the survey have made their preference on Modern education while hybrid and traditional education was preferred by 14% and 13% of respondents respectively.

Chi-Square Test

Students_preference_traditional_and_modern_education			
	Observed N	**Expected N**	**Residual**
traditional	26	66.7	-40.7
modern	146	66.7	79.3
both	28	66.7	-38.7
Total	200		

Test Statistics	
	Students_preference_traditional_and_modern_education
Chi-Square	141.640[a]
df	2
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 66.7.	

The major result in the Chi-Square Tests table is the Pearson Chi-Square.

The value of the test statistic is 141.640[a].

None of the cells had an expected count less than 5 which satisfies the assumption of expected cell count (i.e., expected cell counts are all greater than 5).

The p-value of the test statistic is p=0.000

The respondents were given three options: Traditional, modern and both. A major proportion of the respondents opted for modern education. However, there was only a slight difference between the counts of traditional and hybrid (combination of traditional and modern education) type of education. This study wanted to test the students' preference on traditional and modern education using a Chi-Square Test of Independence. The p-value obtained using Chi-Square test is 0.000, since the p value is below the chosen significance level (a=0.05), we can reject the null hypothesis. It is thereby proven that students' prefer modern form of educational system rather than traditional education.

DISCUSSION
The main aim of this research is to analyse and perceive students' preference on traditional and modern education. Though both teaching aid is equally important and essential for teaching students feel that the use of multimedia or online media is more beneficial for learning than using blackboard. There is a big ratio of choosing online education over traditional education which is 73%. Students find themselves captivated towards the online learning and make them more focused on what they are learning in class.

More specifically, the objective is to examine the kind of education students receive from colleges in order to understand the issues and challenges faced by them in their curriculum. Grabbing students' attention is one of fundamental issue for any class even if it is primary, secondary or higher education. Students tend to lose their attention from the topic of study after a particular period of time. As an important step to flourish in modern teaching approach, instructors should procure enough technical skills. Precisely, the quantitative study disclosed major distinctions in class contentment among the modern lecture sessions and the conventional lectures, reporting an elevated degree of contentment in learning. Learner's contentment would increase if the teacher provides better condition for studying not only in a conventional lecture sessions, but also in a sequential modern form of classrooms.

The study also focused on the accessibility of modern form of education to the college going students. Internet was easily accessible to the students for further reference or attaining deeper knowledge about any topic of their interest. It contains continuous flow of information that students eager to learn more. The ones who are deprived of access to modern education may be the ones who don't have a smartphone or computer that has the ability to access internet. The paper also provides an insight to the kind of education employed in the educational institutions. KM Upasana in her paper "A comparative study of traditional education and e- education with special reference to India" advocated modern or online education as it is useful to all. Her model provides insight on how technological innovations enhance the limitations regarding old text-centred teaching method.

LIMITATIONS
This research was limited to the college students under the age group 18-26 in the sub urban regions of Thrissur and of Ernakulam. There are no secondary data to support the findings of the study as there are no similar researches done on this particular topic of the research.

CONCLUSION
By analysing the data obtained and tested through Chi-Square test, it is proven that students in the age group of 18-26 prefer the modern form education which has developed in the recent years after the emergence of internet and the World Wide Web. In the age of innovations, youth are heading to the technological advancements that make their things done much easier and they thereby look forward to the more advanced form of educational system. They have perceived the transformation of the system positively as well as whole heartedly. The survey conducted among the students prove that most of the educational institutions still have the traditional

classrooms that does not incorporate any kind of technological innovations in it. The quantitative analysis confirms that students prefer the modern form of education rather than traditional education.

Still, students do respect the old conventional style of teaching that make use of blackboard and chalk as it served as the earlier and important aid in lecture room as a means of imparting education to the learners but students rarely opt for traditional form of education for acquiring knowledge at college in the present scenario. Some educational institutions have also come up with an alternative form of learning method named hybrid learning system which combines both traditional as well as modern kind of teaching into a single system. This form of education satisfies all kinds of learners and allows them to make significant improvement in their outcomes. From the data analysed it is proven that students consider modern form of learning system as their highly preferred form of learning system at colleges as it provides a different learning experience to them.

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INTRODUCTION TO VORTICITY AND ITS APPLICATION

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ABSTRACT

In this paper first we examine the vortex, In fluid dynamics a vortex is a region in fluid in which the flow is rotating around an axis line, which may be straight or curved. The plural of vortex is either vortices. Vortices form in stirred fluids & may be observed in phenomena such as smoke rings, whirlpools in the wake of boat, or the winds surrounding a tornados or dust devil.

Keywords: Vorticity, vortex, vorticity vector, rotational, ir-rotational

INTRODUCTION

Vortices are a major component of turbulent flow. The distribution of velocity, vorticity (the curl of the flow vorticity) are used to character vorticity are used to character vorticity. (Note: A vector that describes the local rotary motion at a point in the fluid, as would be perceived by an observer that moves along with it. The direction of the axis of rotation of this imaginary ball (according to the right-hand rule).

Mathematically, If $\vec{u}$ be the velocity vector than $\vec{W} = \nabla * \vec{u}$ (curl u) is called vorticity vector.

$$\vec{W} = w_1 \hat{\imath} + w_2 \hat{\jmath} + w_3 \hat{k}$$

If $w_1, w_2, w_3 = 0$ then the fluid motion is said to be irrotational.

Vorticity line: A vortex line is a line which is everywhere tangent to the local vorticity vector. It is defined by

$$\frac{dx}{w_1} = \frac{dy}{w_2} = \frac{dy}{w_3}$$

Vortex tube: The vortex line drawn through each point of a closed curve enclose a tabular space in the fluid known as vortex tube.

A vortex tube of infinitesimal cross-section is called vortex filament or simply vortex.

Vortex type: A rigid-body vortex (also called rotational vortex. The balls are themselves rotating in addition to revolving around the center.) If the fluid rotates like a rigid body. So that v increases proportionally to the distance 'r' from the axis a tiny ball carried by the flow would also rotates about its center as if it were part of that rigid body. So that u increases proportionality to the distance 'r' from the axis a tiny ball carried by the flow would also rotate about its center as if it is being part of that rigid body.

Irrotational vortex: If the particle speed u is inversely proportional to the distance 'r' from the axis (i.e. revolving around the center of the vortex but not rotating.

Note:

Rotational and Irrorational

- Any fluid element (particle that occupy that point having non-zero vorticity, that point is called rotational and vice-versa, any fluid element (particle) that occupy that point is called irrorational which means particle is not rotating.
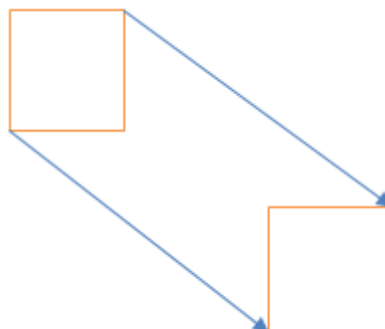
Now we will discuss about vorticity tensor : But before that we will discuss about deformation tensor, it describe how fluid element deform as a result of fluid motion.

Application of Vorticity:

An application, we consider a congruence of vortex-lines and derive, in a simple way, the relativistic analogue of the Kelvin-Helmholtz theorem.

Vortex flow meter are a direct type of flow-measuring device with operating fundamentals based on the Von Karman Vortex street principle. In this instrument, a bluff body or shedder bar is arranged at the center of flow path. When the fluid passes through it, disturbances in the flow called vortices are alternately formed on both sides of the shedder. These vortices thus formed are shed just after due to the flow stream forming a vortex street as per Karman Vortex Street principle.

A free spiral vortex is the combination of a free vortex and radial flow. It can be modeled by the superposition of the stream functions of a free vortex and either a sink or source, depending on the direction of the radial flow.

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COMPARATIVE ANALYSIS OF TABU SEARCH AND GENETIC ALGORITHM IN WIRELESS SENSOR NETWORK

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ABSTRACT
Determination of cluster head in a wireless sensor network is a basic issue now a days and proficiency of the calculation absolutely relies on the dimension of cluster heads. In this paper, results are acquired with the assistance of tabu search and Genetic Algorithm which is utilized to enlighten a Sensor organizes improvement issue. Long correspondence separate among sensors and a sink in a sensor system can altogether drain the imperativeness of sensors and reduce the lifetime of a system. By gathering a sensor arrange into different self-sufficient bunches using a GA, we can staggeringly limit the correspondence separations, thus hauling out the system lifetime.

Keywords: Wireless Sensor Networks, Clustering, Communication distances, Tabu search, Genetic Algorithm.

I. INTRODUCTION

A wireless network is vast network that links with various physical devices such as server and clients machines along with hardware. These kind of network are found useful to develop an information system[13]. Wireless network are broadly categories as wireless local area network (WLAN), wireless personal area network (WPAN), Wireless Metropolitan Area Network (WMAN), Cellular Network, Mobile Adhoc Network and Wireless sensor network etc. Wireless sensor network is one of the part of wireless network, it is also called actuator network. Wireless sensor network (WSN) made up of large number of sensor nodes that interrelated with each other to achieve data aggregation. The wireless sensor networks (WSNs) can be utilized in a wide geographical space to handle physical occurrence with reasonable correctness and consistency. The sensor nodes can observe various entities such as: temperature, pressure, humidity, sunlight, metallic objects, etc.; this monitoring ability can be efficiently used in diverse area such as automation, agriculture, military, and environmental applications [1]. A sensor node is made up of various components like sensors (for sensing something), processor (for processing the data), and transceiver and power units. The sensor nodes are spreaded in a sensor field. All these dotted sensor nodes has the ability to aggregate information and transmit information to the base station and also the end users. Information is routed back to the end user by multihop communications design through the sink. The sink serves as a gateway; it could converse with the task manager node via the internet or Satellite. Security of sink were discussed [11] in layered approach while when an internet connectivity available and they are working wih an internet enabled server, the threat of ransomeware [12] also possible.

II. CLUSTERING

In order to enhance life time of network, clustering approach is adopted. Network is divided in to various clusters [2](group) containing various sensor nodes as cluster members and a cluster head. Cluster head transmit aggregated data to the data sink. Clustering sensor nodes is an efficient technique to improve scalability and life time of a wireless sensor network (WSN)[3,4].

In WSN network is divided into clusters, the communication between nodes can be intra cluster or inter-cluster. Intra-cluster communication comprises the message exchanges between the participating nodes and the CH. Inter-cluster communications includes the transmission of messages between the CHs or between the CH and the BS [5,6]. Clustering schemes have advantages as follows:

a) Scalability

b) Less Overheads

c) Easy Maintenance

d) More Robustness

e) Load Balancing

f) Less Energy Consumption

III. TABU SEARCH OPTIMIZATION

Tabu Search Optimization [7,8]] is a technique which gives the solution when the optimum value is stuck into local optima .In this protocol, we have considered TSO for the cluster head selection so that CH can be selected efficiently. More importantly as TSO doesn't come back to its previous solution, similarly once the node is selected as CH, there are definite numbers of rounds and rotation of CH take place before the same node is assigned the role of CH.TSO updates the Tabu list by removing the already obtained solutions thereby it focus on the other solutions. Similarly the CH nodes which are selected as the CH they are removed from the list of the nodes which are yet to become cluster heads.TS are often thought-about as a generalization of repetitive enhancements like militia. It's considered an adaptive procedure having the flexibility to use several ways, like applied mathematics algorithms and particular heuristics that it guide to beat the constraints of native optimality. TS relies on ideas that may be employed in each computer science and improvement fields. Over the days TS was better by several researchers to suit one among the different popular key approach. Cutting plane approach, stand-in constraint and steepest ascent are massive milestone within the improvement of TS. TS uses memory to stay track of answers antecedently visited so it will forestall revisiting that solution. Memory-based strategies are hallmark of TS approaches several applications don't embrace advanced features of TS since sensible solutions are generally achieved by easy styles

Pseudo code for TABU Search

```
Start
T: = [ ];
S: =original result;
S*:=s
Repeat
Find the best acceptable s' ε N(s);
If f(s') > f(s*) then s*:=s'
S:=s';
Update tabu list T;
Until stopping norm:
stop;
A necessary tabu search algorithm
Where T is a tabu list and N(s) is the set
of region solution.
```

IV. GENETIC ALGORITHM

An adaptive technique that helps in solving search and optimization problems corresponds to GAs. It is based on the genetic processes performed by biological organisms [9].

The GA is shown in the following.
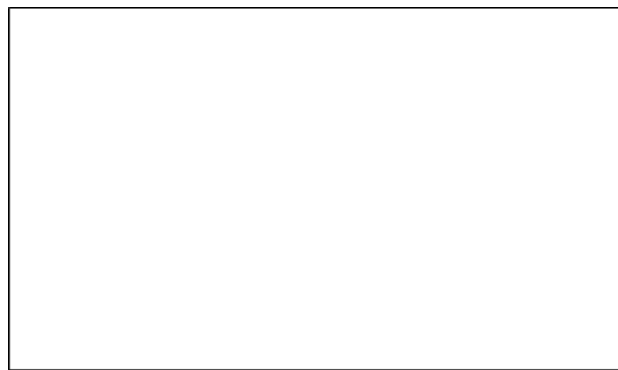
Figure-3: Genetic Algorithm

The stopping criterion in the above algorithm represents the stage at which the requirements are met. The genetic algorithm uses the following conditions to determine when to stop:

- Generations: The algorithm stops when the number of generations reaches the value of Generations.

- Fitness limit: The algorithm stops when the value of the fitness function for the best point in the current population is less than or equal to Fitness limit

i. Basics of Genetic Algorithms

A population is created with a group of individuals created randomly. The individuals in the population are then evaluated. The evaluation function is provided by the programmer and gives the individuals a score based on how well they perform at the given task. Two individuals are then selected based on their fitness, the higher the fitness, and the higher chance of being selected. These individuals then will reproduce to create one or more offspring. The genetic algorithm creates three types of offspring for the next generation:

- Elite offspring are the individuals in the current generation with the best fitness values. These individuals automatically survive to the next generation.

- Crossover offspring are created by combining the two individuals or parents.

- Mutation offspring are created by introducing random changes in the individuals.

This process continues until a suitable solution has been found or a certain number of generations have passed.

ii. Fitness function

Under the genetic algorithm, the fitness function is a process for scoring each chromosome based on their qualification. The assigned score will trait for continuation of further reproduction. Naturally, individually they are permitted to go in new generation based on their fitness score. Therefore, the score dictates the fate of individuals.

iii. Selection

The selection process determines which of the chromosomes from the current population will crossover to create new chromosomes. These new chromosomes join to the existing population. This combined population will be the basis for the next selection. The individuals with better fitness values have better chances of selection. While there are many different types of selection, I will cover the most common type - roulette wheel selection. In roulette wheel selection, individuals are given a probability of being selected that is directly proportionate to their fitness. Two individuals are then chosen randomly based on these Probabilities and produce offspring.

Figure-1: Pseudo code of the roulette wheel selection algorithm

iv. Crossover

In the crossover process or reproduction process, combines two individuals or parents, to form a crossover offspring for the next generation.

v. Mutation

The mutation is an exploration process which makes small random changes in the individuals in the population to create offspring [10].

V. CLUSTER FORMATION BASED ON GA

Each node Ni in the network is represented as a bit of chromosome. The CH and cluster member nodes are represented as 1 and 0 s, respectively.

Step 1: After the nodes are deployed in the network, its connectivity nature is verified. The nodes with the higher connectivity are chosen as the CHs.

Step 2: The sensor nodes are allocated among the selected CH using a cluster function F, which is based on three parameters such as distribution factor (DF), transmission cost factor (CF) and energy factor (EF).

- Distribution factor (DF): it gives the average number of nodes per cluster.

$$DF = \frac{C_n}{C_{ch}}$$ (1)

C_n is the total sensor node count.   is the total C_{ch} counts.

- Cost factor(CF): It is estimated based on the distance among the sensor nodes

$$CF = l + 10 \, p \, log10\left(D/D_{ref}\right) + gv \qquad (2)$$

l is the path loss at D_{ref}. D_{ref} is the reference distance. D is the distance among the sensor nodes. ρ is the path loss exponent in the range (2, 4). gv is the zero-mean Gaussian random variable. It gives the deviation in path loss from its average value.

- *Energy factor:* it is defined as the sum of the transmission energy (Et), reception energy (E_r), energy in idle state (E_{idle}) and energy during sensing state (E_{sens}) of each CH

$$EF = E_t + E_r + E_{idle} + E_{sens} \qquad (3)$$

- Cluster function F: it is defined as the function of the above estimated DF, CF and EF.

$$F = f(DF, CF, EF)$$

This function represents the number of members and sensor nodes as members of CH.

Step 3:   Each individual within the cluster is evaluated based on Fitness function(FF) which is estimated based on the node distance(D_{ns}), cluster distance(D_{nsc}) and transmission energy(TE_{CHS}).

$$FF = \frac{1}{TE_{CHS}} + (D_{ns} - D_{nsc}) + (n_n - n_c) \qquad (4)$$

Where TE_{CHS} is the energy required for data transmission from the cluster to sink. D_{ns} is the sum of the distance of all nodes to sink. D_{nsc} is the sum of the distance of normal nodes to clusters and the sum of distances of all the clusters to sink. n_n is the number of nodes. n_c is the number of clusters. n_n and D_{ns} are kept as constants. Although the value of TE, D_{nsc} and n_c keep varying.

Fitness function (FF) value is updated in the individual.

Step 4:   Based on, the population transforms into the future Generation.

Step 5:   Using Roulette Wheel selection technique,   Chromosomes with higher FF when compared with other Chromosome are selected for generating a new offspring.

Step 6:   Among the selected chromosomes, the lower fitness Chromosomes are removed and a new offspring is replaced.

Step 7:   The concept of elitism is also included that guarantees that the current best individual at each generation always Survived to the next generation.

Step 8:   Following the chromosome selection, single-point Crossover technique is applied. After crossover, the following two cases are possible.

Figure-2: One point Crossover

Step 9:   After the crossover, each bit of an individual is applied Over the mutation operator. In this process, when the bit value is 0, it is mutated to 1 and vice versa. This technique avoids duplication of individuals. This ensures genetic diversity within the population.

Step 10:   Finally, the clusters need to be reconstructed since the position of CHs might be shifted.

VI. PROPOSED PROTOCOL

This paper described TABU-GA MSEEC protocol for WSNs in the presence of node heterogeneity with the routing done by TABU-GA search against the area of 200m ×200 m using TABU-GA search for MSEEC energy efficient clustering protocol. In TABU-GA MSEEC, there are three types of nodes; normal node,

advance node and super node based on their initial energy value. The eight advance nodes and eight super nodes are placed while rest of the normal nodes are placed. Msn is the proportion of entire number of nodes having α times greater energy in comprise of normal nodes called super nodes. The remaining nodes having energy denotes by E0.

P=p1+p2 where p1 is the entire number of normal nodes attached to advance nodes and p2 is the entire normal nodes attached to super nodes. The entire energy equation of three level nodes is given below:-

$$E_{total} = p. E_0 + M_{AN}. (1+\alpha) . E_0 + M_{sn} .(1+\beta). E_0$$

Therefore, the three-level M-SEEC has ($\alpha .M_{AN} + \beta. M_{SN}$) times more energy. From the figure 3, we can easily see the randomization of normal nodes.
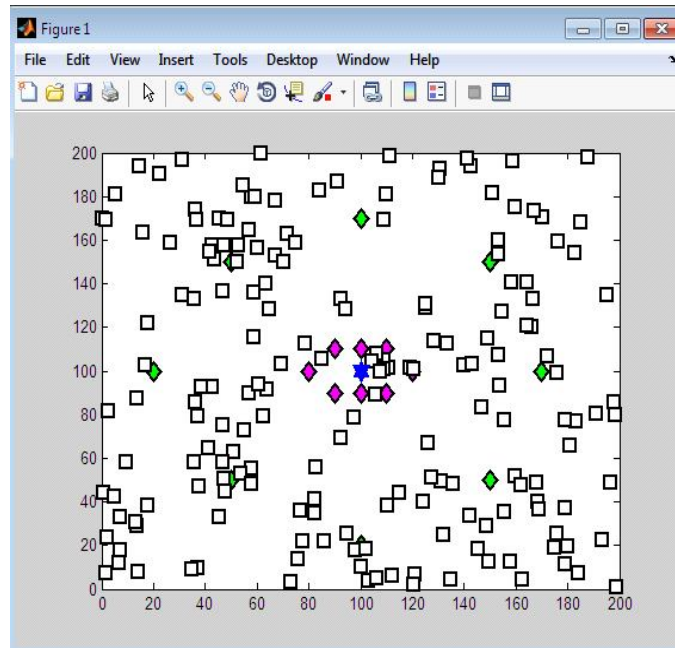

Figure-3: Snapshot of the entire network when 200 nodes are distributed in 200m×200m network.

VII. SIMULATION ENVIRONMENT AND SET UP

In order to analyze the results, MATLAB 2013 a simulator is used for the implementation. In the network scenario 200 nodes are placed in which 8 advanced nodes and 8 super nodes are fixed and rest of the normal nodes are randomly deployed inside the area of 200×200 m^2 .The position of the BS is fixed at (100,100). Nodes are assumed to be dead when their energy parameters value is zero. For the evaluation, the radio energy model is utilized. Results of MSEEC is related with TABU-MSEEC and TABU-GA MSEEC protocol. They are assessed on the basis of these parameters which are mentioned below in table 7.1.

Table-7.1: Simulation Parameter

Parameter	Value
Size of Network	200×200
Position of Base station	100×100
Number of Nodes	200
Probability (p)	0.1
Initial Energy (Eo)	0.5
Energy of the transmiter	50nJ/bit
Energy of the receiver	50nJ/bit
Free space	10nj/bit/m2
Multi-path	0.0013pJ/bit/m4

VIII. RESULTS AND DISCUSSION

On applying TABU and GA search mechanism, the following results are obtained. For simulation, MATLAB 2013 a tool is used for easy computing of results. All results were compared with the basic multi-level protocol which has high energy efficiency and stability. The performance metrics used in the results show that the proposed TABU-GA based multi-level stable and energy efficient clustering protocol is stable for a longer time, has higher energy efficiency and higher throughput when compared to basic multi-level clustering protocols.

Evaluation of MSEEC, TABU M-SEEC and TABU-GA MSEEC in terms of alive nodes

It is number of individual type of nodes and also the aggregate amount of nodes which has not used their entire energy. This measurement demonstrates the entire lifespan of the system. All the more essentially, it provides a portion of the covered area of the system after some time. The FND refers to the initial dead node in the rounds. This parameter gives details as to how stable the protocol exists.
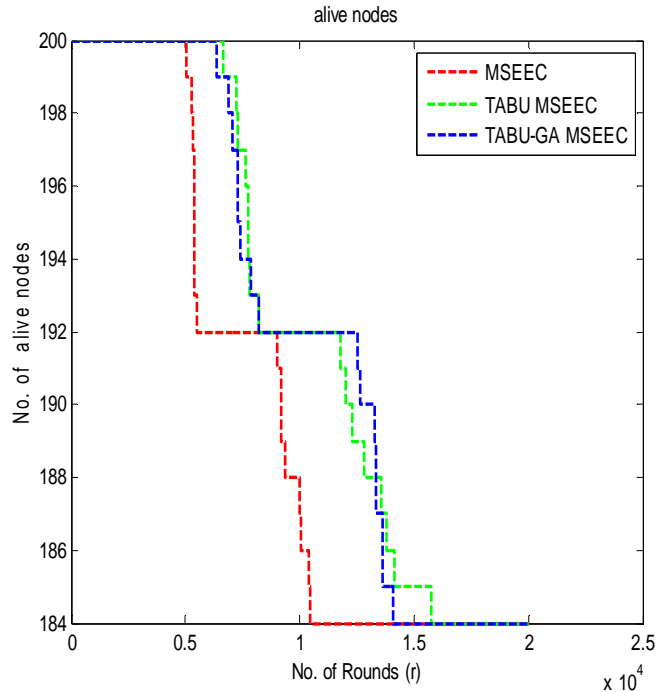
Figure-4: Alive node vs. rounds for 200 nodes in 200×200 network

From the figure 4, it is observed that the value of alive node in case of MSEEC is 11000 and in case of TABU-MSEEC it is 16000 and also in case of TABU-GA MSEEC it is 14000.

Evaluation of MSEEC, TABU M-SEEC and TABU-GA MSEEC in terms of Packet Transferred.

Figure-5: Packet transferred vs. rounds for 200 nodes in 200 × 200 network

From the figure 5, it is observed that the 200 nodes are simulated in a 200 × 200 for MSEEC, TABU-MSEEC and TABU-GA MSEEC protocol. From the figure, it is observed that the value of node dead in case of MSEEC is 11000 and in case of TABU-MSEEC it is 16000 and also in case of TABU-GA MSEEC it is 14000.

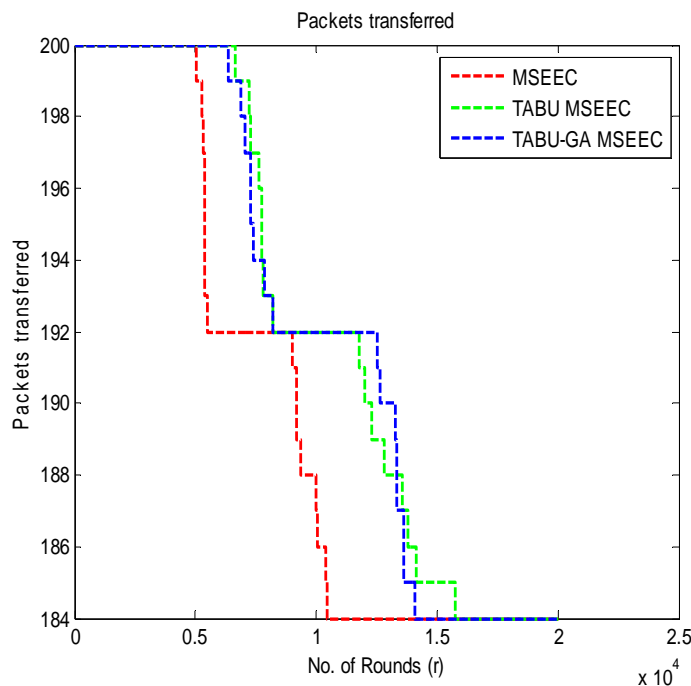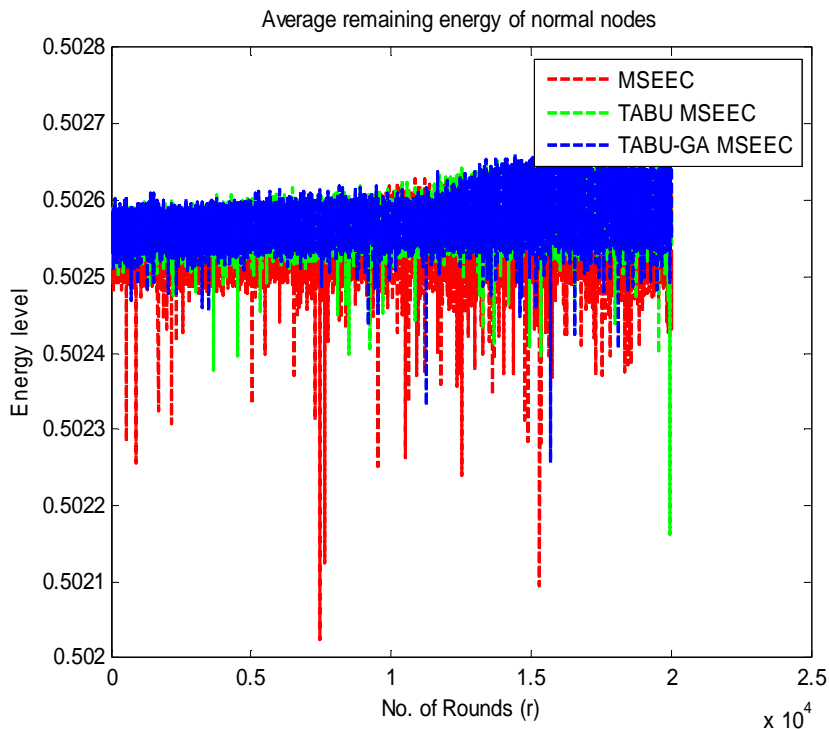**Evaluation of MSEEC, TABU M-SEEC and TABU-GA MSEEC in terms of Average remaining energy**

Figure-6: Average remaining energy vs. rounds for 200 nodes in 200 ×200 network

From the figure 6, it is observed that the 200 nodes are simulated in a 200 × 200 for MSEEC, TABU-MSEEC and TABU-GA MSEEC protocol as seen in figure 3. From the figure, it is observed that the value of average remaining energy in case of MSEEC is 0.5025 and in case of TABU-MSEEC it is 0.5050 and also in case of TABU-GA MSEEC it is 0.5026 which is more than that of MSEEC and TABU-MSEEC.

IX. CONCLUSION

Grouping a sensor network into various autonomous clusters utilizing a GA and routing through tabu, can incredibly minimize the communication distances, thus prolonging the network lifetime. The presented scheme chooses effective CHs, optimizing the routing as well as increment the lifespan of the network. The proposed system selects efficient CHs, optimization of routing and increase the network lifetime. The proposed TABU-GA MSEEC techniques having more energy remain than that of MSEEC and TABU-MSEEC protocol.

In near future the work can be extended with firefly and other optimization techniques.

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BRITISH COLONIALISM IN INDIA: AN OVERVIEW

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ABSTRACT

As defined by Webster's Encyclopaedic (Unabridged Dictionary of the English Language, 1989, p. 291), "Colonialism is the policy of a nation seeking to extend or retain its authority over other people or territories,.[1]" The British Raj did it around the all part of the world. Hence, people quoted it as there was no Sunset in British Raj as they were ruling the whole world. India was also one of these Nation Where more than 150 years British Raj was there. It was in between the period from 1858 to 1947. Various studies were conducted on colonist period of India and even world by British. There are arguments also about the British Government ruled to India. Many says they developed India on the other side many viewed as they made India Economically weak as before them India was very Rich Nation. British entered in India through Trade entitled as East India Company and slowly with divide and rule started to rule on India. For European Countries, Vasco-Da-Gama discovered India. Some European states established their own empires during the European colonial period around to the 15th century some European states established their own empires during the European colonial period. The Belgian, British, Danish, Dutch, French, Portuguese, Russian, Spanish and Swedish territories recognised colonies across large areas. Before these colonies, major part of India was ruled by Mughals. Few part was divided by regional rulers. After colonies, India started to unify themselves and fight against them. The revolution 1857 was the one of major and prior struggle against these Colonies. The major part of India was covered by British Colonies. They developed various sectors of India during their colonial period on one side on the other side they damaged India economy, they gave worst treatment to Indians than animal. It needs to study on the effect of British Colonial to India. Hence, Current research work deals with British Colonialism in India.

Keywords: British, Colonialism, Government, India, freedom fighter, rulers etc.

INTRODUCTION

Pre-colonial period, India was divided into small-small parts of Geography, religions, culture and casts. Inside disputes were there amongst these various rulers of India. Moreover, most of the part was covered by Mughal Empires in India where Hindus were treated badly. Though India is the Nation of Multi-religions, Multi-culture, we can rule them by divided into these differentiate part- this point was noted by British colonies and they got success to rule India around 190 years. The concept of colonialism is defined by Osterhammel, Jürgen as "Colonialism is a relationship between an indigenous (or forcibly imported) majority and a minority of foreign invaders. The fundamental decisions affecting the lives of the colonized people are made and implemented by the colonial rulers in pursuit of interests that are often defined in a distant metropolis. Rejecting cultural compromises with the colonized population, the colonizers are convinced of their own superiority and their ordained mandate to rule.[2]" European colonizing countries followed policies of mercantilism, so as to strengthen the house economy, therefore agreements typically restricted the colonies to mercantilism solely with the metropole or mother country. However, by the mid-19th century, Indian Empire gave up mercantilism and trade restrictions and adopted the principle of trade, with few restrictions or tariffs. Christian missionaries were active in much all of the colonies as a result of the Colonialists were Christians. Scholarly person prince Hoffman calculated that by 1800, before the commercial Revolution, Europeans already controlled a minimum of thirty fifth of the world, and by 1914, they gained management of eighty four within the aftermath of war II, the prototypal European colonial system much terminated from1945 to 1975.

India was colonized by various countries at initial stage and later whole India was ruled and controlled by British Government. Following table shows the Indian colonies:

Sr. No.	Colonies Nations	Period
01	Dutch India	1605-1825
02	Danish India	1620–1869
03	French India	1668–1954
04	Casa da Índia	1434–1833
05	Portuguese East India Company	1628–1633
06	East India Company	1612–1757
07	Company rule in India	1757–1858

08	British Raj	1858–1947
09	British rule in Burma	1824–1948
10	Princely states	1721–1949
11	Partition of India	1947

Table-1.1: Indian Colonies

Table 1.1 shows the various colonies who tried to rule India. As mentioned earlier, British colonies Rules for lone time more than 150 to 190 years to India. They has direct or indirect control on India before the 19th Century. Ramesh, Randeep cited on it as "In 1857, a local rebellion by an army of sepoys escalated into the Rebellion of 1857, which took six months to suppress with heavy loss of life on both sides, although the loss of British lives is in the range of a few thousand, the loss on the Indian side was in the hundreds of thousands.[3]" Though it was huge loss of life and battle both of India, it was the first rebellion movement of India against British Colonialization. Tatya Tope, Jansi's Rani Laxmibai started this rebellion and created the awareness of patriotism amongst Indians. Hence, the rebellion 1857 has a vital role in Indian rebellion against British Colonialization.

INDIA BEFORE PRE-COLONIAL

India was called as the Golden Eagle Period before the Colonies. Pre-colonialization, it had a self-sufficient and flourished economy. Because of the nice skill of craftsmanship in the fields of cotton and silk textiles, metal and precious stone works etc., India had already established itself on the world map with a decent amount of exports. This well-developed handicraft industrial development of India was paralyzed by the colonies, especially British Colonies.

India –After Colonial: The British came to Republic of India with the motive of constitution. Their plans concerned victimization Republic of India as a feeder colony for his or her own flourishing economy back at Great Britain which India was having based on their handicraft export at huge level world-wide. This exploitation of British was continued for two centuries, until we have a tendency to finally got independence on fifteen August 1947. Therefore, this rendered our country's economy hollow. Hence, a study of this relationship between the colonizers and its colony is vital to know the current developments and future prospects of Republic of India.

The colonial rule is marked with periods of serious exploitation. Nation took steps that ensured development and promotion of the interests of their home country. They were not in the approach to be involved regarding the course of Indian economy. Such steps reworked our economy for the worse. It is quite natural that it effectively became a provider of raw materials and a client of finished merchandise.

The colonial kings robbed Republic of India of education, opportunities etc. reducing Indians to mere servants. Beyond question, they were never the part of try to estimate colonial India's national and per capita financial gain. Although the results were inconsistent, India's growth of mixture real output was but a pair of within the first half of the 20th century including a half PC growth in per capita output annually. By and enormous, Republic of India long-faced a herculean task to endure the blows that of two centuries of colonial rule landed on its economy.

CROP FAILURE AND REBELLION AGAINST BRITISH COLONIALIZATION

In the 19th century, during the British Raj, India faced a series of crop failure which resulted into widespread starvations in which at least 10 million people died. The East India Company had already begun to concern itself with famine prevention during the early colonial period as a part of responding to earlier famines as threats to the stability of colonial rule. The strict rules of tax paid against crop converted into the opposition of British Raj and slowly significant reform movement transformed gradually into the Indian Independence Movement. Under the leadership of Mahatma Gandhi 'home-rule movement' was transformed into mass movement of Indian Freedom Struggle. Not only Gandhi but also Bagha Jatin, Khudiram Bose, Bhagat Singh, Chandrashekar Azad, Surya Sen, Subhas Chandra Bose, and Pradyumn Ananth Pendyala were rebellions against the use of violence to oppose the British rule.

Effect of British Colonization on Indian Children: As stated above, the effect of colonialization was found on the rural life of India due to Crop failure serous of 19th Century, same negative result was found of the Colonial governments on the lives of native children's, significantly in rural areas. There had been some tries to manage what imperial authorities thought to be abuses such as an instance, colonial officers frowned on marriages that were shrunken for young women, though they didn't sometimes press their considerations terribly smartly whereas colonial officers typically criticized "natives" for operating youngsters too laborious, the colonial economy sometimes relied on continued kid labour, thus there was very little modification.

Gradually, colonial administrations did introduce some new instructional opportunities, supplemented typically by missionary efforts. Thus, some youngsters were exposed to formal schooling, that in some cases force them off from family traditions and into new contact with Western values. Colleges for ladies may additionally influence socialization for women's roles, once more actuation off from tradition. Instructional opportunities were restricted, however, therefore the impact of this facet of victimization was solely felt bit- by- bit

Education in British Colonial Period: As stated earlier, India suffered a lot in the period of British Colonial period. They made paralyzed to India Economy on one side but developed modern education system to Indian Education. Modern and developed education system of current era is the outcome of British Colonial Education System. The famous Macaulay's minute of dated February 1835, had introduced English education in India, especially to create the group of people who would work as the link group between rulers and Indians. In other words, he called for an educational system that would create a class of anglicized Indians who would serve as cultural intermediaries between the British and the Indians. On the subject of education for the nobility Joseph Prabhu writes: "Outside the religious framework, kings and princes were educated in the arts and sciences related to government: politics- danda-nıti, economics-vartta, philosophy-anvıksiki, and historical traditions-itihasa.[4]"

Economy under British Raj: There are several disputes in respects to Economic development of India under the British Colonialization because the problem was raised by British Whig politician statesman United Nations agency in 1778 and began to continue with a seven-year official document trial against Warren Hastings and therefore the Malay Archipelago Company on charges together with management of the Indian economy. Rajat Kanta Ray Scholar student argues the economy established by British people within the eighteenth century was a variety of plunder and a catastrophe for the standard economy of Mughal Bharat, depleting food and cash stocks and imposing high taxes that helped cause the famine of 1770, that killed a third of the individuals of Bengal. He additionally argues that British people increased the realm of irrigated land by an element of eight, contrastive with five-hitter below the Mughals. According to British economist Angus Maddison, India's share of the world economy went from 24.4% in 1700 to 4.2% in 1950. India's GDP (PPP) per capita was stagnant during the Mughal Empire and began to decline prior to the onset of British rule.[5],"

Development under British Colonial Period: India was the golden eagle pre-colonial period, its true but there was not technical and advance growth in many sectors of easy life- such as transportation, irrigation, education was with traditional method of Gurukul etc. They developed heavily in infrastructure, together with canals and irrigation systems additionally to railways, telegraphy, roads and ports. The river Canal reached 350 miles from Haridwar to Cawnpore, and equipped thousands of miles of distribution canals. By 1900 the dominion had the biggest irrigation system within the world. One success story was province, a jungle in 1840 that by 1900 had 4,000,000 acres underneath cultivation, particularly in tea plantations. In all, the quantity of irrigated land increased by an element of eight.

British engineering developed a contemporary railway line within the late nineteenth century. Though it was for their easy transportation of raw-material in their nation after colonialization, it became the major economic and technical growth part of India. Later, it became the then fourth largest within the world and was noted for quality of construction and repairing. All the funding and management came from non-public British firms. The railways initially were in camera owned and operated, and go by British directors, engineers and arch craftsmen. At first, solely the unskilled employees were Indians.

In 1832, a plan for a rail system in Asian country was 1st proposes. Accordingly in 1837 the primary train in Asian country ran from Red Hills to Chintadripet Bridge in Madras. It was absolutely known as Red Hill Railway. It absolutely was used only for freight transport. a number of additional short lines were in-built decade and however they didn't interconnect and were used for freight transport solely. The East India Company which became later the colonial government inspired new railway firms backed by non-public investors beneath a theme that will offer land Associate in tending guarantee of an annual come back of up to five per capita throughout the initial years of operation. These businesses were to make and operate the lines under the ninety-nine year lease, with the govt. having the choice to shop for them earlier. In 1854, Governor-General Lord Dalhousie developed a concept to construct a network of trunk lines connecting the principal regions of Asian country which is inspired by the government guarantees, investment flowed in and a series of recent rail firms were established, resulting in speedy enlargement of the rail system in Asian country. Most of the trains were constructed and developed under the supervision of British Engineers.

Thus, after the declaration of Macaulay's minute in 1835, British colonies started to create the link group between them and natives of India. They made availability of various facilities for their comfort which later

became the part of India growth in Technical era. There were different views and followers of British Raj and Indian Freedom Movement. Even Subrito Baghci explained his own family experience as his father was the follower of British Raj while his Mother worked with and under the influence of Netaji Subash Chandra Bose.

The Freedom fighting movement of Indian patriotic got success to throw out of India to the British Colonial yet there are few things that needs to note here under this study as what the benefits are and what the drawbacks of British colonial to India are. This is described in the below table 1.3

Benefits and Drawbacks of British Colonialization: Following table explains few benefits and drawbacks of British Colonialization.

Sr No.	Benefits	Drawbacks
01	Modern goods	The British controlled the government / economy
02	Modern transportation	Indians were seen as "half" citizens
03	Education increases	Hurt to Hinduism via seals on gun cartridges
04	Health care increases	Divisions between Hindu & Muslims
05	Protection	

Table-1.2: British Colonial- benefits and drawbacks

As shown in the above table 1.2, benefits and drawbacks of British colonialization has been explained. That was the period when British ruled ¾ part of the world. India was one of them. They made India weekend in the form of Economy which we are still facing as a part of trouble, while they developed various sectors of India in the form of technical development. Hence there are arguments about British Colonialization and Indian growth. About British colonies R. O. Christensen rightly pointed out as, (1996) "Colonial purpose, local needs, capital, service, and private-versus-public interests. He concludes that making the railways a creature of the state hindered success because railway expenses had to go through the same time-consuming and political budgeting process as did all other state expenses. Railway costs could therefore not be tailored to the timely needs of the railways or their passengers [6]."

CONCLUSION

Thus, British Colonial was thrown out of India in 1947 but with the due loss of partition of India into India and Pakistan. Indian congress and Muslim got success for the independent Nation but failed to have the Hindustan. British rulers succeed in their target of dividing Hindustan into two part as India and Pakistan. Moreover, because of their policy still after the independent Nation and that's too more than 65 years we are fighting with each other. This is because of British colonial only. Moreover we can conclude it as the long lasting impact of British colonial in seen on India and Pakistan and their relations with each other's.

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LABOUR MIGRATION TRENDS IN INDIA

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ABSTRACT

This paper explores the migration trends in India. The problem of migration in India is not new rather it's sustaining since the post-colonial. Referred to as "India Diaspora" an estimated as of 2015, 15.6 million people in India are living in other countries. India has been among the world's top origin countries of migrants since the United Nations started tracking migrant's origin in 1990. The number of international Indian migrants has more than doubled over the past 25 years, growing about twice as fast as the world's total migrants. This is a function of flows of unskilled, semi-skilled and skilled labour from India over the last two centuries. Skilled migration to the developed nations of the north became more prominent with the recent 21st-century exodus of the IT workers. In the 21st century, India is one of the top countries where the phenomenon of reverse brain drain has occurred. Earlier, India was well known for being the country where numerous information technology students left for the developed countries mostly for USA, UK and Canada in pursuit of better education and greater employment opportunities. Likewise, the labour migrants are considered as one of the major sources of remittances and swelling Forex reserves.

INTRODUCTION

In today's increasingly interconnected world, international migration has become a reality that touches nearly all corners of the globe, often making distinctions between countries of origin, transit and destination obsolete. Migration of labour to industrialized developed countries of the west remained in the process for a long time but U.K. was the most attracting country for a significant number of Indian engineers, scientists, doctors and technical workers during 1960s when such demand was not met by the local English workers. The migration to North America was started in the early 1950s and the trend remained modest till the middle of 1960s. Moreover, a significant flow of Indian professionals to countries like Australia, Germany, Japan, Malaysia and New Zealand was also noted in 1990. But during 2003, nearly 1.25 million academically and technically qualified experts from India was migrated to USA, Canada, U.K. and Australia. The second trend of labour emigration from India was towards the oil producing 38 rich countries of the Middle East23 during the 1970s. Till the end of the Second World War, the migration of Indians to the Gulf countries was at low scale and there were only 14,000 Indians. But the rapid hike in oil prices during 1973-74 and afterwards brought uneven richness to the Gulf region which laid the foundation of various developmental programs including schools, houses, hospitals, big business establishments, improvement in transportation and communication in the countries of this region. But the local workers were unable to meet the increasing demand in the labour sector because of their low number and inadequate training. Therefore, it paved the way for the entry of technical experts and semi-skilled workers from several countries of Asia including India Therefore, it paved the way for the entry of technical experts and semi-skilled workers from several countries of Asia including India. By the mid of the 1980s, India was the second largest supplier of manpower to these countries as the labour migration from India to the Gulf jumped from only 22,000 in 1971 to 1,55,000 in early 1991. However, this trend was continued only by the end of 1997 and thereafter, the annual flow of Indians to the Gulf started declining slowly. During 1999, there was a steep decline in the number of Gulf going aspirants. This was, of course, largely due to the restriction imposed by Saudi Arabia and the United Arab Emirates (Rahman 2001:26). But later on, it again started increasing with some variations. One stupendous feature of labour migration from India was that over 90% of the migrants made their ways to the Middle East countries. In 2004, the number of workers who were given emigration clearance for contractual employment was 500,000 for the Gulf countries. In 2017 India had the most outward migrants in 2017 (17 million), followed by China (10 million) and Bangladesh (7.5 million) according to the Asian Development Bank.

REVIEW OF LITERATURE

Migration is a very complex phenomena but in terms of India, it is slightly different in India. Due to the very fast growth of population, the number of job seekers are also increasing. We are getting 1 million labour force every month. That's why people get migrated to different countries. And another aspect of migration is education as well.

Empirical Evidence: During the period of 2011 to 2017 we have seen the huge number of migration to the gulf and developed countries. But the number is decreasing to migration to Gulf countries. In 2011 around 630000 labours are migrated to Gulf countries but in 2017 only around 400000. But on the other hand, the migration to

developed countries are increasing very fast not only for the job but also for studies. It also leads the problem of "Brain Drain" which is very popular in India.

Objective:The main objective of this paper is to review and analyse the migration trends in India to other countries in recent years.

Research Methedology: Secondary data has been used.

LABOUR MIGRATION

India is a very popular destination as well as a major country of origin and transit for workers across the world. As per official figures, there are over 30 million Indians overseas, with over 9 million of the Indian diaspora concentrated in the GCC region (Cooperation Council for the Arab State of the Gulf). Over 90% of Indian workers, most of whom are semi-skilled and unskilled workers, work in the Gulf region and South-East Asia. According to data, which is officially available only for workers migrating legally with Emigration Check Required (ECR) passports and to one of the 18 ECR countries. Official data shows 520,938 workers migrated for work legally after completing ECR procedures in 2016, compared to the 784,152 workers who left in 2015. The number for 2017 was 391,024 (emigration clearance obtained via recruitment agents, project employers and direct recruitment. As per the MEA 's Annual Report 2016–17, this drop is explained by the decline in crude oil prices and the resulting economic slowdown in the GCC countries. Official data shows 520,938 workers migrated for work legally after completing ECR procedures in 2016, compared to the 784,152 workers who left in 2015. The number for 2017 was 391,024 (emigration clearance obtained via recruitment agents, project employers and direct recruitment. As per the MEA 's Annual Report 2016–17, this drop is explained by the decline in crude oil prices and the resulting economic slow down in the GCC countries.
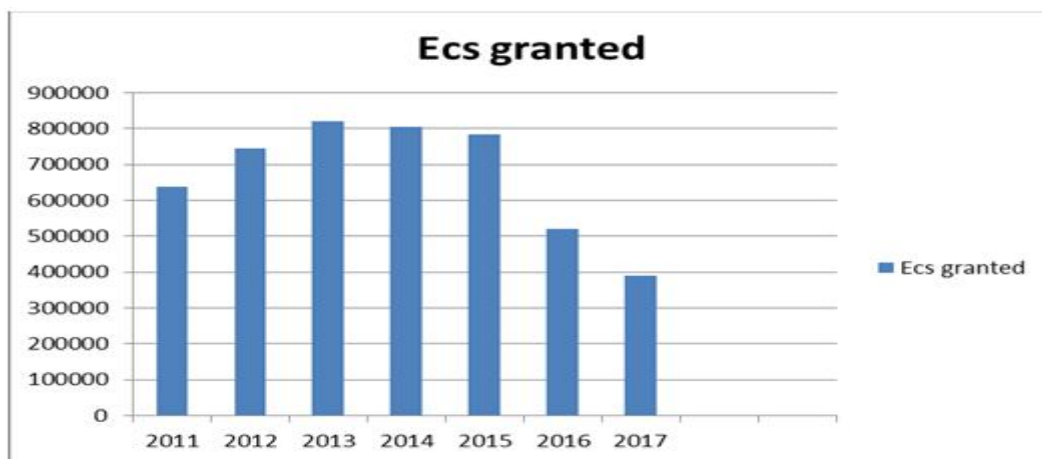
GENDERING MIGRATION FOR WORK FROM INDIA

According to data from the UN Department of Economic and Social Affairs (UNDESA), the Indian migrants stock in GCC countries increased from 2.4 million in 1990 to 6.8 million in 2013, with growth prominent among both male and female migrants in all countries (see table 1 below). The male–female proportion in the total Indian migrant stock has remained more or less the same during the past two decades, with women comprising approximately 23.6 per cent of the total stock. However, official data shows declining numbers of women departing with emigration clearance to Gulf countries.

COUNTRY	MALE(1990)	FEMALE (1990)	TOTAL (1990)	TOTAL MIGRANT STOCK (1990)	MALE (2013)	FEMALE (2013)	TOTAL (2013)	TOTAL MIGRANT STOCK
BAHRAIN	46828	13665	60493	173200	199767	63088	262855	729357
	77.4	22.6	34.9		76	24	36	
KUWAIT	380458	173123	553581	1585280	541143	189415	730558	2028053
	68.7	31.3	34.9		74.1	25.9	36	
OMAN	180878	31678	212556	423572	551885	92819	644704	1112032
	85.1	14.9	50.2		85.6	14.4	58	
QATAR	101233	27914	129147	369816	473069	103707	576776	1600955
	78.4	21.6	34.9		82	18	36.1	
SAUDI ARABIA	652957	328665	981622	4998445	1223522	538335	1761857	9060433
	66.5	33.5	19.6		69.5	30.6	19.5	
UAE	353659	104635	458294	1306574	2224781	627426	2852207	7826981
	77.2	22.8	35.1		78	22	36.4	
TOTAL	1716013	679680	2395693	8856887	5214167	1614790	6828957	22357811

MIGRATION TO DEVELOPED ECONOMIES

Census data reveals that the India-born population in the United Kingdom tripled from 166,000 in 1961 to 470,000 in 2001. It has to be noted, however, that these numbers include white British born in India. Social geographers Ceri Peach and S.W.C. Winchester estimate the number of ethnic Indians in 1961 at 50,000. The ethnic Indian community as of 2007 stood at 1.3 million. In 2001, it counted 1 million members, with one-fifth born in South Africa or an East African country.Being the only major European destination for Indians until the 1990s, the United Kingdom hosted about two-thirds of Europe's ethnic Indian population in 2001. Other countries in Western Europe, and increasingly in Eastern Europe, have also witnessed an influx of Indian migrants.

Between 1995 and 2005, half of the Europe-bound Indian immigrants headed to the United Kingdom. The other half opted for other EU countries, primarily Germany and Italy, which received 18 percent and 12 percent of the flows, respectively. Flows into Belgium and Sweden have also slowly increased since the mid-1990s, and about 1,000 Indians come to France each year. However, the Indian community in France, about 65,000 people, is largely composed of ethnic Indians from Madagascar, the Seychelles, La Reunion, and Mauritius.

In many cases, the increased flow of Indians was triggered by European governments attempts to tap India's highly skilled labor force. For example, Germany's temporary migration scheme, labeled "green card" and in place between 2000 and 2005, deliberately targeted Indian IT professionals. On the other hand, the Indian community in Italy consists largely of formerly illegal migrants, now being regularized. Most of the Indians in Italy are from Punjab and tend to work on dairy farms and in agriculture.Substantial Indian migration to Northern America started only in the late 1960s. Both in the United States and Canada, major changes in immigration policy affected immigration flows generally, and Indian immigration specifically. Substantial Indian migration to Northern America started only in the late 1960s. Both in the United States and Canada, major changes in immigration policy affected immigration flows generally, and Indian immigration specifically

INDIAN COMMUNITY IN UNITED STATES

The Immigration Act of 1990, effective from 1995, facilitated this process further by introducing the H-1B temporary worker category. This visa category allows U.S. businesses to hire foreigners with at least a bachelor's degree in "specialty occupations" including scientists, engineers, and IT specialists. Indian citizens are by far the top recipients of H-1B visas each year. According to the U.S. Department of Homeland Security, from 1986 to 2005, the annual total influx of Indian immigrants more than tripled from 27,000 to 85,000, while the share in total immigration flows rose from 4.4 to 7.4 percent. Indian citizens accounted for 5.7 percent of all persons obtaining lawful permanent resident status in 2008. According to the U.S. Department of Homeland Security, from 1986 to 2005, the annual total influx of Indian immigrants more than tripled from 27,000 to 85,000, while the share in total immigration flows rose from 4.4 to 7.4 percent. Indian citizens accounted for 5.7 percent of all persons obtaining lawful permanent resident status in 2008. In 2007, India received one-third or 158,000 of all H-1B visas (including new visas and renewals). The second largest number went to Canadian citizens, accounting for 26,000 visas only.India's domination of computer-trained temporary workers is mainly attributed to the large supply pool in India and to the fact that prior waves of Indian IT workers had successfully established a significant presence in that industry.As in the United States, significant immigration flows of Indians to Canada were triggered by new immigration legislation that opened the door to high-skilled immigrants. In 1968, Canada introduced its points system, which assigns value to qualifications rather than a person's ethnic or national background.

By the 2006 census, Canada was home to 443,690 Indian foreign born, or 7.2 percent of all immigrants. The ethnic Indian community of 963,000 includes those born in Canada, as well as in East Africa, Guyana, Fiji, and Trinidad.According to Statistics Canada, one-quarter of adult ethnic Indians were university graduates in 2001, better than the overall population. Also, 8 percent of all workers of Indian origin were employed in the natural and applied sciences compared with 6 percent of the total workforce.However, 13 percent of the Indian labor force held manufacturing jobs, and the average income of Canadians of Indian origin was about 10 percent less than the corresponding national figure.Since the 1990s, Australia and New Zealand have become important destination countries for Indians. Australia had 147,101 foreign born from India according to the 2006 census, 3.3 percent of all immigrants and the third-largest group from Asia, after the foreign born from China and Vietnam. From 1999 to 2007, the number of admitted immigrants from India grew 25 percent each year.In New Zealand, the Indian-born population nearly doubled from 6,500 in 1986 to 12,800 in 1996, more than tripling by the 2006 census to 43,300 (4.9 percent of all immigrants).Three factors can account for the increase in Indian immigration to Australia and New Zealand. First, both countries aim to attract English-speaking, highly qualified professionals, often to supply their IT industries.Second, Australia and New Zealand have become

important destinations for Indian students who, upon graduation, increasingly decide to stay on. This has been facilitated by Australian policies since 1998; these policies allow them to change their status without having to leave the country.

MIGRATION, SKILLS AND EMPLOYMENT IN INDIA

In the overall proportion of informal workers in total employment (e.g., unorganized sector workers plus informal workers in the organized sector) has remained relatively stable, at around 92 per cent. Hence, a majority of the Indian workforce deals with some level of informality in their employment. Coupled with a national unemployment rate of 3.4 per cent in 2017–18, the opportunities to find formal employment with decent wages and job security are restricted. In such a scenario, emigration for work with a formal contract and better wages are major motivation to leave.. Saudi Arabia features as the most popular destination, hosting over 2.5 million workers in 2016. ECR flows might be a very small proportion of the total labour force in India but in comparison with the annual addition to the labour force in the past two decades (at an average of 7 million to 8 million workers per year), the labour outfl ow figures are quite heavy, and foreign employment destinations have acted as a crucial safety valve for the Indian labour market. This is particularly important given that the country's employment growth has been much lower in recent years, with some states being more adversely affected than others.

Students Migration
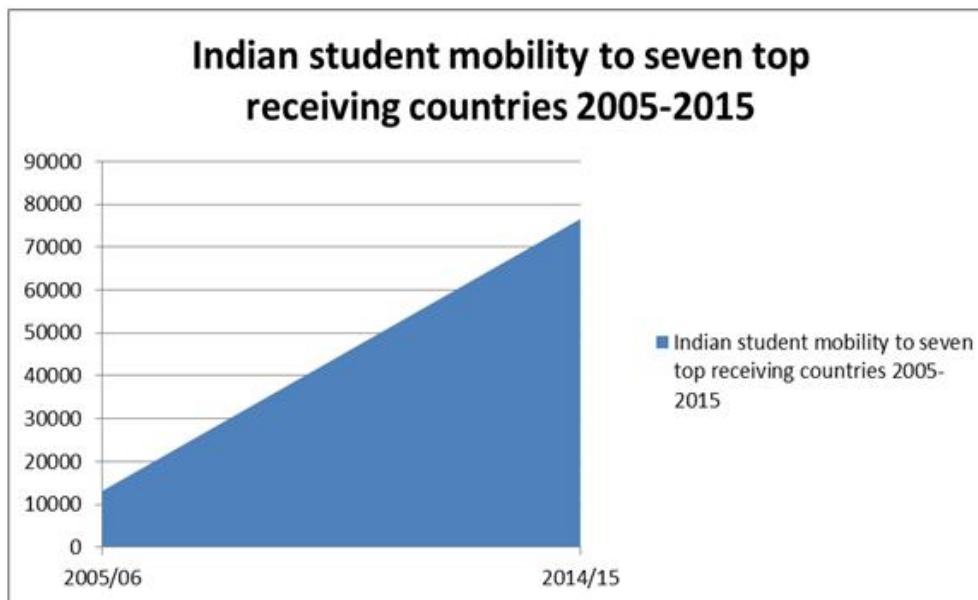
Indian Indian is the 2nd most student sender in the world. **The broad story of outbound mobility from India between 2005/2006 and 2014/2015** is one of growth. According to data from a number of sources, seven top and emerging destination countries – including the United States, Canada, the U.K., Australia, China, New Zealand, and Germany – collectively saw Indian enrollments rise 103 percent, from 138,388 to 281,160.

- In 2005/06, 138,388 Indian students enrolled in today's top seven destinations. Among those:
    - 55 percent enrolled in the U.S. (76,503)
    - 5 percent in Canada (7,456)
    - 17 percent Australia (23,849)
    - 14 percent in the U.K. (19,228)
    - 4 percent enrolled in China (5,634)
    - 2 percent enrolled in New Zealand (2,135)
    - 3 percent enrolled in Germany (3,583)
- By 2014/15, 281,160 Indian students enrolled in today's top seven destinations. Among those:
    - 47 percent enrolled in the U.S. (132,888)
    - 17 percent in Canada (48,633)

- o 13 percent Australia (35,380)

- o 7 percent in the U.K. (19,485)

- o 6 percent enrolled in China (16,694)

- o 6 percent enrolled in New Zealand (16,325)

- o 4 percent enrolled in Germany (11,655)

CANADA: 6.5X GROWTH, FROM 7,456 TO 48,633 INDIAN STUDENTS IN A DECADE

AUSTRALIA: 1.5X GROWTH, FROM 23,849 TO 35,380 INDIAN STUDENTS IN A DECADE
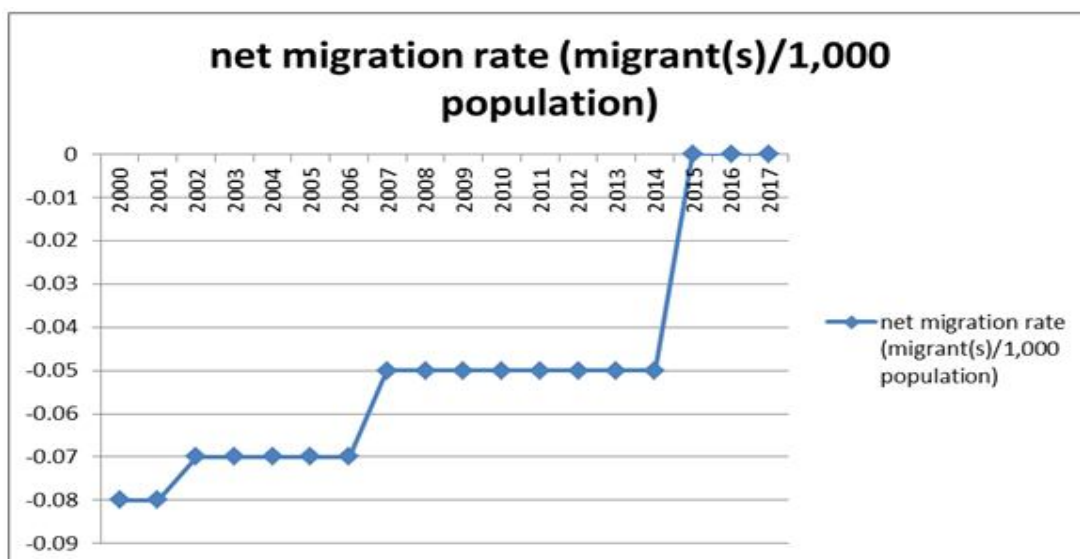
THE UNITED KINGDOM: A ROLLER COASTER: FROM 19,228 TO 39,090 TO 19,485 INDIAN STUDENTS IN A DECADE

NEW ZEALAND: 7.6X GROWTH, FROM 2,135 TO 16,325 INDIAN STUDENTS IN A DECADE

GERMANY: 3.3X GROWTH, FROM 3,583 TO 11,655 INDIAN STUDENTS

CHINA: 3X GROWTH, FROM 5,634 TO 16,694 INDIAN STUDENTS IN A DECADE.

India Net migration rate in India: 0 migrant(s)/1,000 population according to 2017 data.

This entry includes the figure for the difference between the number of persons entering and leaving a country during the year per 1,000 persons (based on midyear population). An excess of persons entering the country is referred to as net immigration (e.g., 3.56 migrants/1,000 population); an excess of persons leaving the country as net emigration (e.g., -9.26 migrants/1,000 population). The net migration rate indicates the contribution of migration to the overall level of population change. The net migration rate does not distinguish between economic migrants, refugees, and other types of migrants nor does it distinguish between lawful migrants and undocumented migrants.

Discussion:

Whenever we talked about migration in India we always keep in mind that mostly it would due to the job. In India, the population is increasing and labour force is also in increasing at a very fast rate. Every month about 1 million labourers are adding in labour force. And another aspect of migration trend in is popular due to study "student migration". But the popular migration trend is because of the lack of jobs. So the important thing is, we need better infrastructure. We need to develop our infrastructure first then we can seriously need to take care of the job creation because if you want to develop our economy so firstly we need to huge development of basic infrastructure. India desperately need infrastructure development.

SPECIFIC RECOMMENDATIONS FROM THE STUDY

1. India desperatilay needs infrastructure based reforms.

2. Government needs to increase the number of world class universities.

3. Government needs to focus on issues of safty specialy for womens.

CONCLUSION

India is facing the huge problem of brain drain to the high migration trend. An estimated were 17 million Indians are living in abroad in 2017 and making India largest source of international migrants. The issue of migration in India is still increasing at a very rate but we do not have a policy related to this which can help us to slow down this rate. The migration in India is very popular for jobs, people get migrated mostly for the job not only go abroad, within the countries as well. The states like UP, Bihar, Orissa and many of them have the same issue of the job. The government is not able to generate the number of jobs which can employ the whole labour force. Another migration is due to education. We have seen the lack of higher education system and world-class education system students get migrated to abroad and most of the time they not came back which leads to the problems of brain drain. The problem of brain drain is very common in the field of IT workers.

We have seen the migration trends in 90's very popular to Gulf countries but in the last decade, the trend went to developed countries. We need to focus on the issue of the skilled labours migration because it leads to the problem of "brain drain". Although it helps our country collect foreign reserves and also helping the development of the economy.

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CAUSES OF MIGRATION IN INDIA: PUSH OR PULL?

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ABSTRACT

Rise in the trend of migration is an increasing concern of India, which is thereby leading to the growth of urban population. Urban areas contribute more than 65 percent to India's GDP, plus the 8%-9%GDP growth experienced by the nation in the last decade is majorly dependent on urban areas. Using the factor analysis approach, the study analyzed the possible determinants that may lead to interstate or rural to urban migration. Delhi as a city, excluding the rest of the NCR has the largest proportion of in-migrants to total population.

Migration being the global phenomenon, caused not only by the economic factors, but also having social, political, environmental and cultural factors as its roots take place because of the push factors that compel a person to leave a place and go to some comparatively developed place and also because of the pull factors which leads the person to come to an area. The purpose of the research is to investigate whether the factors which are mainly responsible for the hike in interstate migration are more likely to be pushed (out of the rural areas) or pulled (into the urban areas due to more development) using various models.

INTRODUCTION

An ideal society should be mobile, should be full of channels for conveying a

Change takes place in one part to other parts.

– Dr. B.R. Ambedkar

DEFINITION

Internal Migration refers to interstate or inter-district migration within the territories of India. Internal migrants constitute roughly about one third of India's population. The issue is related to Article 19 which gives the right to all citizens to "to move freely throughout the territory of India". Its advantage is socioeconomic mobility, but its adverse impacts are larger than an advantage.

In a large country like India, the study of movement of population in different parts of the country helps in understanding the dynamics of the society better. At this point in the economic development, in the country, especially when most of the states are undergoing faster economic development, particularly in the fields of manufacturing, information technology or service sectors, migration of population has become more important.

When a person is marked in census at a different place than his/her place of birth, he/she is considered as a migrant. In the five years ended 2016, an average of nine million people migrated between states every year for either education or work, according to economic survey 2016-17. That is almost double the interstate migration recorded in 2001-2011 and captured by census 2011. As per its estimates the total inter-state migration went up to 191% in the decade 2001-2011 compared to the previous decade.

More than half of the world population has started living in the urban areas. The urbanization pattern in India has been undergoing significant change. The urban population is expected to increase to about 40% of total population by 2021(ministry of urban employment and poverty alleviation and ministry of urban development, government of India 2005) .The migration data on 2001 Census indicate that 20.5 million people enumerated in urban areas are migrants from rural areas who moved in within the last 10 years. It may also be worth noting that rural-urban migration constitutes a significant component of interstate migration (about 41.1 million as of 2001) taking place within the country.

Uneven economic development, inter-regional disparity and differences in living standards between socioeconomic groups are some of the important reasons responsible for migration. Avenues of better employment and higher wages serve as pull factors, whereas non-availability of employment opportunities in backward regions, draught and scarcity conditions are push factors.

A large part of migrated population, particularly in large and metropolitan cities lives in marginal settlements, slums and squatter areas with limited infrastructure services threatening health, environmental degradation of urban areas, traffic and other problems of urban areas. The paper is an attempt to understand the concept of migration, its causes and consequences in India.

REVIEW OF LITERATURE

Most of the literature on rural- urban migration builds on the work of Harris-Todaro model (1970), CMM (cohort based migration model) and on gravity regression model for migration. Hence mostly focus on the pull factors with a few studies focusing on push factors.

Sir Banerjee and Kanbur (1981) used a probabilistic migration model to examine internal migration in India and presented evidence that migration tends first to rise and then falls as rural income rises and thereby focused on the push factors.

Bird and Deshingkar (2009) explore circular migration in India, the policy response and the impact of the policy response to the welfare of migrants and more broadly on regional inequality.6 They find that circular migration rates are higher in remote rural areas, particularly amongst the chronically poor.

Mitra and Murayama (2008) analyze the district level rural to urban migration rates of males and females separately for the states like Maharashtra and Gujrat.

It is interesting to note from the migration literature that while Todaro's model has been extensively studied, adequate distinction has not been made regarding push versus pull factors in migration, especially so at the city level in India. We need focus on both for balanced development of rural and urban areas.

OBJECTIVE

Migration is a very common feature in this growing trend of globalization. This paper is an attempt to examine whether it is push factors or pull factors which explains migration.

RESEARCH METHODOLOGY

The study is purely based on secondary data which is collected from trusted sources like professional magazines, reference books, journals and published reports by UNESCO, World Bank, MHRD etc.

DISCUSSION

The number of migrants in India is large, as per the 2011 Census; there were **453.6** million Indians who were migrants. However, the vast majority of this is intra-state migration, which tends to cause little political friction. Inter-state migration in India, however, is small. As per Census 2001 data, inter-state migration accounted for only **13%** of India's total migrant numbers.

Using population data from the 2011 Census, the 2017 economic survey estimated net migration into and from a state. As per its estimates, the total inter-state migration went up by **191%** in the decade (2001-2011). This could be the result of several factors – agrarian distress, increased urbanization, better communication technology.

Karnataka went from a net exporter of migrants to a net importer, with a migrant population approximately the same as Gujarat's – where migrant numbers went up nearly five times in 2001-2011 compared to the 1991-2001 decade. Tamil Nadu saw its migrant population explode by 39 times and saw the highest number of migrants move to the state in the 2001-2011 decade.

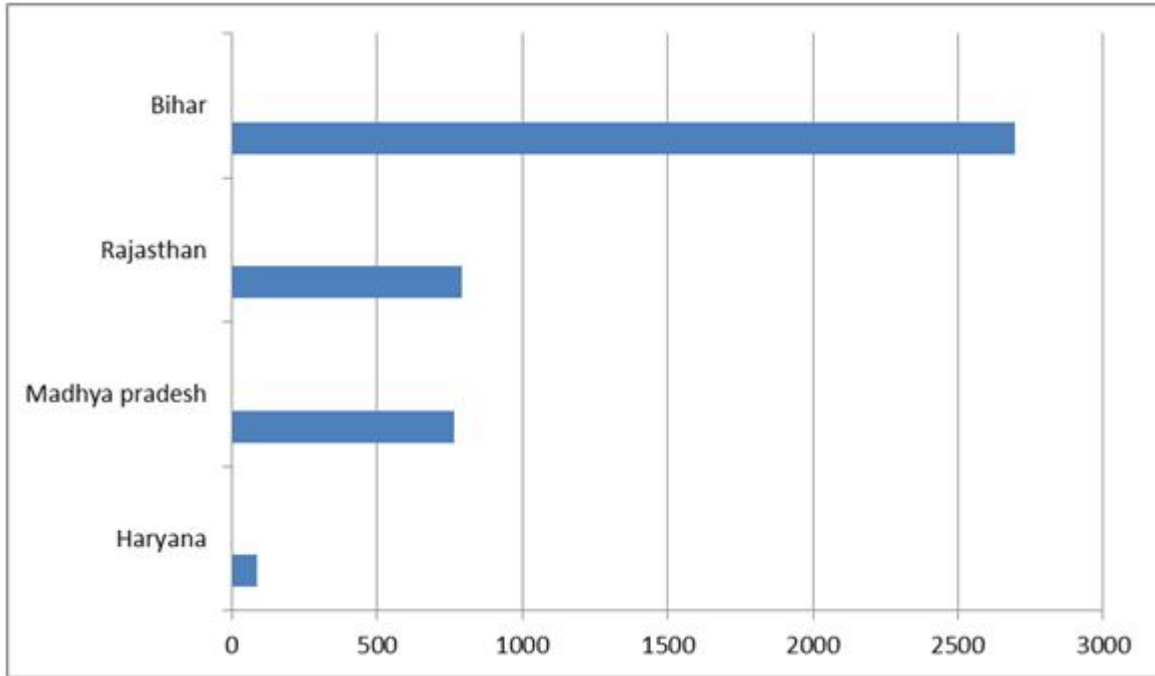Likewise, outmigration from Uttar Pradesh went up by **197%** and from Bihar by **237%**
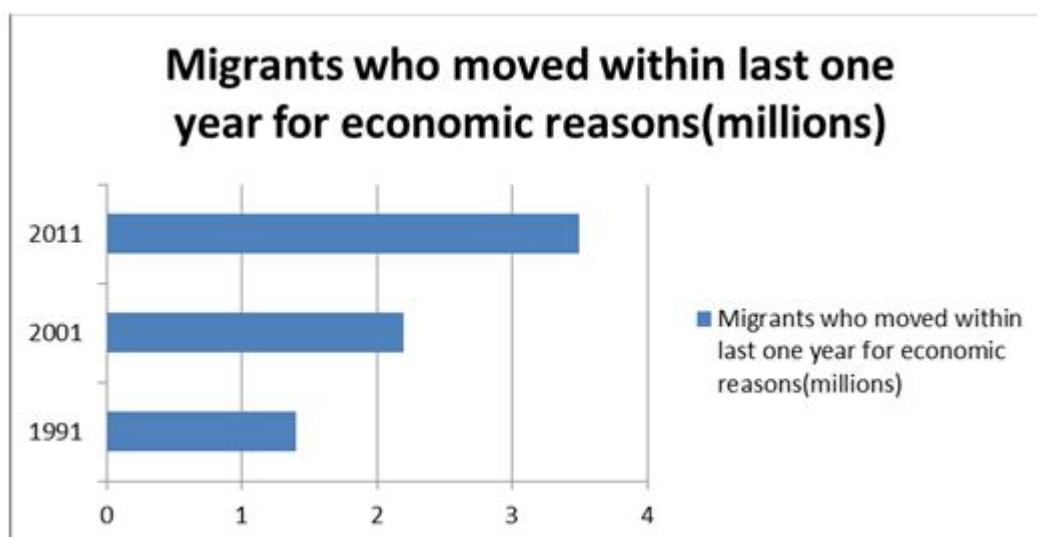
Source: census of India, economic survey 2017.

Migrants leaving the state have gone up by a whopping **461%** in the 2001-2011 decade as compared to 1991-2001.

Net outmigration in the 20-29 age group

(2001-2011) ('000)

Source: census of India, economic survey 2017

Average net flows at state level: (economic survey 2017)

This figure shows the net flows for the 26 states. Positive (negative) numbers denote in (out)-migration. The largest recipient was the Delhi region, which accounted for more than half of migration in 2015-16, while Uttar Pradesh and Bihar taken together account for half of total out-migrants. Maharashtra, Goa and Tamil Nadu had major net in-migration, while Jharkhand and Madhya Pradesh had major net out-migration
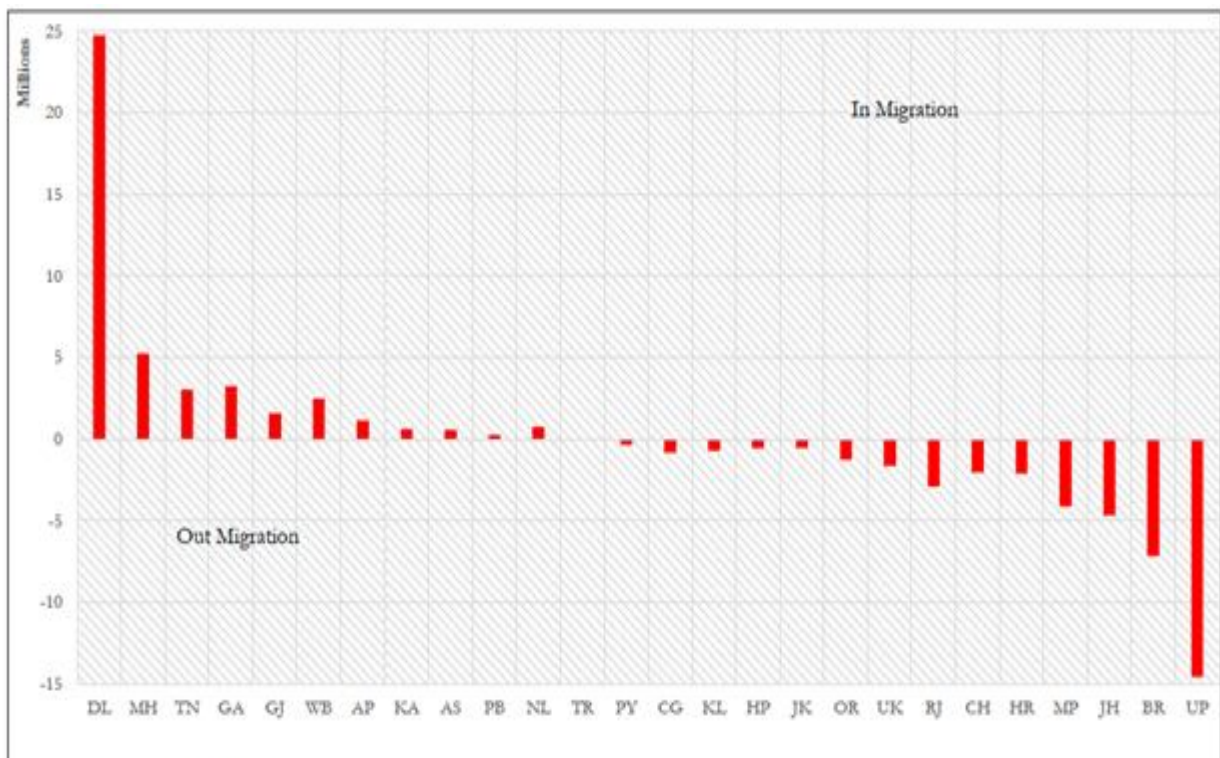
Source: Survey Calculations

FACTORS

'Pull' and 'Push' Factors: Two principle factors- push and pull are responsible for migration. The push factors are poverty, lack of work opportunities, unemployment and underdevelopment, poor economic condition, lack of opportunities, exhaustion of natural resources and natural calamities, scarcity of cultivated land, inequitable land distribution, low agricultural productivity etc.

Pull factors attract migrant to an area (area of destination), like, employment and higher education opportunities, higher wages facilities, better working condition. Millions of people migrated from their far-off villages to the big cities of Kolkata, Mumbai or Delhi. The appalling living conditions like slums, lack of safe water, absence of sanitation, overcrowding with the attendant increase in crime, insecurity for women, sexual abuse and exposure to frequent epidemics and AIDs are the immediate outcome of this population shift.

CAUSES OF MIGRATION

Urbanization: Urbanization has been a major driver of internal migration. Rates of urbanization influence rural- urban wage differences. An increase in the demand for labor in urban areas can attract urban wages and increase migration. The pull factors of better job facilities, good salary, and more income, medical and educational facilities are attracting the rural people to move to the cities. The **push factors** of no job facilities, low salary, less income, drought, less medical and education compel people towards cities.

Marriage: Marriage is a very important social factor of migration. Every girl has to migrate to her in-law's place of residence. Thus, the entire female population of India has to migrate over short or long distance. About 49.35 the percent people shifted their residence after marriage in 2011.it is one of the pull factors.

Employment

People migrate in large number from rural to urban areas in search of employment in industries, trade, transport and services. The rural areas do not provide employment to all the people living there. Even the small-scale and cottage industries of the villages fail to provide employment to the entire rural community. About 10.22 per cent of migrants migrated for employment in 2011.it is also a pull factor on the other hand unemployment is a push factor.

Education

Due to lack of educational facilities in rural areas, people migrate to the urban areas for higher education. Many of them settle down in the cities for earning a livelihood after completing their education. In 2011 census, about 1.77 percent people migrated for education.

Lack of Security

Political disturbances and interethnic conflicts drive people away from their homes. Large number of people have migrated out of Jammu and Kashmir and Assam during the last due to disturbed conditions there. People also migrate on a short-term basis in search of better opportunities for recreation, health care facilities etc.

India: Migration by reason 2001-2011

	2001(%)	2011(%)
Work/ Employment	14.70	10.22
Business	1.20	0.96
Education	3.00	1.77
Marriage	43.80	49.35
Moved after birth	6.70	10.57
Moved with the household	21.00	15.39
Other reason	9.70	11.74

Source: Census of India, 2011.

Impacts of migration

Migration affects both the area of origin of migration and the areas of destination of the migrant population. The consequences of migration are explained below.

1. **Demographic consequences**: Migration changes the characteristics of the population in regions of out migration and regions of in- migration. It changes age and sex composition of population with rate of growth of population. The proportion of old, children and females increases due to out- migration in source region. The high sex ratio is found in the source areas because mostly the youthful male population is involved in migration. Consequently, these areas are depleted of the youth population and results in lowered rates of births and lower population growth rates.

2. Economic consequences: Migration changes the resource-population ratio. If the people are moving from an over populated area to an area of under population the result is in the balancing of the resource- population ratio. If the migration is from an area of under population to over population or optimal populated, the results are harmful to both the areas. Migration affects the occupational structure of the population. The population of receiving areas becomes more productive , causing the dependency ratio in the source areas. Brain drain is another consequence of migration. Skilled people migrate from poorer countries to developed countries in search of better economic opportunities. People migrating out send remittance to their families at home and add to economic prosperity

3. Social consequences: Migration results in intermixing of diverse cultures and leads to the evolution of composite culture. It breaks the narrow thoughts and widens the mental horizon of the people. In history, India received migrants from different cultural groups causing different cultures, but sometimes migration creates a social vacuum and a sense of dejection among individuals and people fall in crimes and drug abuse.

4. Pollution: Large scale movement of people from rural to urban areas causes overcrowding in cities and puts heavy pressure on resources. It causes haphazard growth of cities and causes slums lacking basic infrastructural facilities such as safe drinking water, electricity, sewage, etc. Overcrowding is also responsible for any environmental problems of air, water, land and noise pollution, disposable and management of solid wastes.

5. Other consequences: Migration enhances remittances to the source region, but causes a heavy loss of human resource, in terms of skilled labor. Leg- behind women enjoy empowerment effects with increased interaction in society, including their partnership as workers and decision making of households.

POLICIES FOR MIGRATION

Due to the increasing trends of shifting people from rural to urban areas, urban areas are suffering from many problems such as slums, high population density, overcrowding and lack of infrastructural facilities. So, government has started some Rural Development Programmes such as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Indira Aawas Yojana (IAY), National Social Assistance Programme (NSAP), Integrated Watershed Management Programme (IWMP), National Rural Drinking Water Programme (NRDWP), Swachha Bharat Mission (SBM) and National Rural Livelihood Mission (NRLM) etc. These programmes were also necessary for the development of the rural areas of the country but all are not sufficient to stop rural-urban migration. The Provision of Urban Amenities in Rural Areas (PURA) is one of the five major components of former President Dr. A. P. J. Abdul Kalam's dream, his vision2020 for a developed India. The PURA defers from the conventional ideas of economic development of rural areas in different ways. It aims at a comprehensive development of rural areas to generate urban level income and not mere poverty alleviation. It seeks modern industry investment in the migration from rural to urban in intrastate is being increasing slowly with industrialization and modernization in India.

Conclusion and Suggestions: An India on the move is an India of churn, as Dr. Ambedkar observed. These new estimates, showing that migration within India is between 5 and 9million annually, indicate that labor mobility in India is much higher than has been previously estimated. Another interesting finding of this study is that the acceleration of migration was particularly pronounced for females and increased at nearly twice the rate of male migration in the2000s.This study predicts an increasing rate of growth of migrants over the years. The numbers show that internal migration has been rising over time, nearly doubling in the 2000s relative to the 1990s. One plausible hypothesis for this acceleration is that the rewards (in the form of prospective income and employment opportunities) have become greater than the costs and risks that migration entails.Hence both the push and pull factors are almost equally responsible for the migration.

Migration occurs due to a mix of push and pull factors that includes marriages,job seeking and mostly education. The main issue is the number of job seekers is increasing, but there is no subsequent increase in the number of jobs. States like UP and Bihar are not industrially developed and therefore the working population migrates to the states like Maharashtra and other south Indian states.

The government should develop the manufacturing sector and encourage the start-ups. Government should look after for the development of the rural regions which can thereby lead to the decline in the rates of migration due to the factors like education and better health facilities. We thus primarily need a world class education system in India to stop student migration and to reduce the burden on the urban areas.

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MIGRATION (PUSH FACTORS)

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Migration is as age old phenomenon. Since the primitive era people have been migrating from one place to another place in the form of individuals, families, and groups for various purpose of food, shelter, security, trade, pilgrimage and adventure. It occurs at various levels of space- international, national, regional, and local. Migration has always specific meaning, factor and impacts.

According to United Nations Multilingual Demographic Dictionary, Migration is a form of geographical mobility or spatial mobility between one geographical unit and another, generally involving a change in a residence from one place of origin or place of departure to the place of destination or place of arrival. such migration is called permanent migration and should be distinguished from others forms of movement which do not involve a permanent change of residence. In the definition, migration refers to a specific type of spatial or geographical mobility which implies for characteristics: 1) Relatively permanent shift of residence of people from one geographical unit to another one , for example, from a village to a town or from one village to another village or from one town to another town; 2)Direction of the shift; 3)cause of the shift and 4)Impacts of the shift on the two units , I.e. .place of departure and the place of arrival . Migratory movement is, therefore, not merely a physical movement of people from one place to another but is a set of social, cultural, economic, political, and other circumstances as well.

Direction of migration
1. Rural to Rural migration

2. Urban to urban migration

3. Urban to rural migration

4. Rural to Urban migration

Of these types of migrations, the last two (3&4) type are directly related to Rural-Urban interactions. All over the world the people have been migrating from village to towns, and modern forces have a great role in accelerating the migration of this type. In the developing countries like India it is a very significant process of demographic changes and urbanization in the recent years. On the other hand, this process has saturated in some of the developed countries where differences between the rural and the urban are no more significant developmental view point. Rather, in these countries the reverse process, I.e. urban to rural migration has started wherein the people shift their residence to a peaceful environment, equally equipped with all modal facilities, in the country side. In the developing countries the migration of the later type is a very limited process. Yet, in the context of rural development the rural section is also coming up with various facilities and economic resources in the countryside. And this has initiated a little of migration from urban centers to developing and economically significant rural areas in the countries like India, but it is still insignificant.

FACTOR OF MIGRATION
Factor of migration are generally classified into the following two broad categories
1. PUSH FACTORS

2. PULL FACTORS

Push factors consist of the condition of relative deprivation in one or more of physical, social, cultural, economic and political aspect of migration life in the place of their departure, which push (force)them out from the place of their origin .On the other hand, pull factors refers to those life condition in the place of migrants destination which pull(attract)them for arrival towards it. Better infrastructural facilities like road, rail, communication, electricity, market, employment opportunities, social status, secular attitude, egalitarian values, democratic ideals, rule of laws, human rights, etc. in urban centers attract the people of different social layers and levels from the villages. In fact, migration is somewhat more than simplify a seasonal, cyclical, temperature and permeant movement of people: it is representative of social hierarchy in the countryside.

According to K L SHARMA, the three factors; namely, micro/structural changes, social stratification and specific condition pertaining to specific villages and towns determine the nature, extend and social characteristics of migration. There for, different PUSH AND PULL FACTOR in village life are combined in unidirectional migratory movement of its different section toward towns. Biplab Dasgupta and Roy Laishley

reveal that unequal distribution of sources in the villages is a key factor for urban migration but the land less or poorest don't migrate necessarily. There is a dualistic pattern of migration consisting of young and old, poor and rich, illiterate and highly educated, Harijans and upper caste. There is a range of the migrants, including the school and college drop-outs the educated with poor, moderate, good and excellent performance, and the technically trained persons.

SHARMA notes that caste, class and power background of people matters in determining migration, mobility and rural-urban connections. Acute unemployment, poverty and more pauperization are more of push factors in Indian villages. The poor may migrate more in number than the rich; the illiterate may leave their nation place more than the educated people and the lower caste people may have to migrate more often than the upper caste. But it does not mean that owing to their numerical preponderance among the migrants in towns and cities the poor, illiterate and the lower caste people establish more rural-urban connections compared to the rich, the educated and the upper caste migrants. The construction workers from rural areas working in metropolises like Delhi, though substantial in number, are poor, illiterate and low caste their existential conditions are comparable with the worst slum-dwellers in the city. They have been pushed out of their native place because of poverty, unemployment and indebtedness. There is hardly anything they give to the city except their labour, and they get hardly anything except the barest means for their survival.

These are the basic factor, why should people be migrating from one place to another place are given below:

	PUSH FACTOR	PULL FACTOR
1)	UNEMPLOYMENT	1) POTENTIAL FOR EMPLOYMENT
2)	LACK OF SAFETY	2) A SAFER ATMOSPHERE
3)	LACK OF SERVICE	3) BETTER SERVICE PROVISION
4)	POVERTY	4) GREATER WEALTH
5)	CROP FAILURE	5) FERTILE LAND
6)	DROUGHT	6) GOOD FOOD SUPPLIES
7)	WAR, CIVIL UNREST	7) POLITICAL SECURITY
8)	HAZARDS	8) LESS RISK NATURAL HARARDS
9)	ISOLATION	9) FRIENDS AND FAMILY

SHARMA further writes that migration necessarily implies social and occupational mobility irrespective of caste, class and educational background of the migrants. It is not that only the paupers and the educated unemployed people migrate to towns and cities from villages.

Some people also migrate to towns and cities for fulfilling their cherished aspirations and ambitions for which ample opportunities are lacking in their native villages. Some migrate to towns for more comforts and facilities, rural elite including the political elite from among the caste Hindus, scheduled caste and scheduled tribes have a tendency to settle down in towns and cities. The beneficiaries of green revolution settle in towns and cities for upgrading themselves as businessmen and entrepreneurs.

ACCORDING TO CENSUS OF INDIA

Reasons for migration:		
Work/employment	=	14.4 million (14.7%)
Education	=	2.9 million (3.0%)
Business	=	1.1 million (1.2%)
Marriage	=	43.1 million (43.8%)
Moved after birth	=	6.5 million (6.7%)
Moved with household	=	20.6 million (21.0%)
others	=	9.5 million (9.7%)

Marriage was cited as the pre-dominant reason for migration among females. About 42.4 million migrants out of total 65.4 million female migrants cited this reason for migration.

Among males the most important reason for migration was 'Work/ Employment', 12.3 million out of 32.8 million total male migrants returning this reason for migration.

Migration profile of some important states
Migration plays an important role in the population growth in some states.

Maharashtra: Maharashtra witnessed largest in-migration of population during the last ten years from different states. The total number of in-migrants in to the state was 3.2 million. The number of out-migrants from the state during the decade was 0.89 million. Thus, the total net migrants, including those who came from abroad, were 2.3 million in number. In comparison the number of net migrants in 1991 was only 0.87 million showing a significant growth of net migrants in to Maharashtra during the last ten years. Out of 3.2 million in-migrants from other states during the past decade, 2.6 million (or 79.6%) moved into urban areas. Important states from where they migrated in to Maharashtra were Uttar Pradesh (0.9 million), Karnataka (0.4 million), Madhya Pradesh (0.27 million), Gujarat (0.24 million), Bihar (0.22 million) and Andhra Pradesh (0.19 million). Among inter-state male migrants, work/employment has been cited as the primary reason for migration (e.g., Uttar Pradesh – 73.0%; Bihar – 79.1%). From the adjoining states, 'Marriage' and 'Moved with households' were cited as important reasons for migration.

Delhi: Delhi, is the next in series, which attracted very high number of migrants from other states in the last decade. Total number of in-migrants in Delhi in the last ten years was 2.2 million in number. The number of out-migrants from Delhi was only 0.45 million and those who came from outside the country were only 49,281. Thus, the total number of net migrants was 1.7 million in 2001 in comparison to 1.3 million in 1991. Major influx of population into Delhi was from Uttar Pradesh (0.88 million), Bihar (0.42 million) and Haryana (0.17 million). Migrations from these states were male dominated. Sex ratio of net migrants in to Delhi was only 673 females per 1000 males. Migrants from all these states cited 'work/employment' as the most important reason for migration during the last decade.

Punjab: Punjab is another state with interesting migration profile. Though the total number of migrants from outside the state and outside the country are 0.81 million and 0.02 million respectively, there is significant out-migration from the state (0.5 million). The number of male outmigrants is less than female out-migrants. As a result, the net migrant in to Punjab is only 0.33 million, the sex ratio stacked highly in favors of males (313 females per 1000 females). States from where sizeable number of in-migrants came to Punjab are: Uttar Pradesh (0.24 million); Haryana (0.11 million) and Bihar (0.14 million). Male in-migrants from Uttar Pradesh and Bihar cited 'Work/Employment' as the main reason for migration (72.1% and 82.2% respectively).

Uttar Pradesh: This state has witnessed significant outflow of migrants to other states. In 2001 Census, 1.1 million persons migrated in to Uttar Pradesh from other states and 3.8 million migrated out of the state, resulting in 2.6 million deficits in net migration. The ratio of the two sexes among the out-migrants from the state is skewed in favors of males. Persons who migrated from the neighboring states into Uttar Pradesh (1.0 million), mostly cited 'Marriage' as the reason in case of females and 'Work/Employment' and 'Moved with households' in case of males.

Impact of migration
Migration leaves its impact on both, rural and urban societies. As it involves a population shift in geographical unit of residence and a purpose in the shifting, the impact of migration may therefore be broadly discussed at the following three levels:

1) Demographical level

2) Environmental level

3) Social level

Migration affects the population size in a way entirely different from that of mortality and fertility rates in the rural and urban settings. As a result of migration, a village experience a sudden decline in growth rate of population and lack of the requisite working hands whereas a town encounters increased density, expansion and growth rate of population. The changes in the population size affects the environment, society and culture in the two setting. Urban migration increases pressure on the environment of town consisting of existing infrastructural facilities like basic amenities (housing, electricity, water and sanitation) means of transport and communication, parks, market, school, etc. This causes enplaned growth of towns characterized by slums, overcrowded streets, lack of basic amenities and other facilities. On the other hand, environment of the rural sector is neglected at the cost of over attention of planners paid to urban sector. Towns, specially the capital towns like Delhi, Bangalore, Jaipur, Guwahati etc have witnessed maximum growth through the process of migration from rural area. The demographic and environmental effects impacts, combined, affect the social fabric of towns in various ways. It leads to unemployment, poverty, social deviance, deterioration of laws and order, discontent and political movements and upheavals. Besides, in-migration from villages and expansion of urban centers by inclusion of villages and small towns located in the hinterland of big towns and cities are two most significant factors responsible for rapid urban growth. These factors explain better the rural-urban

connections and the emergence of new structure and relations. Urbanization consists of a great deal of rural material and cultural inputs which determine the extent of impact of urban values, attitude and behavioral patterns on the rural population

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MIGRATION IN AFGHANISTAN

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ABSTRACT

Migration is the movement of people from one place to another with the intentions of settling, permanently or temporarily in a new place or location. This paper discusses about the type, causes and effect of migration in a society or a country. There are some causes or reason that people emigrate from one place to another place. People think the advantages and disadvantages of moving or staying in a better place for their living.

The focuses of this paper is about migration in Afghanistan. This country is among those countries that has the highest immigration in the world. The main causes are the four decades of war and conflict that whole people of Afghanistan are suffering, and still this war is going on. Afghans began fleeing the country after the Saur Revolution in 1978; more fled in the opening scenes of the Soviet invasion in 1979 and throughout the war, but when the Taliban seized control even more fled. The next part of this study discusses about other factors that causes the internal and international migration in Afghanistan like corruption, discrimination, and lack of job opportunities or unemployment for labors and especially for young generation. This research also talk about the positive and negative impacts of migration on Afghanistan. At the end, there are some suggestions and solutions about this issue and also declare the responsibility of government into their people about these problems.

INTRODUCTION

Migration is defined as the geographic movement of people across a specified boundary for the purpose of establishing a new permanent or semi-permanent residence or it is the movement of people from one place to live in another. Migration be classified internal and external migration. Internal migration means the movement of people in different states and regions within a country from one place to another. On the other hand, external or international migration refers to the movement of people from one country to another for permanent settlement.

Migration stream means the total number of people migrating from one region to another or from one country to another for residing during a time period. It is, in fact, related to the movement of people from a common area of origin to a common area of a destination.

Afghanistan is home to the largest refugee crises experienced since the inception of the UNHCR. Decades of war have led millions to flee their homes and seek refuge in the neighboring countries of Pakistan and Iran, and for those who were able, further abroad. The number of refugees spiked in 1990 at 6.2 million. They began to decrease in 1992 with the fall of the government, but began to increase again in 1996 with the rise of the Taliban. In 2002, with the fall of the Taliban and the US-led invasion, record numbers of Afghan refugees returned to Afghanistan. An international reconstruction and development initiative began to aid Afghans in rebuilding their country from decades of war.

The Taliban have regained strength in the second half of this decade and insurgency and instability are rising. Afghanistan continues to be challenged by underdevelopment, lack of infrastructure, few employment opportunities, widespread poverty, war and conflict. The slow pace of change has led Afghans to continue migrating in order to meet the needs of their families.

Today refugee movements no longer characterize the primary source of Afghan migration. Migration in search of livelihoods is the primary reasons for migration and occurs through rural-urban migration in Afghanistan or circular migration patterns. Afghans utilize their social networks to find low-skilled work in the cities or neighboring countries. The highly skilled in Afghanistan often seek to migrate to Western countries, as the opportunities in Afghanistan are limited.

According Tolo News, the continued fighting in the last few decades has been one of the main reasons forcing many Afghans to leave their country for neighboring ones, or even further afield.

Chief Executive Officer of Afghanistan Dr. Abdullah Abdullah said addressing the problems and challenges of the returnees is a priority and one of the main tasks for the government.

"In addition to other challenges and priorities we have, such as security, military issues, economic development and growth of Afghanistan economy, considering and paying attention to the migration phenomenon and migrants, returnees and humanitarian situation in Afghanistan, is our main duty," said Abdullah.

As Afghanistan's Refugees and repatriation indicates that more than 6.5 million Afghans are living outside the country, of whom almost four million are migrants and nearly three million are asylum seekers.

However, Statistics show in the last four years, more than three million Afghans have returned to Afghanistan and most of them were legal and illegal migrants who have returned from Pakistan and Iran.

In addition to the sharp increase in Afghan migrants, human trafficking has increased in the country during recent years. Relevant government departments have said they are trying to legalize these migrations and in their efforts have disbanded about 100 human trafficking groups while some remain under surveillance.

Statistics show more than 68 million people in the world live outside their original countries as migrants.

AFGHANISTAN MIGRATION TREND

Afghans are one of the largest refugee groups in the world since the 1980s. But for centuries Afghans have been migrating back and forth between Afghanistan and what are now its neighboring countries – and further afar still. Afghans would make pilgrimages to holy sites; migrate for purposes of education, trade, work and finding and a save place for living.

Mass forced migration, however, was not the rule until the Soviet invasion in 1979. Afghans were between 1979 and 2016 the largest group of refugees in the world. A massive repatriation scheme led to the return of 5.7 million Afghans between 2002 and 2012 from Pakistan. Over a million were repatriated from Iran between 2002 and 2005. Nevertheless, the continued high risk of being exposed to violence and the fact that Afghanistan remains one of the poorest countries in the world has ensured the persistence of mass flight from Afghanistan. In 2016, well over 3 million

Afghan refugees lived outside of Afghanistan (among which we find over 2 million in Pakistan, around one million in Iran, and 178,000 recent arrivals in EU countries), making them the second-largest refugee group in the world.

There are two types of immigration in Afghanistan, and those are internal and external migration. Internal displacement in Afghanistan is on the rise, in particular due to increasing numbers of war and conflict-induced displacement. According UNHCR, currently there are more than 480,000 people internally displaced - the majority due to conflict (400,000) and the rest due to natural disasters. Internally displaced persons (IDPs) migrate to safer living conditions, whether in terms of physical or human security, and often find themselves included in mixed migration flows with rural-urban migrants, other displaced populations and return migrants. One of the durable solutions to internal displacement is return to the area of origin; however, many studies in Afghanistan have shown the often permanent nature of displacement and the multiplicity of displacement patterns, with secondary and tertiary displacement also on the rise.

Armed conflict is one of the main causes for internal displacement. As a consequence, to avoid an increase in IDPs, the Brookings Institution (BI) and The Liaison Office (TLO) suggested that military planners should integrate the issue of displacement into their counterinsurgency strategies, guidelines and standard operating procedures (Rotting, 2011).

Internal migration of voluntary nature in Afghanistan is caused mainly by economic factors. People move to the urban centers to look for a job, because of a lack of employment in rural areas and perceived better employment opportunities in the cities. This has led to a stable urbanization trend. While in 2010 about 23 per cent of the population were living in urban areas, this will increase to 43 per cent in 2050. There is evidence that return migration to urban areas is a common occurrence further strengthening this urbanization trend.

Ultimate responsibility with regard to IDPs lies with the Afghan Ministry of Refugees and Repatriation (MoRR). With support from the international community, MoRR has formulated many policies and implemented programs to address protracted displacement and reintegration of IDPs. Since 2012, MoRR has been tasked to establish a National IDP Policy. However, despite these efforts, legal instruments are required to prevent and respond to internal displacement and ensure that the human rights of IDPs are fully respected. Although this issue has been addressed in the Afghan National Development Strategy, the strategy does not provide a definition for an IDP in Afghanistan, nor does it prohibit discrimination against them.

It should be noted that many Afghans are also displaced due to natural disasters such as earthquakes, flooding, drought, landslides and avalanches. Though it is not possible to completely avoid natural disasters, suffering can be minimized by raising awareness among the population and by developing suitable warning systems. Natural disasters cut across many boundaries, including organizational, political, geographical, professional, topical and sociological. This means that disaster information needs to be disseminated to all stakeholders at Shura, District,

Provincial and National levels, both public and private. The International Organization for Migration is currently working on this with other partners.

According to the ministry of Refugees and Repatriation, in the recent years, more than 500000 Afghan people fled from Afghanistan. Discrimination and corruption are another factor for immigrating or fleeing people from Afghanistan.

Security
War and conflicts are the main challenge in Afghanistan. The afghan national forces fighting against terrorism every day, and at least 40 soldier are killing Afghanistan, every one try to leave and flee from Afghanistan. According BBC (2018), as President of Afghanistan said: More than 45000 Afghan national forces were killed during fighting against Taliban, Daesh and other groups in last for years in Afghanistan. This is the main reason that people try find a better place living inside and outside the country.

Poverty and disparities
Poverty and disparities is another factor for migrating. After four decades of war, Afghanistan remains one of the poorest and least developed countries in the world. It is also one of the most corrupt. Unemployment stands at 40 percent and more than half the country lives below the poverty line. People are migrating to other paces to find a job, and most young generation migrate into Iran and Eruption countries in the recent years.

Corruption is another factor that causes migration in Afghanistan. In 2018, Afghanistan was placed at the highest position among the corruption countries. In Afghanistan, corruption is the direct result of a long history of conflict and erosion of state institution. Besides direct financial costs of corruption there are high costs and time devoted to corrupt practices by government officials, private businesses, and the public. Most important however, are the negative impacts of corruption on the state's credibility and legitimacy. In 2008, the United Nations Office on Drugs and Crimes (UNODOC) collected data on corruption in Afghanistan. The study showed that corruption practices were a high burden on Afghan families and individual citizens.

INTERNAL (RURAL-URBAN) MIGRATION
The study observed that lack of employment in rural areas is one of the major causes of rural-urban migration. Overall, 42% of the respondents mentioned that both lack of opportunities in their home villages and the perceived better opportunities available in the cities were the major factors in their decision to migrate, while 38% of the respondents mentioned the lack of rural employment opportunities alone as the major cause of their decision to migrate. Similar findings were observed in other recent studies. The study also revealed that migration flow towards the cities is rapidly increasing (UNHCR, 2005).

Labor market and unemployment
The condition of labor market in Afghanistan is very bad, in last three years ago about 500000 afghan young generation fled into European countries. Unemployment Rate in Afghanistan remained unchanged at 8.80 percent in 2018 from 8.80 percent in 2017. Unemployment Rate in Afghanistan averaged 9.57 percent from 1991 until 2018, reaching an all-time high of 12.40 percent in 1993 and a record low of 6.70 percent in 2009.

SHORT- AND LONG-TERM MIGRATION
Short term migration
According the National Risk and Vulnerability Assessment a seasonal migrant is defined as someone who during the past 12 months spent at least one month away from the household for seasonal work. It should be noted that this definition focuses on migrants who spent time away from home and further abroad but also includes migrants who remained in Afghanistan. The main problem of displacement or migration enter the country is war and conflict. During any opration for eradicate of Taliban or other Militants group, common people migrate into save places and after oration they return to their homes.

Long- term migration
An in-migrant refers to someone who during the past 5 years lived outside the current area of residence for at least 3 consecutive months. In many cases this in-migrant is a return-migrant that is someone who lived in the current area of residence before. The term in-migrant includes individuals who migrated from elsewhere within Afghanistan or from abroad. In contrast, an out-migrant is anyone aged 15 years or older who was a household member one year ago but has moved away and is no longer considered a member of the household.

Due to war and conflict, Afghanistan has been for several decades an emigration country. Millions of citizens fled during Soviet invasion in the 1980s and many left the country during the 1990s to escape the Taliban regime. Since 2002 however, one may argue that Afghanistan has become an immigration country, considering the fact that almost 20% of the Afghan population (over 5 million refugees) has returned to the country. Most

migrants returned home from Pakistan and Iran. However, it should not be forgotten that the flow of immigrants mainly consists of first and second generation Afghans and less of foreign immigrants.

RECOMMENDED ACTIONS

The Afghanistan government needs to recruit and train personnel with skills in statistics and information communication technology to enhance data gathering, entry, processing, and analysis. Salaries of staff workers have to increase, to counter-work wide corruption which makes data collection in many cases difficult if not impossible. When training migration workers, it is necessary to take into account differences in language, culture and ethnicity of both, migrants and staff workers. In addition, efforts should be made by the Afghanistan government to create and maintain links between migrants and their countries of origin and to tap into their potential by encouraging them to contribute human and financial capital to the development of their home communities. Migrants could make best use of economic opportunities at home if internal mobility is facilitated by both the source and host countries and communities.

The outward transfer of remittances through money transfer organization such as Western Union is only an option for a limited number of citizens in Afghanistan. This poses a serious limitation for diaspora members in western countries, who wish to invest in the development of Afghanistan. In addition, the Afghanistan Government has to improve the pass and visa system to ensure that Afghan nationals have access to identification. However, in order to achieve this, the Afghanistan Government has to reform its pass and visa system and decrease waiting times and high fees of passports and other identification. Moreover, the Afghanistan Government should stress the importance of identification and labor permits in consultation processes with neighboring countries. Moreover, in the long term, the Afghanistan Government should establish mechanisms to better control the outflow of Afghan students. This could be done by issuing exit visas to those who wish to leave the country, collecting information on demographics and reason of emigration. More information is also needed with regard to foreign nationals coming to Afghanistan. The Afghanistan Government should expand the scope of administrative registration of foreigners collect data on sex, age and reason of (short-term) residence in the country.

Furthermore, the Afghanistan government should more intensively facilitate collaboration with international migration organization and research institutions to harmonize migration data collection or databases. More importantly, a database on Afghan migration information should be created. Such a database would give more inside into the reasons why people move or do not move in specific areas and thereby, contribute to more effective migration policies. The database should include detailed information on migrants, as this enhances comparability of data collected between countries.

Finally, the Afghanistan government must pay attention more on peace process and bring stability in the country, and people have a peaceful live. Also, those migrant who living in other country come back to the country. The other responsibility of the government is to provide job opportunity that our young generation do not go to abroad of Afghanistan by lots problem and they should work inside the country.

CONCLUSION

This paper explores cause and factor of migration in Afghanistan. With widespread poverty in rural Afghanistan, lack of access to financial and insurance markets, and scarce income generating opportunities, war and conflict migration remains a key risk management and income diversification instrument for migration. War and conflict bring adversity and destroy a country and Afghanistan are facing to this bad problem. If the war end in Afghanistan not only more of refugees return back to Afghanistan also the other people will nor migrate to other country.

Furthermore, the strong correlation between poverty and migration location indicates that while less poor households are more likely to migrate abroad, poorer households migrate internally to rural or urban areas and causes migration. With the overall socioeconomic situation external migrants significantly better than the ones with internal migrants, such findings could be partially explained via the high transaction costs related to external migration, the role of social networks as well as the role of human capital in terms of accessing higher paying employment opportunities abroad.

Finally, simulations exploring changes in the probability to migrate indicate that economic growth via strengthening of the local context in terms of employment generation and infrastructure could potentially have a large influence on migration patterns via a substitution effect. While the paper aims at being "positive" as opposed to "normative," these insights do suggest that as growth expands in rural Afghanistan, the role of migration may likely change in terms of households' income strategies. Nonetheless, in the medium term,

policies could focus on how to facilitate the flow of remittances and promote their productive use locally as a strategy of enhancing rural growth and poverty reduction and also come and stability in Afghanistan.

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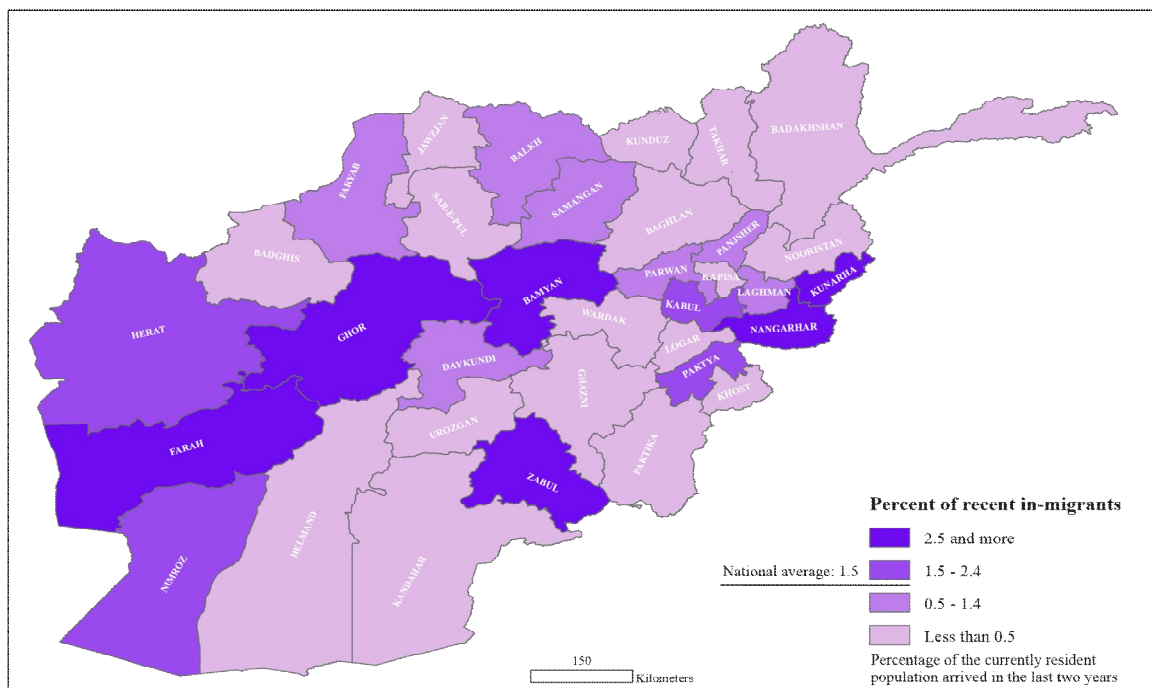
Afghanistan Map

A STUDY OF NASCENT ATTITUDINAL PROBLEMS AMONG COLLEGE STUDENTS AND THE ROLE OF TEACHERS IN COPING

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ABSTRACT

The journey of human life passes through various stages among which youth age or pubescent phase is considered to be the most vital in everyone's life. Such a transactional period brings with it lots of changes at the biological, psychological, cognitive and societal level. The main aim of the study was to probe and explore the causes and levels of depression and aggressiveness among collegiate. The study was conducted in the higher educational institutes of Rupnagar Distt. of Punjab with a sample size of 150 students studying in first year graduation. Aggressiveness and depression levels were evaluated using Aggression Scale (Garg, 2014) and Becks Depression Inventory (Beck, 1961) with internal consistency α= 0.92 . On the basis of percent score, it was found that more boys faced the problem of aggression in comparison to girls and the reasons were found to be socio-economic status, poor parental relationships, and more exposure to social media, excessive internet usage and television viewing. On the other hand, more girls faced the problem of depression than boys and the reasons were found to be childhood neglect, sexual abuse, chronically medical diseases, hormonal changes, adverse family environment, mental gap between child and the parent, poor peer relations. However, t- ratio showed no significant difference in aggression and depression among boys and girls.

INTRODUCTION

Adulthood is the critical phase of life, is a period of major physical, physiological, psychological, and behavioral changes with changing patterns of social interactions and relationships. It is a key stage of life development when children require an understanding of the life challenges they face and need to develop basic skills to cope with difficult emotions. It is a time of increased risk of poor mental health with anxiety, depression, psychosis, eating disorders, and substance misuse becoming more prevalent, as well as an increasing risk of deliberate self harm and suicidal behavior (Health and Children 2006). Some young people begin to exhibit problem behaviors during early adolescence. In such cases, entry into conduct problems generally occurs through associations with peers. Externalizing behavior problems can intensify during this period when peer influences can lead to rule breaking behavior such as delinquent and anti¬social behaviors, substance use, and in some cases, gang involvement and drug dealing (Hann 2001) . Understanding adults psychopathology involves observations across environmental contexts and societal settings. Environmental milieu, including home and school, the standards set by adults interacting with adolescents in these contexts, and variations in their perspectives, may contribute to differences between sources of information about behavior (Achenbach, Howell et al. 1991). The ATP (Association For Transpersonal Psychology) found that the late onset group who began to engage in anti social behavior for the first time in late adolescence did not appear to be associated with a more difficult transition to adult life, but changing behavior coincided with new friendships with other anti social young people, psychosocial adjustment problems, substance use and difficulties in relationships with parents and friends (Smart and Victoria 2005) . Initial data on these 'late starters' suggests that much of their anti¬social behavior tended to be non aggressive and that they are more likely to desist in problem behaviors as they become older. However, other research suggests that some late starters might be involved in highly aggressive and problematic behaviors (Hann and Borek 2001). UK surveys have shown that up to 90% of parents believe young people's drug use derives from the need to conform to their peer group. However, placing too much emphasis on peer pressure, may lead parents to underestimate their own influence on children, which, though it varies at different ages, has been shown to affect young people's long term behavior (Bradley 2007). Targeted supports which highlight the role and influence of parents as well as the risk factors of an adolescent's association with peer groups are therefore essential.

DEFINING BEHAVIORAL PROBLEMS

(Hall and Elliman 2003)define psychological, emotional and behavioral problems as 'behaviors or distressed emotions, which are common or normal in children at some stage of development, but become abnormal by virtue of their frequency or severity, or their inappropriateness for a particular child's age compared to the majority of ordinary children'. (Surveillance, Hall et al. 2003). The most prevalent types of disorders disclosed in children are: emotional disorders, e.g. depression, anxiety states, phobias and psychosomatic disorders , oppositional defiant disorders and conduct disorders (ODD and CD), e.g. non compliance, defiance, stealing, truancy, aggression and more persistent delinquency, along with these, attention deficit disorder,

with or without hyperactivity (ADHD and ADD), psychiatric disorders like psychosis, anorexia nervosa etc (Cummins and McMaster 2006) . The spectrum of behaviors can therefore vary from very mild to clinically problematic, and their definition and nature often expands beyond the term 'behavioral problems' itself to incorporate mental and emotional health problems. Often the behavioral problem is a manifestation of a deeper emotional/mental health problem. The purpose of the paper was to focus on the most commonly experienced and reported problems amongst children and adolescents.

Emotional disorders (such as depression, anxiety and obsessions), hyperactivity (involving inattention and over activity) and conduct disorders (involving awkward, troublesome, aggressive and antisocial behavior) were the three most common groups of childhood mental health problems. Behavior problems also include problems related to repeated violation of others' rights, hyperkinetic impulsive behavior, and missing classes or running away from school (Kendall 2011). The Global Burden of Disease Report 2010 indicates that conduct disorder is among the 15 leading causes of disability adjustment of life years of children ages 05-19 years. A study conducted in five developing countries suggests that 10.5% of adolescents suffer from mental health problems. Also it showed that 20.8% of children in Brazil, 11.7-13.7% of school children in Sri Lanka, 34-36% of children in Pakistan, and 30% children in India suffer behavior problems.

As the teens face countless problems and challenges so they have to deal with a lot of emotional highs and lows. If they are feeling great at one moment, the very next moment they may feel depressed. These mood swings are common problem in teenage. It is the only time when parents have to lay a strong foundation in their kid's life. In present scenario a subsequent increase inthe problem of depression, aggression, and poor quality of relationships among adolescents is seen which sometimes lead to suicide. And these problems are inter-related to each other. Adulthood is the time when young people need to be understood from every aspect because neither they are too young to take decisions independently nor they are too small to depend upon others for every work. Adolescents with poor relationships with parents, teachers, and peers are more likely to have behavioral problems. Excessive television viewing, exposure to internet and social media is also emerging as a major cause of aggression. (Arnett 2007)

Young people are becoming more stressed these days. Break up with boy/girl friend, increased arguments with parents, non-acceptance & negligence on the part of peers, financial status of family, chronically medical disorder, loss of some family member, parental separation, broken homes and sibling rivalry are subjected to a near harrowing experience which ultimately causes stress and depression.

This study was conducted with the intention to study the behavioral problems among college students so that appropriate measures can be taken to eliminate/reduce these behavioral problems.

METHODOLOGY
Sample
Sample of present study comprised of 150 students of 1st year graduation from higher educational institutes and 10 teachers working on senior positions in those institutes. The sample was selected by multistage stratified random sampling.

Data Collection tools and techniques
Following tools were administered on the sample of students: Beck Depression Inventory (Beck, 1961), Aggression Scale (Garg, 2014), Inter-personal Relationship Inventory (constructed by researchers). Besides, semi-structured interviews were conducted with teachers.

FINDINGS
Aggression
Aggression among adults was studied using standardized aggression scale by Garg (2014) which consisted of 30 self-reporting items.

Table-1: Percentage of boys and girls with different levels of aggression

Sr. No.	Scores	Levels of Aggression	No. of Boys	Percentage of boys	No. of Girls	Percentage of Girls
1	1-15	Normal	0	0	0	0
2	16-30	Mild Aggression	31	41.33	35	46.67
3	31-45	Moderate Aggression	29	38.67	30	40
4	46-60	Severe Aggression	15	20	10	13.33
5	61-90	Extreme Aggression	0	0	0	0
		Total	75	100	75	100

It was found that 20% boys and 13% girls exhibit severe aggression whereas around 39% boys and 40% girls had moderate aggression. This data indicate that more than 50% students irrespective of gender were suffering from problem of aggression.

Depression

Depression among adolescents was studied by administering Beck Depression Inventory (BDI) which is a standardized scale developed by Beck in 1961. It consisted of 21 self-reporting items.

Table-2: Percentage of boys and girls with different levels of depression

Sr. No.	Scores	Levels of Depression	No. of Boys	Percentage of Boys	No. of Girls	Percentage of Girls
1	0-10	These ups and downs are normal	11	14.67	7	9.33
2	11-16	Mild mood disturbances	24	32	26	34.67
3	17-20	Borderline clinical depression	10	13.33	10	13.33
4	21-30	Moderate depression	21	28	26	34.67
5	31-40	Severe depression	9	12	6	8
6	Above 40	Extreme depression	0	0	0	0
		Total	75	100	75	100

From table 2 it is evident that 12% boys and 8% girls were suffering with severe depression. Besides, 28% boys and about 35% girls had moderate depression. Thus, among adolescent boys and girls, problem of depression was prevalent as 40% boys and 43% girls were suffering with depression.

Relationship problems

Problems in interpersonal relationship of adolescents with their parents, peer and teachers was assessed by employing interpersonal relationship inventory. It consisted 28 items out of which 7 items were related with relationship with teachers, 9 for relationship with parents and 12 on peer relationships.

Table-3: Percentage of boys and girls having different kind of relationships

Sr. No.	Scores	Levels of Relationship	No. of Boys	Percentage of Boys	No. of Girls	Percentage of Girls
1	1-15	Very Good	0	0	0	0
2	16-30	Good	23	30.67	26	34.67
3	31-45	Moderate	42	56	31	41.33
4	46-60	Poor	10	13.33	17	22.67
5	Above 60	Very Poor	0	0	1	1.33
			75	100	75	100

From table 4.3, it can be seen that 69% of boys are falling under the category of moderate and poor relationships which is more than that of girls that is 65%. In other words, we can say that boys are facing more relationship problems than girls.

Semi-structured interview of 10 teachers from 4 different colleges was conducted with the main objective to list the problems faced by present day adolescents. They were asked few questions regarding behavior problems of adolescents, its causes & symptoms that help to determine problem behavior, and the contribution of factors such as social-environmental factors, exposure to social media, television viewing, and family background towards deviant behavior of child. The responses of the teachers were collected and analyzed. The major problems stated by them were negligence in studies with long absenteeism and drop-out, financial problems, aggressive behavior, and addictive behavior. Table 4.4 describes the major problems faced by adults with signs & symptoms, their causes, and effects.

Table-4: Major behavioral problems faced by adolescents as stated by teachers in semi-structured interview

Major Behaviour Problem	Signs & Symptoms	Causes	Effects
Negligence in studies (includes absenteeism and lack of interest in studies)	Disobeying teachers and parents.	Socio- economic status of family.	Affects the studies.
	Teasing classmates during ongoing class.	Illiteracy and unawareness on part of	Makes parents worried.

	Not paying attention in class. Not completing the homework. Bunking the school and wandering outside. Not afraid of teachers. Lying. Vandalism. Arguing with teachers.	parents. Lack of understanding and good communication among parents and children. Poor relationship with parents, teachers, and peers. Bad attitude and use of foul language by teachers.	Failure in exams. Indulgence in bad habits. Dark future.
Financial Problems	Long absenteeism. Lack of interest in studies. Poor health. Inferiority complex. Unable to take care of personal hygiene. Drop-out. Poor academic records. Stealing.	Unable to meet basic personal and school requirements (clothing, food, fee, books & copies etc.) Over drinking habit of father. Poor economic condition of family. Lack of support from mother to daughters.	Have to leave studies and work as laborer in small age. Makes future dark. Indulgence in anti-social and anti-legal activities to earn easy money.
Aggressive Behaviour	Becomes aggressive over small issues. Beating others for no reasons. Gang formation. Arguing over small issues. Lack of interest in studies. Speaking rudely to everyone. Lack of patience. Disobedience. Suicidal tendencies.	Carelessness on part of parents and teachers. Poor family environment. Poor economic conditions. Impact of daily soaps because of excessive television viewing and excessive exposure to social media.	Negativity in thoughts. Affects studies. Disliking by all. Scolding and beating from parents and teachers. Have to bear physical and verbal punishment.

Addictive behaviour	Use of foul language. Stealing. Gang formation Fighting and beating friends, sometimes parents and teachers also Drop-out Absenteeism Bunking the school and roaming with gangs.	Illiteracy & unawareness of parents. Poor financial conditions of family. Bad company. Family and community environment(drinking, smoking, taking drugs etc) Under-protection & over-protection of parents. Excessive exposure to television. For fun.	A lot of health problems. Indulgence in anti-social and anti-legal activities to earn easy money. Criminal tendencies. Isolation, guilt & negativity about life. Disliking o the part of society, family, and peers. Dark future.

EDUCATIONAL IMPLICATIONS

The findings of the study indicate that there is a dire need to address adult behavior problems at family, colleges, and societal levels. The adults need to be tackled in a tactful way. College students are facing financial problems, addictive problems, problem of aggressive behavior, depressive behavior, and addictive behavior.

On the basis of findings it was seen that percentage of boys with aggressive behavior are more than girls which is a matter of great concern. To curb the problem of aggressive behavior the energies of adults need to be channelized in a positive way. They can be involved in various kinds of activities be it be creative, mental, or physical activities of their level. Further yoga and meditation can be initiated as an extra activity by the school in addition to music and art to improve their concentration, distress them and make them emotionally stronger. Teachers and parents also need to understand the child, and the causes behind the behavior. Awareness programs regarding ill effects and the problems which they can face due toaggressive behavior should be there. Awareness can be through short animated movies, short stories, street plays, or through the classes of moral education.

The problem of financial constraint also needs to be addressed because it is the problem directly linked with the survival of the man. Education is backbone of every nation and good education system leads to its social and economic development which in-turn leads to social and economic development of a living being. It is seen that every year a lot of students drop out their studies because of poor economic condition of family. They have work as laborers at a very small age to meet the basic requirements of life. This problem can be overcome with the help of parents and society. Teachers can adopt the children and can help them in their studies. NGO's can come forward to help the children financially by recognizing their abilities. Vocational training can be provided to the students so that along with studies they can earn to serve themselves and their family. Steps can be taken to enhance and promote creativity of the child e.g. art & craft exhibitions(which can be a source of earning also. Intelligent students can be encouraged to teach their juniors subject of their interest and some amount should be fixed as fee. This will not only give them the practical experience of the subject but also a source of income to withstand themselves and their families.

Addictive behavior leads to a lot many health problems. This problem can be addressed with the joint efforts of teachers, parents, doctors, and society. Awareness campaigns regarding addictiveness, how it affects health and health issues should be there. This can be through talks with doctors, through street plays (nukadnatak), short animated stories, short stories & articles in news papers, various television programs, and through social media. Health check up camps can be organized at school and community level. Teachers and parents need to understand the child and the find out the reasons which led the child to indulge in substance use, smoking and drinking. Teachers should establish friendly relation with their students so that after recognizing the problem suitable measures can be taken, This can be done with the involvement of NGO's who are dealing with life threatening issues.

The problem of negligence in studies can be curbed by employing innovative and interesting teachinglearning activities. By bringing about the changes in curriculum i.e. changing the bulky curriculum to a simple and interesting one to obtain useful productive outcomes. Tours and excursions should be organized to give students practical knowledge of their subjects. These can be done at local level like visits to museum, art gallery, bio-gas plant, botanical garden, thermal plant etc. Teachers need to change bring about a change in their teaching methods and ways. Instead of using old traditional and authoritative method, democratic ways of teaching should be adopted. Classroom environment should be friendly. Every student should be given chance to express themselves and their views. Debates, discussions, extempore, story writing etc should be encouraged. Teachers need to be equipped themselves with the latest knowledge in their subject and latest technological developments and their usage. Use of foul language should be prohibited.

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SYNTHESIS AND CHARACTERISATION OF COPPER(II) COMPLEXES WITH TRIDENTATE NNO FUNCTIONALIZED LIGAND: DENSITY FUNCTION THEORY STUDY, DNA BINDING MECHANISM, OPTICAL PROPERTIES, AND BIOLOGICAL APPLICATION

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ABSTRACT

The photo physical properties of two mononuclear pentacoordinated copper(II) complexes formulated as [Cu(L)(Cl)(H$_2$O)] (1) and [Cu(L)(Br)(H$_2$O)] (2) HL = (1-[(3-methyl-pyridine-2-ylimino)-methyl]-naphthalen-2-ol) were synthesized and characterized by elemental, physicochemical, and spectroscopic methods. The density function theory calculations are used to investigate the electronic structures and the electronic properties of ligand and complex. The interactions of copper(II) complexes towards calf thymus DNA were examined with the help of absorption, viscosity, and fluorescence spectroscopic techniques at pH 7.40. All spectroscopy's result indicates that complexes show good binding activity to calf thymus DNA through groove binding. The optical absorption and fluorescence emission properties of microwires were characterized by fluorescence microscope. From a spectroscopic viewpoint, all compounds strongly emit green light in the solid state. The microscopy investigation suggested that microwires exhibited optical waveguide behaviour which are applicable as fluorescent nanomaterials and can be used as building blocks for miniaturized photonic devices. Antibacterial study reveals that complexes are better antimicrobial agents than free Schiff base due to bacterial cell penetration by chelation. Moreover, the antioxidant study of the ligand and complexes is evaluated by using 1,1-diphenyl-2-picrylhydrazyl (DPPH) free-radical assays, which demonstrate that the complexes are of higher antioxidant activity than free ligand.

1. INTRODUCTION

Copper(II) complexes play an important role in the active sites of a large number of metalloproteins in biological systems and potential application for numerous catalytic processes in living organisms that involve electron transfer reactions or activation of some antitumor substances [1]. These processes are also involved inbioinorganic [2] and medicinal chemistry [3]. In fact copper(II) chelates have been found to interact with biological systems and to exhibit antineoplastic activity [4–6] and antibacterial, antifungal [7, 8], and anticancer activity [9]. Some copper(II) N,S,O/N,N-donor chelators are good anticancer agents due to strong binding ability with DNA base pair [10]. Pyridines are common but vital heterocyclic compounds in organic synthesis, especially as agrochemicals and synthetic intermediates. For example, pyridine derivatives, such as (aromatic) alkoxyl pyridine compounds, amidopyridine, and its derivatives, substituted fused pyridine compounds, have already been widely applied in the fields of agrochemical products [11]. Moreover, pyridine derivatives play a unique role in anthelminthic, acaricide, bacteriocide, and phytocide [12]. For these biological effects we choose the pyridine derivative ligand as a starting material.

DNA biopolymer plays essential role in the growth, development, and heritage transmission of living species not only of humans and animals but also of the vegetal ones. This is one of the most important substances in biological system, whose base pairs carrying the genetic information related not only to the normal life activity but also to the abnormal activities such as carcinogenesis. Compounds having ability to bind and cleave double stranded DNA under physiological conditions are of importance for their utility as diagnostic agents in medicinal applications and for genomic research. DNA base pairs and amino sugar moiety are involved mainly in intercalative or groove binding interactions. In this respect the design of functional materials has received considerable attention due to their propensity to take part also in potential applications in DNA molecule probes [13]. Fluorescence spectroscopy measurement also helps in studying the dynamic interactions and apparition of macromolecules and macromolecular complexes. The relevance of fluorescence techniques to a range of bioanalytical, biophysical assays is based on the use of different fluorescence probes that can interact with macromolecules and with nucleic acids (DNA and RNA). The applications of DNA in photonics and optoelectronics have attracted intensive attentions during recent years [14] because the DNA-lipid complex has thermal and optical stability [15].

Herein we report an account of fluorescent mononuclear copper(II) complexes obtained with tridentate NNO-donor ligand (1-[(3-methyl-pyridine-2-ylimino)-methyl]-naphthalen-2-ol) (HL) (vide Scheme 1). The electron transfer mechanism of copper(II) complexes is investigated by cyclic voltammetry. The density function theory calculations are used to examine the electronic properties of these complexes. The DNA binding study of the copper(II) complexes has been performed spectroscopically. Here, we report the synthesis of new copper

complexes nanowires with DNA and explain fluorescence emission properties. From a spectroscopic study, copper(II) complexes strongly emit green light in the solid state. DNA optical microwire devices are expected to be used as optical biosensors. The antioxidant study of the ligand and complexes is evaluated by using DPPH free-radical assays. Antibacterial activity of the Schiff base and its copper complexes has also been studied by agar disc diffusion method against some species of pathogenic bacteria (Escherichia coli, Vibrio cholerae, Streptococcus pneumonia, and Bacillus cereus).

2. MATERIALS AND PHYSICAL MEASUREMENTS

All chemicals and reagents were obtained from commercial sources and used as received, unless otherwise stated. Solvents were distilled from an appropriate drying agent. The organic moieties were synthesized following the procedure. The elemental (C, H, N) analyses were performed on a Perkin Elmer model 2400 elemental analyzer. Copper analysis was carried out by Varian atomic absorption spectrophotometer (AAS) model-AA55B, GTA using graphite furnace. Electronic absorption spectra were recorded on a SHIMADZU UV-1800 spectrophotometer. The fluorescence spectra of EB bound to DNA were obtained in the fluorimeter (Hitachi-2000). Electron spray ionization (ESI) mass spectra were recorded on a Qtof Micro YA263 mass spectrometer. IR spectra (KBr discs, 4000–400 cm^{-1}) were recorded using a Perkin Elmer FTIR model RX1 spectrometer. The room temperature magnetic susceptibility measurements were performed by using a vibrating sample magnetometer PAR 155 model. Molar conductance () was measured in a systronics conductivity meter 304 model using ~10^{-3} mol L^{-1} solutions in DMF solvent. Optical microscopy images were taken using an NIKON ECLIPSE LV100POL upright microscope equipped with a 12 V-50 W halogen lamp. The samples for optical microscopic study were prepared by placing a drop of colloidal solution onto a clean glass slide. Electrochemical measurements were performed using computer-controlled CH-Instruments (Model No. CHI620D). All measurements were carried out under nitrogen environment at 298 K with reference to SCE electrode in dimethyl formamide using [-Bu$_4$N]ClO$_4$ as supporting electrolyte. Stock solutions of complex-1 and complex-2 were prepared in DMF because of their lower solubility in water.

2.1. Preparation of the Ligand (HL)

The synthesis of ligand HL was prepared by modifying the reported procedure [16]. An ethanolic solution of 2-hydroxy-naphthaldehyde (0.86 g, 5.0 mmol) was added to 3-methyl-2-aminopyridine (0.64 g, 5.0 mmol) in ethanol. Then this mixture was allowed to stir at room temperature for 2 h and then it was refluxed for 3 h. The mixture was cooled to room temperature and kept over one night to get the precipitate of the solid orange ligand. The precipitate was filtered by using vacuum pump and washed several times using ethanol to remove any unreacted materials; then product was collected by recrystallization from ethanol and dried in vacuum desiccators. Finally the product was characterized by IR, ^{1}H NMR, and ^{13}C NMR spectroscopy.

$C_{17}H_{14}N_2O$: anal. Found: C, 77.86; H, 5.34; N, 10.68; Calc.: C, 77.82; H, 5.28; N, 10.44, m.p. 186 ± 1°C; IR (KBr, cm^{-1}): $v_{O–H}$, 3448, $v_{C=N}$, 1472, $v_{CH=N}$, 1623; ^{1}H NMR (δ, ppm in CDCl$_3$ + CCl$_4$): 15.686 (d, 1H$_a$); 9.976 (d, 1H$_b$); 8.30 (d, 1H$_c$); 6.89 (d, 1H$_d$); 8.15–7.04 (m, 9H); 2.498 (s, 1H$_e$); ^{13}C NMR: 149.08 (C-9), 146.31 (C-1), 139.45 (C-7), 129.32–119.31 (Ar-C), 17.00 (C-6); yield: 90%.

2.2. Preparation of [Cu(L)(Cl)(H$_2$O)] (1) and [Cu(L) (Br)(H$_2$O)] (2)

To prepare the copper(II) complexes (1 and 2) a common procedure (Scheme 1) was followed as described below, using copper(II) chloride for complex (1), copper(II) bromide (2), and the organic ligand (HL) in equimolar (1 : 1) ratio. A methanolic solution of HL (1.0 mmol) was mixed with 1.0 mmol of copper(II) chloride (1) and copper(II) bromide (2) with stirring condition and the mixture was refluxed for 4 h. The solid product was collected by filtration and washing with cold methanol and water then dried in vacuo. The pure crystallized product was obtained from methanol.

[Cu(L)(Cl)(H$_2$O)] (1): yield 80–85%; $C_{17}H_{15}N_2O_2$ CuCl

Complex-1: $C_{17}H_{15}N_2O_2$CuCl: Anal. Found; C, 53.96; H, 3.96; N, 7.40; Cu, 16.81; Calc: C, 53.84; H, 3.92; N, 7.34; Cu, 16.72. IR (cm^{-1}): $v_{CH=N}$, 1618; $v_{C=N}$, 1470, $v_{O–H}$, 3438. m.p. 232 ± 1°C. ESI MS (): M$^+$ 378, [M+2]$^+$ 380. Magnetic moment (μ, B.M.): 1.74. Conductivity (Λo, S cm^{-1}) in DMF: 6.32.

[Cu(L)(Br)(H$_2$O)] (2): yield 75–80%; $C_{17}H_{15}N_2O_2$ CuBr

Complex-2: $C_{17}H_{15}N_2O_2$CuBr: Anal. Found; C, 48.29; H, 3.55; N, 6.62; Cu, 15.03; Calc: C, 48.18; H, 3.48; N, 6.54; Cu, 14.82. IR (cm^{-1}): $v_{CH=N}$, 1620; $v_{C=N}$, 1468, $v_{O–H}$, 3440. m.p. 243 ± 1°C. ESI MS () M$^+$ 422, [M+2]$^+$ 424. Magnetic moment (μ, B.M.): 1.72. Conductivity (Λo, S cm^{-1}) in DMF: 6.30.

2.3. Theoretical Methodology

All molecular calculations were performed in the gas phase using density functional theory (DFT) with B3 [17] LYP [18] with [1] exchange correlation functional. The basis set 6-31G (d, p) was used for all atoms [19]. All calculations were carried out using the GAUSSIAN 09 program package with the aid of the Gauss View visualization program [20].

2.4. DNA Binding Experiments

The DNA binding experiments were done by a Tris-HCl buffer (pH 7.4) with copper complexes in DMF solvent. The DNA concentration per nucleotide was determined by absorption spectroscopy using the molar absorption coefficient $(6600 \ (mol \ L^{-1})^{-1} cm^{-1})$ at 260 nm. A solution of DNA in the buffer gave a ratio of UV absorbance at 260 and 280 nm of about 1.8-1.9, indicating that the DNA was sufficiently free of protein [21]. Absorption spectral titration experiment was performed by keeping the constant concentration of the copper(II) complex and varying the CT-DNA concentration. After addition of DNA to the copper complex, the resulting solution was allowed to equilibrate at 25°C for 30 min, after which absorption spectra were noted.

Ethidium bromide displays very weak fluorescence in aqueous solution. However, in the presence of DNA, it exhibits intense fluorescence because of the intercalation to base pairs in DNA. In the ethidium bromide (EB) fluorescence displacement experiment, 5 μL of the EB Tris-HCl solution $(1 \ mmol \ L^{-1})$ was added to 1 mL of DNA solution [22], stored in the dark for 2 h. Then the solution of the copper(II) complex was titrated into the DNA/EB mixture and diluted in Tris-HCl buffer to 5 mL to get the solution with the appropriate complex/CT-DNA mole ratio. Prior to measurements, the mixture was shaken up and incubated at room temperature for 30 min. Fluorescence measurements were performed at an excitation wavelength of 522 nm, and the emitted fluorescence was analyzed at 610 nm.

2.5. Determination of Viscosity

Viscosity experiments were conducted on an Ostwald's viscometer. The concentration of the copper(II) complexes (1 and 2) varying from 0.5 to 4.0×10^{-6} M and each complex was introduced into a DNA solution $(5.25 \times 10^{-6}$ M) present in the viscometer. Each sample was measured two times and average flow time was calculated. The values of relative viscosities of DNA in the absence and presence of the complexes are plotted against the ratio of the concentration of complex and CT-DNA [23].

2.6. Antimicrobial Screening

The antibacterial activity of the tested samples was determined using a modified agar disc diffusion method [24]. The activities were done at 100 and 200 μg/mL concentrations of ligand and its copper(II) complexes in DMF solvent by using three pathogenic Gram negative bacteria (Escherichia coli, Vibrio cholerae, and Streptococcus pneumoniae) and one Gram positive pathogenic bacteria (Bacillus cereus). The solution of ligand and its copper(II) complexes were added to the agar plates and incubation of the plates was done at 37°C for 24 hours. At the end of the period, the diameter of the inhibition zones was calculated in millimetres [25].

2.7. DPPH Radical Scavenging Activity

Antioxidant activity of the synthesized compounds was estimated by 1,1-diphenyl-2-picrylhydrazyl (DPPH) radical scavenging effect. The 0.1 mL of different concentrations (25 to 150 μg/mL) of sample in methanol was added to 4 mL of a 1.46×10^{-5} M DPPH solution, and then solution was left to stand at room temperature in the dark. After 30 min of incubation, the absorbance of the solution was measured at 520 nm [26].

2.8. Synthesis and Characterization

The organic ligand (HL = (1-[(3-methyl-pyridine-2-ylimino)-methyl]-naphthalen-2-ol)) was synthesized by the reaction of the respective 3-methyl-2-aminopyridine (5 mmol) and then 5.0 mmol of 2-hydroxy-1-naphthaldehyde in presence of ethanol. The complexes were obtained in good yield from the reaction of the copper chloride (1) and copper bromide (2) with equimolar amount of organic moiety HL in the methanol medium. In these complexes the organic molecule HL acts as tridentate ligand through NNO donor centres. The complexes conductivity measurement in DMF suggests that complexes exist in solution as nonelectrolytes [27]. These complexes are air-stable, coloured solids, partly soluble in ethanol and methanol, and soluble in acetonitrile, DMSO, and DMF. All copper(II) complexes are nonhygroscopic and monomeric in nature. At room temperature the magnetic moments (μ) of these complexes are 1.74 and 1.72 B.M. Satisfactory analytical results were obtained for all the complexes, exhibiting paramagnetic character comparable to mononuclear copper(II) complexes of tridentate Schiff bases [28]. From conductivity, UV-Vis spectra and magnetic moment measurement indicate all complexes are distorted trigonal bipyramidal geometry [29].

2.9. Infrared and Electronic Spectral Studies

The IR spectrum of the ligand has several bands appearing at 3448, 1472, and 1623 cm^{-1} due to phenolic O–H group, pyridine C=N, and imine CH=N stretching vibrations in the solid state (see Figure S1 in Supplementary Material available online at http://dx.doi.org/10.1155/2014/104046). The hydroxyl hydrogen of ligand is replaced by a metal in metal complexes. In complexation the bands are shifted to lower frequency at 409–411 and 514–518 cm^{-1} which are attributed to the existence of Cu–O and Cu–N bond with copper(II) ion. These vibrations confirmed the involvement of nitrogen and oxygen atom in chelation with metal ion. Hence, a broad band in the range of 3,438–3,440 cm^{-1} indicates the presence of a water molecule in complex-1 and complex-2. All the IR data suggest that the metal ions are coordinated to the Schiff base through the phenolic oxygen, imino-nitrogen, and pyridine nitrogen and with one water molecule.

The proton NMR spectra of the free ligand have been recorded in $CDCl_3$ at room temperature using CCl_4 as an internal standard (Figure S2). The ligand exhibits hydroxyl proton (H_a) appearing at δ 15.68 ppm, the aromatic pyridine proton (H_b) appearing at δ 9.97 ppm, H_c appearing at δ 8.30 ppm, H_d appearing at δ 6.89 ppm, methyl proton (H_e) appearing at δ 2.49 ppm, and aromatic and heteroaromatic proton signals appearing at δ 7.04–8.15 ppm. The chemical shift of hydroxyl proton is very high (15.68 ppm) indicating intramolecular hydrogen bond (inset Figure S2). ^{13}C NMR spectra (Figure S3) showed similar diagnostic features for the free ligand. Hydroxyl carbon (C-9) was found at 149.08 ppm, pyridine carbon (C-1) at 146.31 ppm, and imine carbon (C-7) at 139.45 ppm, and the methyl carbon (C-6) signal was found at 17.0 ppm and aromatic carbons were found at 119.3–129.3 ppm. NMR spectra of the free ligand support the conclusions derived from the IR spectra.

The electronic spectra of all complexes were recorded in DMF at room temperature. The electronic spectral data of the Schiff base and their complexes are given in Table 1. All the spectra of complexes show lower bands than 400 nm due to and transitions for the aromatic ring, and again absorption bands at 436.0 nm and 456 nm are due to intraligand charge transfer transitions. An intense band at 262 nm is assigned to intraligand transition [30] along with the less intense bands at 319 and 365 nm corresponding to the ligand to metal charge transfer transition. The copper(II) complex-1 and complex-2show a d–d broad and a weak band centered at 664 and 672 nm which is attributed to transition [31]. This electronic spectrum is compared with five coordinate complexes consistent with the degree of distortion from the TBP geometry [29, 32].

Table-1: UV-Vis spectral and electrochemical data of complex-1 and complex-2.

2.10. Electron Sprays Ionization Mass Spectra (ESI MS)

The mass spectra of complexes (Figures S4 and S5) support their projected formulation. It reveals the molecular ion peak at 262.16, consistent with the molecular weight of the ligand, whereas its copper complexes (1 and 2) show a weak molecular ion peak at 378.14 and 422.6 due to the higher instability. A weak peak at 380 and 424 corresponds to the [M+2]$^+$ peak possibly due to the presence of isotopic chlorine and bromine in the copper complexes of 1 and 2, respectively [33, 34]. Other peaks were observed at 361, 324, 248, and 161 which corresponds to different fragments that support the structure of the copper complexes.

2.11. Electrochemistry

The redox properties of the Cu(II) complexes were examined by cyclic voltammetry using a Pt-disk working electrode and a Pt-wire auxiliary electrode in dry dimethylformamide using [-Bu₄N]ClO₄ (0.1 M) as the supporting electrolyte. The cyclic voltammetric data are given in Table 1. The cyclic voltammograms exhibit quasi-reversible electron transfer process with a reduction peak at V and −0.712 V with a corresponding oxidation peak at V and −0.597 V for complex-1 and complex-2, respectively, at a scan rate interval 50–400 mV s^{-1}. The values for these Cu(II)/Cu(I) redox couples were in the range of −0.690 to −0.654 V versus Ag/AgCl and the ratio of cathodic to anodic peak height was less than one. The most significant feature of the Cu(II) complexes are the Cu(II)/Cu(I) couple [35]. The ratio between the cathodic peak current and the square root of the scan rate () is approximately constant. From this cyclic voltammetry data it can be deduced that the redox couples are related to a quasi-reversible one-electron transfer process.

2.12. Emission Activity

The emission property of the ligand HL and its copper(II) complexes was recorded at room temperature (298 K) in 1×10^{-6} (M) DMF solution given in Figure 1. In the absence of metal ions the fluorescence of the ligand is probably quenched by the occurrence of a photo induced electron transfer (PET) process due to the presence of lone pair of electrons in the ligand [36]. It is evident that the fluorescence emission intensity of the ligand decreases dramatically depending on the complex formation with the metal ions. These coordination complexes make the energy transfer from the excited state of the ligand to the metal ions causing decreases of the fluorescence intensity. For this reason the intensity of complex-1 and complex-2 is decreased. The ligand shows higher fluorescence intensity at 352 nm while complex-2 is fluorescence silent when both are excited at 300 nm in DMF solution.
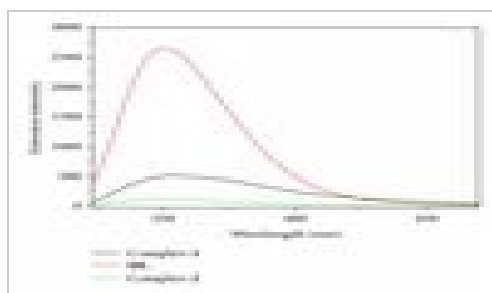

Figure-1: Fluorescence emission properties of the free ligand (HL) and its copper(II) complexes.

2.13. Electronic Structure

Full geometry optimization of HL and copper(II) complexes (1 and 2) was carried out using density functional theory (DFT) at the B3LYP level in their ground state shown in Figure 2. The frontier orbitals of HOMO and LUMO of HL, 1, and 2 are also given in Figure 2. The selected bond distances and bond angles are reported in Table S1. Thus it is apparent that electron density of HOMO in HL is largely localized on both pyridine and naphthalene ring. HOMO of copper(II) complexes have largely localized on pyridine ring and partly on naphthalene but in LUMO electrons are largely localized on naphthalene ring. The HOMO-LUMO energy gap in the ground state of complex-1 and complex-2 has been predicted to be 0.0212 and 0.0139 eV, respectively, and is not influenced by excitation. From this optimized structure, the bond length of Cu–Cl is 2.16 Å and of Cu–Br is 2.29 Å; this suggests that larger size of bromine atom forms weaker overlap with copper atom but other bond lengths are comparable. The N1–C1–N2 bond angle of HL is 119.30° but on complex formation the bond angle decreases to 85.36° and 86.13° for 1 and 2, respectively.
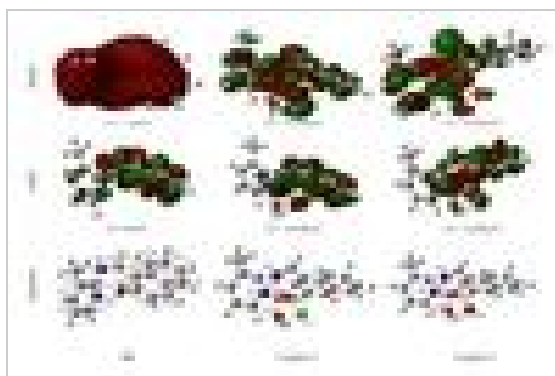

Figure-2: The HOMO and LUMO orbitals of HL and copper(II) complex-1 and complex-2 obtained from DFT.

2.14. DNA Binding Studies

The binding interaction of the copper(II) complexes with calf thymus DNA has been investigated with the help of spectroscopic, viscosity measurements, and electrochemical study.

2.15. Electronic Absorption Study

In general, the hyperchromism and hypochromism were regarded as spectral features for DNA double-helix structural change when DNA reacted with other molecules. The hyperchromism originates from the breakage of the DNA duplex secondary structure; the hypochromism originates from the stabilization of the DNA duplex by either the intercalation binding mode or the electrostatic effect of small molecules. It is reported that if the aromatic ring of the molecule closely matches with the helical turn of the CT-DNA groove, the aromatic rings of the ligand interact with DNA in Tris-HCl buffer through the formation of the van der Waals contacts or hydrogen bonds in the DNA grooves. The binding of the copper(II) complex to the CT-DNA helix is examined

by an increase of the absorption band (c.a. 264 nm) of copper(II) complex. This increasing absorbance indicates that there is the involvement of strong interactions between complex and the base pairs of DNA [37]. The absorption spectra of the copper(II) complexes in the absence and presence of CT-DNA are shown in Figure 3. A hyperchromism was also observed for a copper(II) complex with a ligand bearing □OH group. The extent of the hyperchromism in the charge transfer band is generally consistent with the strength of interaction [38]. As DNA double helix possesses many hydrogen bonding sites which are accessible both in the minor and in the major grooves, it is likely that the –OH group of the ternary complex forms hydrogen bonds with DNA, which may contribute to the hyperchromism observed in absorption spectra. The increasing absorbance indicates there is groove binding modes.
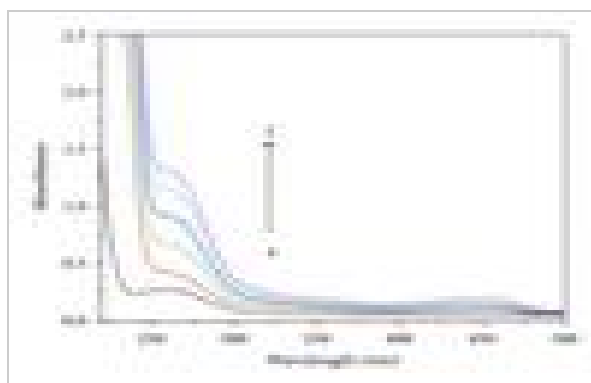

Figure-3: Electronic spectral titration (a, b) of complex-1 (a) and complex-2 (b) with CT-DNA at 266 nm in Tris-HCl buffer; [complex] = 2.34×10^{-5}; [DNA]: a 0.0, b 1.22×10^{-6}, c 2.44×10^{-6}, d 3.66×10^{-6}, e 4.88×10^{-6}, f 6.10×10^{-6} mol L^{-1}. The arrow denotes the gradual increase of DNA concentration. Plot of [DNA]/ versus [DNA] for the absorption titration of CT-DNA with the copper(II) complex-1 (c) and complex-2 (d) in Tris-HCl buffer at the (c, d).

In order to further illustrate the binding strength of the copper(II) complex with CT-DNA, the intrinsic binding constant was determined from the spectral titration data using the following equation [39]:where [DNA] is the concentration of DNA, , , and correspond to the extinction coefficient, respectively, for the free copper(II) complex, for each addition of DNA to the copper(II) complex, and for the copper(II) complex in the fully bound form. The [DNA]/() plot against [DNA] gave a linear relationship shown in Figure 3. The intrinsic binding constants for the complexes were calculated from the slope to intercept ratio. The value for complex-1 and complex-2 was estimated to be 6.08×10^4 M^{-1} (up to five points) and 5.98×10^4 M^{-1} (up to five points) in terms of groove binding. These values are in agreement with those of well-established groove binding rather than classical intercalation [40].

Again DNA binding interaction is compared with the presence of ligand with CT-DNA. From absorption spectra, there is no change in absorption spectral band upon increasing the DNA concentration. This absorbance indicates that there is no involvement of interactions between ligand and the base pairs of DNA.

2.16. Ethidium Bromide Fluorescence Displacement Experiments

Fluorescence quenching is a helpful method to study the reactivity of chemical and biological systems since it allows nonintrusive dimensions of substances in low concentration under physiological circumstances [41], useful information about binding mechanisms and providing clues to the nature of binding. Fluorescence intensity of a compound can be quenched as a result of molecular interactions, such as excited state reactions, molecular rearrangements, ground state complex formation, and collisional quenching. Fluorescence intensity of EB bound to CT-DNA shows a decreasing trend with the increasing concentration of the complexes as shown in Figure 4. The quenching of EB bound to DNA by the complexesis in agreement with the linear Stern-Volmer equation [42]:where and represent the fluorescence intensities in the absence and presence of quencher, respectively. is a linear Stern-Volmer quenching constant and is the concentration of quencher. The value calculated from the plot is shown in Figure 4 of versus [complex]. The value of Stern-Volmer quenching constant () was 1.94×10^4 (up to four points) and 1.34×10^4 (up to four points) for complex-1 and complex-2, respectively. The value in fluorescence spectral studies indicates the nonintercalative binding interaction with DNA and probable groove binding or external binding is suggested for complex-1 and complex-2, which is supported by viscosity measurements. Thus the binding interaction is groove binding mode but not involved in intercalative binding. All the Stern-Volmer plots represent a good linear relationship indicating a strong affinity of the copper(II) complexes to CT-DNA.
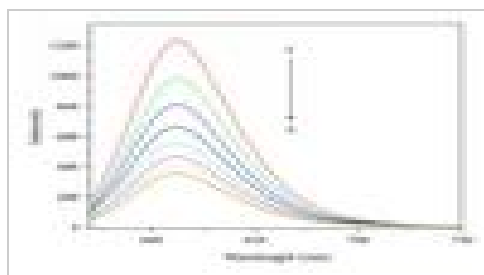
Figure 4: Emission spectra (a, b) of the CT-DNA-EB system in Tris-HCl buffer upon the titration of the copper(II) complex-1 (a) and complex-2 (b). λex = 522 nm; [EB] = 9.2×10^{-6} mol L^{-1}, [DNA] = 1.22×10^{-6}; [complex]: a 0.0, b 1.36×10^{-5}, c 2.72×10^{-5}, d 4.08×10^{-5}, e 5.44×10^{-5}, f 6.80×10^{-5}, g 8.16×10^{-5}, h 9.52×10^{-5} mol L^{-1}. Arrow shows the intensity change upon the increase of the complex concentration. Plot of against [complex] in fluorescence quenching of CT-DNA-EB system in Tris-HCL buffer (c, d), complex-1 (c), and complex-2 (d), respectively.

2.17. Binding Parameters
When small molecules bind independently to a set of equivalent sites on a macromolecule, the binding constant () and the numbers of binding sites () can be determined using the following equation [43]: and are the binding constant and binding site of complex-1 and complex-2 to CT-DNA, respectively. The number of binding sites () is determined from the intercept of versus . The number of binding sites () is 0.93 and 0.89 for complex-1 and complex-2, respectively. The result indicates less association of complex-1 and complex-2 to the DNA bases, also suggesting strong affinity of the complexes through surface or groove binding.

2.18. Cyclic Voltammetric Studies
Electrochemical measurement is a most constructive technique to analyse metal-DNA interactions than spectroscopic methods [44]. The electrochemical investigations of metal-DNA interactions can provide a useful complement to spectroscopic methods, which inform about interactions with both the reduced and oxidized form of the metal. Electrochemical studies of transition-metal complexes have been extensive, and the effect of ligand concentration on potential can be used to determine formation constants. In the absence of DNA, the complexes show sharp waves peaks for both oxidation and reduction state. Upon addition of DNA both waves' peaks of and are decreased, due to large binding of copper(II) complexes to DNA and not to an increase in solution viscosity; we performed CV experiments on a mixture of copper(II) complex, which intercalates between the DNA base pairs. In this study it has been employed to recognize the nature of DNA binding of the copper(II) complexes and the result is given in Figure 5. This result indicated that interaction occurs between the CT-DNA and copper(II) complexes. The equilibrium binding constants can be calculated by using the shift value of the formal potential of Cu(II)/Cu(I) according to the Bard and Carter equation [45]:where and are the formal potentials of the bound and free complex forms respectively, and and are the corresponding binding constants for the binding of reduction and oxidation species to DNA, respectively. The ratio of equilibrium binding constants, , is calculated to be 2.43 and 2.09 for complex-1 and complex-2, respectively, which indicate the strong binding of DNA with reduced form over oxidised form of copper complexes.
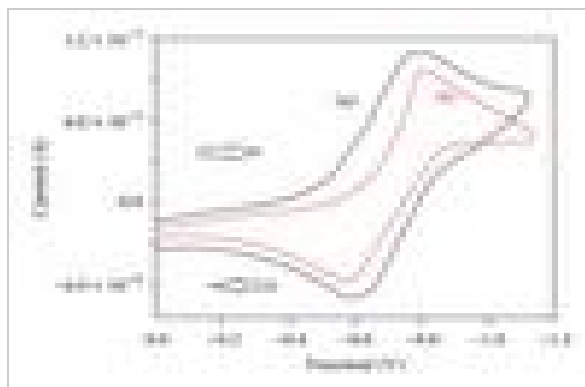

Figure-5: Cyclic voltammograms of complex-1 in Tris-HCl buffer in the absence (a) and presence (b) of CT-DNA. $v = 1$ V s^{-1}.

2.19. Effect of CT-DNA on Viscosity Measurements
Considering the nature of DNA binding of the complexes, we carried out viscosity measurements on CT-DNA by varying the concentration of added complexes. Hydrodynamic measurements, such as viscosity and

sedimentation, are critical tests for a binding mode in solution in the absence of crystallographic structural data [46]. Because DNA viscosities are sensitive to the length changes of nucleic acids, a classical intercalation mode should result in lengthening the DNA helix as base pairs are separated to accommodate the binding ligand or the nonclassical intercalation could bend or kink the DNA helix, thereby decreasing its length and viscosity. From the viscosity measurements, it was observed that there is no change in the relative viscosity of the DNA solution by increasing the concentration of adding complex given in Figure 6. However, complex-1 and complex-2 block the intercalative interaction strongly and hence the negligible changes in the relative DNA viscosity observed. This is in conformity with its lowest DNA binding affinity. Similarly, the presence of hydroxyl group on the naphthyl ring would also sterically hinder the partial insertion of the ligand ring in between the DNA base pairs, leading to no change in relative viscosity of DNA. This suggests that these complexes interact with CT-DNA through groove binding mode.
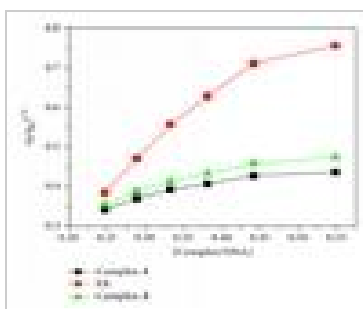

Figure-6: Effect of increasing amounts of copper(II) complexes (1 and 2) on the relative viscosity of CT-DNA at 25°C.

2.20. Fluorescence Microscopy Study of Cu-DNA Complexes

The fluorescence micrograph showed formation of microwires shaped copper complex with DNA (Figure 7). The obtained green microwires were characterized by using fluorescence microscopy to investigate their optical waveguide properties. The fluorescence micrograph was obtained by the excitation of the sample with blue light between 450 and 490 nm (Scheme 2). This investigation clearly demonstrates that Cu complexes (1and 2) molecules have been incorporated into the DNA microparticles and arbitrarily distributed in the nanoparticles. This leads to an impressive increase in the fluorescence intensity of the polymer even on high dilution with DNA. During the formation of the doped microparticles, hydrophobic and interactions induce the aggregation of DNA and Cu complexes (1 and 2) molecules into microparticles [47]. This clarification suggested that the microwires absorbed the excitation light and propagated the fluorescence emission toward the tips, thereby exhibiting strong wave guiding behaviour. The DNA-Cu complexes microwires show significant optical waveguide properties due to the strong fluorescence emission.

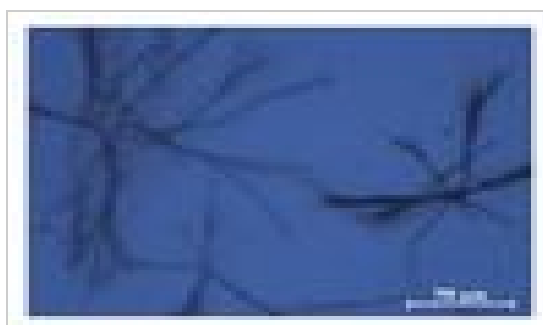Scheme-2: Synthetic route of fluorescent green microwires of complex-1 and complex-2with DNA.

Figure-7: Optical and fluorescence micrographs of complex-1 (a and b) and complex-2(c and d) with DNA microwires, respectively. The fluorescence micrograph was obtained by the excitation of the sample with blue light between 450 and 490 nm.

2.21. Antibacterial Activity

Antibacterial activity of the ligand and its copper(II) complexes is tabulated in Figure 8. The biological activity of the synthesized ligand and its compounds are compared with standard antibiotic chloramphenicol drug. From this study it is inferred that all complexes have higher activity than ligand but lower than antibiotic. Here height of the bar represents the activity of complexes and ligand with respect to standard antibiotic. The increased activity of the metal chelates can be explained by overtone concept and the Tweedy chelation theory [48]. The variation in the activity of copper(II) complexes against some different organisms depends on either the impermeability of the cells of the microbes [49] or difference in ribosome of microbial cells and also activity increases with increasing the concentration of complexes. In a complex, polarity of metal ions reduces due to partial sharing of its positive charge with donor groups of ligand and delocalization of -electron into the whole chelate ring. Lipids and polysaccharides are important constituents of cell walls and membranes, which are preferred for metal ion interaction. This increased lipophilicity also helps the penetration of the bacterial cell membranes and restricts further growth of the microorganisms. Due to higher lipophilicity, complex-1 and complex-2 exhibit higher antibacterial activity than free ligand.
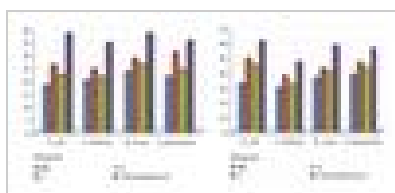

Figure-8: Comparison of the antibacterial activity of HL, complex-1, and complex-2 with standard chloramphenicol drug. DMF solvent does not show any activity.

2.22. Antioxidant Activity

We investigated the free radical scavenging ability of the newly synthesized ligand and its complexes using DPPH. The DPPH radical is one of the most commonly used substrates for fast evaluation of antioxidant activity because of its stability and simplicity of the assay. In DPPH assay, the ligand and its complexes act as donors of hydrogen atoms or electrons in transformation of DPPH radical into its reduced form DPPH-H. The breaking of the OH bond is considered to be one of the most important physicochemical parameters involved in the definition of the antioxidant potency of phenolic derivatives [50]. Phenols are also excellent chain-breaking antioxidants and good $^1O_2$ quenchers [51]. Lower absorbance values of the reaction mixture indicated higher free radical scavenging activity. The DPPH radical scavenging ability of the ligands and their complexes is shown in Table 2. It is inferred that free radical scavenging activities of synthesized compounds are concentration dependent and the activity of complexes increases with increasing its concentration. Ascorbic acid, a phenolic antioxidant, used as a standard, showed stronger antioxidant activity than that of synthesized compounds. It can be concluded that complexes are more scavenging activity than ligand due to partial sharing of positive charge with hole organic moiety and also electron releasing hydroxyl and methyl group present in the ligand moiety. After the complexation with metal ions reveals that the antioxidant activity increases due to the presence of positively charged meal ions as well as electron donating groups present in the moiety, so complexes have a strong potential to be applied as scavengers to eliminate radicals [52].

Table-2: Antioxidant activity (µM) of ligand and metal complexes (1 and 2) at different concentrations using DPPH assay.

3. CONCLUSION

Synthesis and characterization of two mononuclear copper(II) complexes of N_2O donor set have been performed. All complexes are pentacoordinated formulated as [Cu(L)(Cl)(H_2O)] (1) and [Cu(L)(Br)(H_2O)] (2). The electrochemical study of these complexes showed a quasi-reversible one-electron transfer process. DNA binding properties of the copper(II) complexes with DNA have been investigated by absorption spectra,

fluorescence spectra, and voltammetry measurements. All results indicate that the copper(II) complexes bind to CT-DNA via groove binding mode. Complexation between the copper complexes (1 and2) and the anionic DNA molecules appears to stiffen the backbones of the former leading to a green color in its fluorescence emission. The observed enhancement of fluorescence may be utilized in sensing DNA. DFT calculations are used to observe the electronic structure and the electronic properties of copper(II) complexes. Furthermore, in vitro antioxidant activity of copper(II) complexes also exhibits the effective scavenging of DPPH radicals. In addition, the result of antibacterial studies confirmed that ligand and complexes are bioactive showing good antimicrobial property. It has also been proposed that concentration plays a vital role in increasing the degree of inhibition; as the concentration increases, the activity increases.

CONFLICT OF INTERESTS
The authors declare that there is no conflict of interests regarding the publication of this paper.

ACKNOWLEDGMENT

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GRATITUDE AND PERSONAL VALUES IN COLLEGE GOING STUDENTS

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ABSTRACT

Gratitude defines an attitude of positivity in a person's character whether personal or professional. It can be easily understood as the realization of gratefulness towards a person's deed from the beneficiary of the said deed. It is a spontaneous feeling emerging from within. However, it is not just an emotional response but also a choice we make. This research aims to study the relationship between Gratitude and Personal values in College Going Students. For this research a sample of 100 colleges going students (50 boys and 50 girls) within the range of 18-24 years were administered. The tools used in the study were Gratitude Questionnaire and Personal Value Questionnaire. The result shows positive relation between Gratitude and Personal Values. Statistical analysis indicated that Gratitude and Democratic, Aesthetic, Power and Hedonistic values are correlated with each other. The future implications indicated that feeling of gratitude leads to caring for each other. It teaches us to be sincere and honest which is essential for the society's progression. It allows us to look inside us, and not to be arrogant, which is essential for successful outcomes for the work that we do. Incorporating constructs of positive psychology like gratitude and personal values have influence on health enhancements and well-being of young adults.

Keywords: Gratitude, Personal Values, Gender, College-Going Students

INTRODUCTION

Gratitude is one of the five characters strengths within the virtue category of transcendence. Peterson and Seligman offer an expanded definition of gratitude "a sense of thankfulness and joy in response to receiving a gift, whether the gift is a tangible benefit from a specific other or a moment of peaceful bliss evoked by natural beauty"

In order to experience gratitude, one must be able to understand people as intentional agents whose actions are motivated by their own desires and beliefs. Some researchers have found that few children under the age of 7 years spontaneously express gratitude in response to receiving a gift, which suggests that expressing gratitude requires developmental capacities beyond theory of mind. Gratitude cannot be defined in a single way but it can be understood through our family values, moral stories and religious stories as well.

Gratitude reduces feelings of envy, makes our memories happier, lets us experience good feelings, and helps us bounce back from stress. Gratitude can be said to have considerable value in the understanding of human functioning and can been seen as a reliable indicator for wellbeing and attendant social variables. Personal values are the virtues that guide us to take into account human elements when one interacts with other human being. They are our feelings for the human essence of others. It's both what we expect others to do to us and what we aim to give other human beings. These personal values give the effect of bonding, comforting and reassuring. Values guide the selection or evaluate policies, people and events. Values are part and parcel of philosophy. Hence, aims of education are naturally concerned with values. All education is, in fact, very naturally value-oriented. Each educational goal, whether originating in a person, a family, a community, a school or an educational system, is believed to be good. 'Good' is intended to mean here 'avoidance of bad'

REVIEW OF LITERATURE

Froh et al (2011) researched on Gratitude and the reduced cost of Materialism in Adolescents. The study examined high school students who completed measures of materialism, gratitude, envy, depression, academic functioning, life satisfaction, absorption, and social integration. It was found that gratitude controlling for materialism, predicts all outcomes i.e, higher grade point average, life satisfaction, social integration, and absorption with lower envy and depression. On the other hand, materialism controlling for gratitude, predicts 3 out of 6 outcomes, low grade point average, higher envy, and life satisfaction. Also, when gratitude and materialism were taken as predictors, it was found that gratitude was a stronger predictor of six outcomes than materialism. In another study Froh et al (2009) researched on Gratitude and Subjective well-being in early adolescence: Examining gender differences. This study examined 154 students to identify advantages from it experience and expression. Students completed measures of subjective well-being, social support, pro-social behaviour, and physical symptoms. Positive associations were found between gratitude and positive effect, global and domain specific life satisfaction, optimism, social support, and pro-social behaviour; most relations

remained even after controlling for positive affect. Gratitude demonstrated a negative relation with physical symptoms, but not with negative affect. The relation between gratitude and physical symptoms was mediated by relational fulfilment. Gratitude demonstrated strong relations with the positive effects: proud, hopeful, inspired, forgiving, and excited. The relation between gratitude and family support was moderated by gender, indicating that boys, compared with girls, appear to derive more social benefits from gratitude.

In a research by Freitas et al (2011) 430 students between the age of 7-14 years were made to answer the questions: "What is your greatest wish?" and "What would you do for the person who granted you this wish?" The responses to the second question were content-analysed and coded into four types of gratitude: verbal, concrete, connective and finalistic. Subsequently, a quantitative analysis regarding age by each type of response was conducted. The results showed a decline in the frequency of concrete gratitude and an increase in connective gratitude as age increased. Character strengths predict subjective well-being during adolescence which indicated that many character strengths are related to subjective well-being in youth. The high school students attended to Values in Action Inventory "strengths for youth" and measured subjective well-being (depression, happiness and life satisfaction) with many assessments, since 9th grade to their 10th grade. In the results the effectiveness of other strengths and other directed strengths (kindness, teamwork) presumed lesser symptoms of depression. Transcendence strengths (meaning, love) presumed greater life satisfaction. Social support partly mediated the connection between strengths and depression however; it didn't mediate between strengths and life satisfaction. These findings show that strengths build connections with people and propose larger self-predict future being (Gillham et al 2011). In a study by Park et all (2009) on Building strengths of character: keys to positive youth development which resulted that good character is never singular if comprised of family with positive traits which manifests in one's thoughts, behaviours, and feelings. The analysis shows that well-being of children and youth depends on the strengths which related to academic success and life satisfaction.

Throughout the ages, instilling strong character strengths among children and youth has been a major goal for parents and academicians. In spite the importance, scholars have neglected this topic throughout 20th century. Positive psychology has again refocused scientific attention on character, identifying it as one of the pillars of this new field and central to the understanding of the psychological good life. In his research on Character strengths: Research and Practice and results showed that though strengths predict different outcomes, character strengths are linked to aspects of an individual and social well-being. This paper discusses ways that acknowledge and cultivate character strengths, among the context of a strengths-based approach to education and private development. Character matters and cultivating its elements ought to be a very important goal for all (Park et all. 2009).

Wood et al (2010) did a research on Gratitude and Well-being: A review and theoretical. From this study it was depicted that gratitude is strongly linked to well-being, and this link may be unique and causal. Although positive psychology neglected the current limitations, the interventions to clinically increased gratitude were critically reviewed and concluded to be promising. Gratitude is important to clinical psychology because a) strong power in understanding well-being. b) potential to improve well-being through gratitude with exercise. Froh et al (2008) did a research on Counting blessings in early adolescents: An experimental study of gratitude and subjective well-being. The results indicated that blessing were associated with enhanced self-reported gratitude, optimism, life satisfaction, and decreased negative affect. Feeling grateful in response to aid mediated the relationship between experimental condition and general gratitude at the 3-week follow-up. The most important finding was the relationship between gratitude and satisfaction with school experience at immediate post-test and 3-week follow-up. Counting blessings were an effective intervention for well-being enhancement in early adolescents.

Van dyke et al (2007) did a study on How forgiveness, purpose, and religiosity are related to the and well-being of youth, and the purpose of this study was to bring attention that this research has shown and encouraged the empirical study of forgiveness, purpose and religiosity, particularly within the realm of youth mental health and well-being, because the values of forgiveness, purpose, and religiosity are considered mental health.

In another research on Gratitude predicts psychological well-being above the Big Five facets by Alex et al (2008) examined whether gratitude predicts psychological well-being above both the domains and facets of the five factor model. Participants completed the NEO PI-R measure of the 30 facets of the Big Five, the GQ-6 measure of trait gratitude, and the scales of psychological well-being. Gratitude had small correlations with autonomy, and medium to large correlations with environmental mastery, personal growth, positive relationships, purpose in life, and self-acceptance. After controlling for the 30 facets of the Big Five, gratitude

explained a substantial amount of a unique variance in most aspects of psychological well-being. Gratitude is concluded to be uniquely important to psychological well-being, beyond the effect of the Big Five facets.

METHODOLOGY
Aim: To study the relationship between gratitude and personal values in college going students

OBJECTIVES:
- To study gratitude and gender in college going students.

- To study personal values and gender in college going students.

- To study the relationship of gratitude and personal values in college going students.

HYPOTHESIS
- There will be a significant difference in gratitude among boys and girls studying in college.

- There will be a significant difference in personal values among boys and girls studying in college.

- There will be a significant relationship between gratitude and personal values among college going students.

Sample
Randon sampling was administered on 100 college going students 50 boys and 50 girls in the age group of 18-24 years from Delhi and NCR.

TOOLS
Gratitude in college going students
The Gratitude Questionnaire-Six-Item Form (GQ-6) is a six-item self-report questionnaire designed to assess individual differences in the proneness to experience gratitude in daily life.

Personal Values Questionnaire
Personal values questionnaire by Dr. (Mrs.) G.P. Sherry and Prof. R.P. Verma is a 40-item questionnaire which is designed to measure the spectrum of personal values. PVQ has 10 dimensions which were selected for assessment. They are Religious Values, Social Values, Democratic Values, Aesthetic Values, Economic Values, Knowledge Values, Hedonistic Values, Power values, Family Prestige Values, Health Values

ANALYSIS OF RESULT
This research aims to study the relationship between Gratitude and Personal values in college going students. For this research a sample of 100 colleges going students were administered. They were asked to fill the following questionnaires: Gratitude and Personal Values Questionnaire. Accordingly the scoring was done, and statistical analysis was carried out.

Table-1: representing Mean, Standard Deviation and T-test among college going boys and girls on Gratitude (N=100)

	Mean	Standard Deviation	T-Test
Boys	28.90	4.586	4.066
Girls	32.44	4.107	4.066

Table-2: Mean, Standard Deviation and T-test among college going boys and girls on Personal Values (N=100)

Variables		Mean	Standard Deviation	T-Test
Religious values	1	11.52	3.872	-1.022
	2	12.34	4.148	
Social values	1	12.42	3.233	.458
	2	12.12	3.317	
Democratic values	1	15.22	3.688	1.334
	2	14.24	3.656	
Aesthetic values	1	12.28	3.774	-.460
	2	12.62	3.608	
Economic values	1	13.94	3.365	1.327
	2	13.12	2.789	
Knowledge values	1	12.86	2.949	.326
	2	12.66	3.179	
Hedonistic values	1	12.10	2.621	-.914

	2	12.62	3.050	
Power values	1	10.36	3.161	-2.048
	2	11.64	3.089	
Family values	1	11.90	3.406	-.793
	2	12.42	3.143	
Health values	1	10.02	2.428	-1.881
	2	11.22	3.803	

Table-3: Correlation of PVQ with Gratitude among college going students (N=100)

Variables	R
Religious Values	-.027
Social Values	.165
Democratic Values	.262**
Aesthetic Values	.232*
Economic Values	.006
Knowledge Values	.178
Hedonistic Values	-.265**
Power Values	-.316**
Family Values	-.168
Health Values	-.038

DISCUSSION

Gratitude is one of the five characters strengths within the virtue category of transcendence. Peterson and Seligman offer an expanded definition of gratitude "a sense of thankfulness and joy in response to receiving a gift, whether the gift is a tangible benefit from a specific other or a moment of peaceful bliss evoked by natural beauty". Gratitude cannot be defined in a single way but it can be understood through our family values, moral stories and religious stories as well. The advantages of practicing gratitude are about unending. Individuals who consistently practice gratitude by setting aside opportunity to see and reflect upon the things they're grateful for experience more positive feelings, feel more alive, rest better, express more compassion and kindness. Personal values have been employed in so distinctively different ways in human discourse. It is often said that a person has a value or an object has a value. Values that may be included in the general definition of personal values are love, brotherhood, respect for others — including plants and animals — honesty, sincerity, truthfulness, non-violence, gratitude, tolerance, a sense of responsibility, cooperation, self-reliance, secularism and internationalism. But the question is does Gratitude and Personal Values go hand in hand or these two parameters are different.

The present study aims to study the relationship between Gratitude and Personal values in college students .For this study a sample of 100 college students were used out of which 50 were boys and 50 were girls range between the ages of 18-24. The sample study was from Delhi NCR. The variables taken for this study were Gratitude and Personal Values. The tools used for this research were: Gratitude Questionnaire and Personal Values Questionnaire.

The first hypothesis states that, there will be a significant difference in Gratitude among college going students boys and girls. The hypothesis was rejected as the finding showed that there is no significant difference between Gratitude and Personal Values in boys and girls. This variable is neither significant at 0.05 level of significance nor at 0.01 level of significance. Result of earlier studies supports present study. A positive association was found between Gratitude and subjective well-being of students (Froh et al (2008). Another research has proved that Gratitude was considered to be important psychological well-being in Adolescents (Alex et al (2008).

The second hypothesis states that, there will be a significant difference in Personal values among college going boys and girls. The hypothesis was rejected as the finding showed that there is no significant difference between Gratitude and Personal Values in boys and girls. The variable is neither significant at 0.05 level nor 0.01 level. Result of the earlier studies support present study. A positive association was found between Gratitude and subjective Well-being in early Adolescents (Froh et al (2009). Another research has proved that there is a positive association between Strength of character, orientation to happiness and life satisfaction.

The third hypothesis states that, there will be a significant relationship between Gratitude and Personal values among boys and girls. The hypothesis was partially accepted as the findings showed that there is a level of significance between Gratitude and Personal Values at levels of 0.05 and 0.01. On the basis of the result it can

be showed that Gratitude is significant to Democratic, Power and Hedonistic Values at 0.01 (2-tailed) level and it is significant to Aesthetic Values at 0.05 (2-tailed) level. Evidences of past research reviews also support the present study. A positive association was found between Gratitude and Happiness where it was proved grateful thinking improved mood, and results also supported the predictive validity of the GRAT (Gratitude Resentment and Appreciation Test)

The co-efficient of correlation obtained between the variable of gratitude and of democratic values has been computed to be r=.262 which has been considered to be significant at level of significance 0.01. Thus we may infer that a significant positive correlation exists between Gratitude and Democratic values. Thus as the level of Gratitude increases the level of democratic values also increases.

There is no correlation between Family, Health, Knowledge, Social, Religious and Economic values with Gratitude. Because Gratitude pushes a person to think about the deeds of the other person first, this results in over compensating for things which are actually not very big. In turn, the person we might be grateful to may take undue advantage of this feeling and ask for favours which may be much more than the work done. On a personal front as a person would be sacrificing to compensate as a mark of gratitude towards a person there comes a feeling of discomfort and irritation. This causes unrest in a person's personal and social life. Alongside, showing gratitude towards a person give an impression of weakness and docile personality

CONCLUSION

The purpose of this research was to assess the relationship between Gratitude and Personal Values in youth and to see whether there is a significant difference between the two. Gratitude pushes the person to think about the deeds of the other person. In turn, the person we might be grateful to may take undue advantage of this feeling and ask for favours which may be more than the work done. The results showed that the hypothesis was accepted as it showed there was significant level of difference between Gratitude and Personal Values. Gratitude seems to be significant to Democratic, Power, Hedonistic and Aesthetic Values. The future implications indicated that feeling of gratitude leads to caring for each other. It teaches us to be sincere and honest which is essential for the society's progression. It allows us to look inside us, and not to be arrogant, which is essential for successful outcomes for the work that we do. Gratitude and personal values promotes prosocial behaviour and incorporating such constructs of positive psychology have implications for health and wellbeing for individuals that further contributes to moral competence and character building of youth.

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PROMINENCE OF PRINT AND ONLINE NEWS IN DIGITAL AGE: A QUANTITATIVE STUDY ON ENGLISH LANGUAGE NEWS PAPERS

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ABSTRACT

Indian print media have to survive the onslaught of emerging electronic media; even the glory of the print media is not yet diminished. It is impossible to visualize India without its deep-rooted print journalism. The research aims at bringing in detailed analysis of the origin, present scenario and future of Indian print media, and how electronic media influences the print. The nature of the press is changing with technological advancement and spread of modern technologies. Even, if the electronic media is emerging print media has its own place of its readers. It is the print media, which made the vernacular language newspapers to flourish to its present day level. Information technology has revolutionized communication media. Print media continue to spread literacy and to share opinions in the "global village". Media became the mirror of the society for almost all purposes. There is clear evidence that newspapers are high in the factor of credibility, which enables the preference of hard copy of newspapers. In this research survey, method of analysis is used for collecting data along with content analysis to prove that the hypothesis is valid.

Keywords: print media, Electronic media, Folk media, Impact, New Media, Future

INTRODUCTION

The phenomenon of media transformation, which began with the printing revolution, was the first leap step towards the evolution of a new age of information and communications. It was in the year 1556 AD; printing press got introduced in India, it was initially the bi-product of the British rule later used as a tool to spread nationalism by the Indians. James Augustus Hickey started the first English newspaper Bengal Gazette. The Hickey's Gazette was more focused to give exposure to the private life and conditions of the officials of the East India Company. It was not a time when India had any press freedom nor any powerful press laws in the country. It is the emergence of Indian newspapers and magazines, which helped to unfurl and spread the idea of nationalism among the citizens. The first newspapers published in India were not so attractive. And early newspapers contained news regarding the British India. As an improved step in 1816 Gangadhar Bhattacharya and Harichandra Ray, launched a paper named *Bengal Gazette* in Bengali, which was the first Indian language newspaper. The publication of newspapers like Bombay Samachar in Gujarati, Times of India in English, Amrit Bazar Patrika in English served the Indian population by informing about the relevant events. Print media, especially newspapers, magazines, tabloids, posters, pamphlets all played a major role in creating a well-informed public. An interesting factor is that India continues to be among the few markets, which always holds prime position for print media. India as the country, which is developing a new factor called the digital divide, is a positive sign for print media. Print media often affected by new technologies even before the emergence of the internet. The technological innovation that resulted in the introduction of Television and Radio had affected the readership patterns. Television channels are emerging and 24-hour news channels covering news and events from all the nook and corners.

The Internet is converting itself as a prime source of news and significant information, making it an element, which is capable of affecting the condition of traditional newspaper. It is a fact that the decline of the print media is a global phenomenon. But in developing countries like India the condition is different. Newspapers had failed to reach the younger generations, who is technologically addicted. When compared to print media, the online media and electronic media have less news credibility, content accuracy, reliability and many other problems, which is pointed as a negative mark for the growth of the electronic and online media in India. Even though, the online media is as credible as television, radio and magazines but not like newspapers. The existing media formats will start adapting to a larger online presence to survive. Indian newspapers were emerged more out of political needs than the commercial and market needs. Newspapers are the one of the most important medium to carry messages. Another important factor is that due to the rise of internet and internet literacy among the youth is resulting in the emergence of the ascendance of the digital media. The younger generation is the first to adopt new technologies; similarly, in the media they are more interested to read news from online newspapers. As new technologies emerge this will affect the circulation of print media, as the younger generation depends greatly on online media there will be a serious reduction in the number and circulation of the print media, but at the same time the preference for printed newspapers due to its credibility will not

decrease. This research aims at the analysis of the future of English language newspapers. Print media, one of its important benefits includes that it provides greater opportunity of viewing than the online media. Print media as a whole, is always exposed to repeated exposures. Even though, electronic media have a greater impact in the society the influence of print media is not less when compared to electronic media. Accuracy is the primary factor, which makes the print media the most credible form of information. Most of the older generation population always prefers a hard copy to read, and they consider it as the primary source of information. Studies point out that the population between the ages of 18-25 always prefers to read online news. One of the significant factors which created a shift from the popularity of print editions of newspapers to online editions is due to the decrease in revenue. Television, radio, and newspapers and other traditional media started making their contents online and are making websites. Thus; as the age changes it will also result in changing media preference. The research paper aims at bringing a detailed analysis of print media by comparing it with the electronic and print media.

LITERATURE REVIEW

A survey of Indian media and entertainment scenario jointly conducted by FCCI and price water house coopers recently assumed that in increasing literacy there was a possibility of future growth and expansion of print media in future. Electronic media are forcing the media to adopt new technologies and to be more professional and to be more sensitive to the market structure. A report for the World Editors Forum points out that newspapers must innovate and integrate. The main focus must be placed on opinion. While newspapers survived the competitions from television, the challenge is more serious in the digital age. According to Kipphan (2001) Magazines in essence, are the great interpreters of what is happening. The World Press Trends 1999 survey shows that the newspapers are on the upswing. Newspaper sales increased in many countries in 1998, while advertising revenues soared according to the 10th annual World Association of Newspapers (WAN) survey of World Press Trends. According to the latest RNI report, (Press in India) at the end of 1999 the total circulation of all newspapers and periodicals was 13,00,87,493 copies. The majority of Indian Newspapers are periodicals. There total number from 38,607 in 1998 to 41,161 in 1999, an increase of about 6.6%. *Robin Jeffery* (2010) in his book *India's newspaper revolution: capitalism, politics and the Indian-language press* states that; Indian-language newspapers face challenges from television in its many forms from the web and from cellular technologies. Regular electricity supply is a luxury in rural India, and that, plus the cost of the hardware, retards the spread of television and the Web. In an online article named *Traditional Folk Media in India: Know Your Folks (2011)* the author points out that the Folk media forms the language of expression for the local populace and gives them a chance to voice out their opinions on various issues. It is a method to underline certain dominant ideologies of the society through its own people. Marshall McLuhan an academic and commentator on communications technology prophesied that printed books would become obsolete, killed off by television and other electronic information technology.

Kesley (1995) states the main reason that weekly papers provide interactive services is to generate new revenue, profit sources. From a declining circulation as advertising is a main source of revenue for print media. Rupert Murdoch saw the opportunities offered by new technology and through diversification created and International press followed by a television domain, creating a truly global media empire. A report of the press council of India (2001) states that, In the past there had a sharp decline in the price of hardware items, as this indicate it as a positive development as it would make the technology more affordable. In a paper named *Future of Print Media in the Electronic Age* (2009) the author states that the first substantial threat to the print media came through the medium of radio set and brought news directly to the listener. However, the low levels of internet penetration in India coupled with computer illiteracy makes newspaper the preferred choice. It was in the year 1995 internet had been introduced in India when the Videsh Sanchar Nigam (VSNL) Limited launched its services. India is not a web-saturated country. About 60 % of the internet users are in the eight big cities of the country. It is another important element to consider that in India the traditional media is struggling to convey the total scale of the Indian contemporary experience. It is the new media and Blogging systems, which allows people to become the 'producers' of information'. Print media will have to find new ways to engage people in participation and this is becoming the major concern of the print media. In the book, *Indian Media business* the author states that the reading time has decreased in 2012 from the time, which had spent in the year 2005. In addition, he pointed out the effect of literacy and education on the readership patterns. From a report in the Economic Times it states that the Internet penetration in Urban India was 64.84% in December 2017 as compared to 60.6% last December. In comparison, rural Internet penetration has grown from 18% last December to 20.26% in December 2017. From an analysis conducted by the chamber of Assocham which was collected from the responses of about 235 families residing in cities including Delhi, Mumbai, Chennai, Hyderabad, Pune and Bangalore, the industry body claimed that Indians residing in big cities are now spending

less than half the time reading newspapers and watching television as compared to 3-4 years ago. And it also reflected that realizing the importance and reach of internet a majority of newspapers have digitalized and individual articles and stories are being circulated on social media.

According to the report of Audit Bureau of Circulations it is stated that in the developed economies, the circulation of newspapers is on decline but in India the trend is opposite to that of in developed countries. And a number of 2.37 crore copies have been added in the past ten years. According to Varghese Chandy, the vice-president of marketing and advertising sales at Malayala Manorama. *"If you look at Kerala, the regional press has been growing steadily. In the last three years, we have grown by almost 6 per cent and the growth will continue for the next few years. At the same time, online is also growing. I won't say because the online is growing the print will go down, that is not the case in a market like Kerala."* Chadha, R (2017) in his article titled *Why India's Newspaper Industry Is Still Growing* states that despite the strong growth of digital media in India, the traditional formats of television and print still account for the largest portion of total media ad expenditures. India remains somewhat unusual in that print revenues continues to grow, with newspapers specifically still serving as an effective way for advertisers to reach a significant audience. From all these collected details we can state that the online media is increasing due to the increasing internet penetration and accessibility which does not makes the idea that the print media usage will decrease but the present data is shows a rise in the circulation of newspapers.

THEORITICAL FRAME WORK AND METHODOLOGY
The theory used in the research is the theory of uses and gratification. This theory is used to understand how and why people actively seek out specific media to satisfy specific needs. This theory is intended to analyze and understand the media usage patterns of media consumers.

Quantitative analysis is used in the research. Quantitative analysis is done by conducting survey (simple random sampling) to understand the print and online media usage. Questions are structured to understand the print and online media usage, preferences, and accessibility of news among consumers and also to analyze the internet penetration in the country. The research also contains analysis of how the online and new media is affecting the circulation of newspapers and the readership patterns. Secondary data has been collected from research analysis and results of earlier done surveys. The research also contains circulation data of different English language newspaper. Percentage of internet penetration in India is also included. Circulation details of newspapers in the year 2013, 2014 and 2017 are also included in the research to get an elaborate idea about the readership patterns. The research also depends on certain reports of Price water house Coopers, Internet and Mobile Association of India and survey reports of Press Trust of India, Indian Readership survey and data collected from Audit Bureau of Circulations.

OBJECTIVES
➢ To find out the future status of Indian newspapers.

➢ To analyze the influence of electronic and new media over print media

➢ To find out whether print media is at threat from internet.

RESEARCH QUESTIONS
➢ Whether print media will experience rapid growth or sudden decline in future?

➢ What is the present condition of print media?

➢ How increased internet penetration affects the circulation of newspapers?

➢ What will be the position of newspapers and the online/new media in the future?

HYPOTHESIS
➢ The circulation of print media is increasing even during the rapid growth of online medium.

➢ The preference for online media is increasing due to easy accessibility and internet penetration.

➢ The readership patterns of the print consumers will change.

RESEARCH DESIGN
Simple random sampling is used in the research. 300 samples were collected of various age groups. The survey questionnaire used for collecting sample contained eighteen questions. The data were collected from both suburban and rural populations. Secondary data was collected to add more information regarding the future of

Indian print media. Secondary data include reports of Internet and Mobile Association of India along with the survey of the Indian Readership Survey.

ANALYSIS AND FINDINGS

CROSS TABULATION AND CHISQUARE TEST RESULTS
Hypothesis: 1 The circulation of print media is increasing even during the rapid growth of online medium

			Circulation		Total
			yes	No	
medium	print	Count	71	38	109
		Expected Count	77.8	31.2	109.0
		Residual	-6.8	6.8	
	broadcast	Count	34	11	45
		Expected Count	32.1	12.9	45.0
		Residual	1.9	-1.9	
	online	Count	109	37	146
		Expected Count	104.1	41.9	146.0
		Residual	4.9	-4.9	
Total		Count	214	86	300
		Expected Count	214.0	86.0	300.0

medium * circulation Cross tabulation

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.227[a]	2	.199
Likelihood Ratio	3.182	2	.204
Linear-by-Linear Association	2.622	1	.105
N of Valid Cases	300		

Table 1

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 12.90.

The key result in the Chi-Square Tests table is the Pearson Chi-Square.

The value of the test statistic is 3.227[a]

The footnote for this statistic pertains to the expected cell count assumption (i.e., expected cell counts are all greater than 5): no cells had an expected count less than 5, so this assumption was met.

Because the test statistic is based on a 3x2 cross tabulation table, the degrees of freedom (df) for the test statistic is

$$df=(R-1)*(C-1)=(3-1)*(2-1)=2*1=2$$

The corresponding p-value of the test statistic is p = 0.199.

The circulation of print media is increasing even during the rapid growth of online media. In the sample dataset, the respondents were asked their preferred medium of news and whether they think that online and broadcast media will affect the circulation of print media. (Table:1) There were three answer choices: Print, Broadcast, Online. This study wants to test for an association between the preferred medium of news and whether online and broadcast media will affect the circulation of print media using a Chi Square Test of Independence

The p value obtained using Chi-Square test is 0.199, since the p value is greater than the chosen significance level (a=0.05), we do not reject the null hypothesis. Rather, we conclude that there is not enough evidence to suggest an association between the preferred medium of news and the circulation of print media get affected by online and broadcast media.
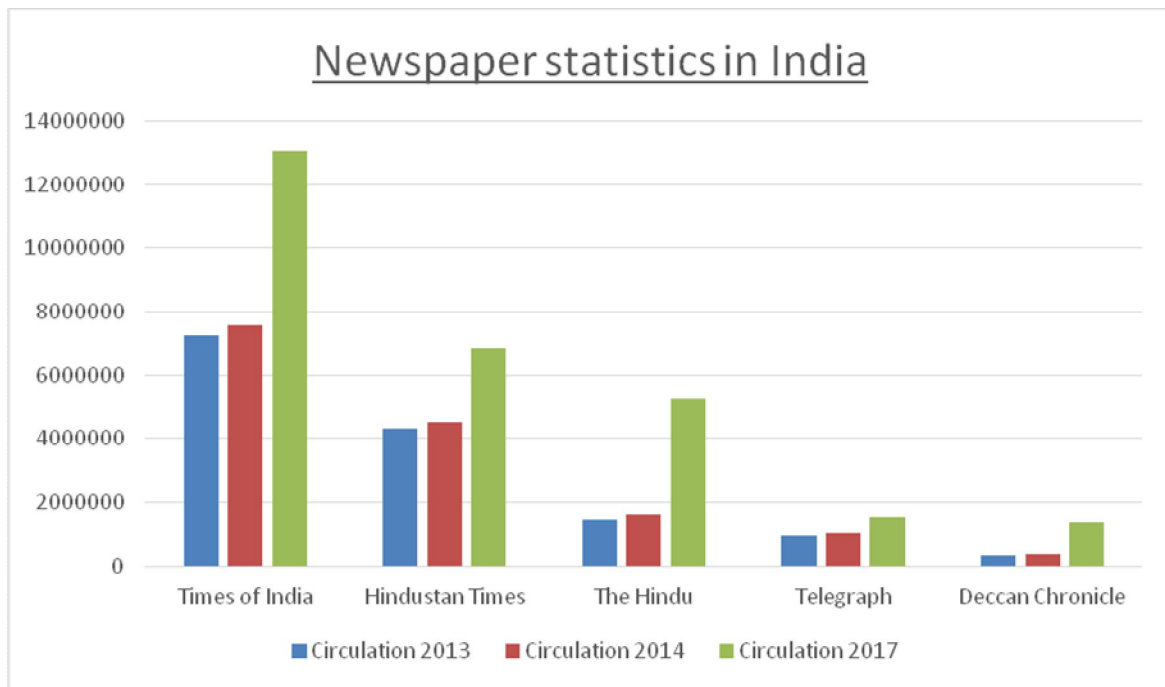
Figure-1: Distribution of News newspaper statistics in India from 2013 -2017

The Fig: 1 shows the circulation details of five English language newspapers in India. As the table shows the circulation of newspapers are increasing there is a rapid rise in the readership patterns. All the newspapers are having increased readership rates. This shows that the Indian population still depends on print media for news consumption.

Hypothesis: 2 The preference for online media is increasing due to easy accessibility and internet penetration.

accessible * medium Cross tabulation			Medium			Total
			print	broadcast	online	
accessible	print	Count	62	16	24	102
		Expected Count	37.1	15.3	49.6	102.0
		Residual	24.9	.7	-25.6	
	broadcast	Count	37	24	9	70
		Expected Count	25.4	10.5	34.1	70.0
		Residual	11.6	13.5	-25.1	
	online	Count	10	5	113	128
		Expected Count	46.5	19.2	62.3	128.0
		Residual	-36.5	-14.2	50.7	
Total		Count	109	45	146	300
		Expected Count	109.0	45.0	146.0	300.0

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	151.555[a]	4	.000
Likelihood Ratio	164.214	4	.000
Linear-by-Linear Association	99.535	1	.000
N of Valid Cases	300		

Table-2

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.50.

The key result in the Chi-Square Tests table is the Pearson Chi-Square.

The value of the test statistic is 151.555[a]

The footnote for this statistic pertains to the expected cell count assumption: no cells had an expected count less than 5, this assumption was met.

Because the test statistic is based on a 3x2 cross tabulation table, the degrees of freedom is $df = (R-1) * (C-1) = (3-1) * (3-1) = 2 * 2 = 4$

The corresponding p-value of the test statistic is p = .000

The preference for online media is increasing due to easy accessibility and internet penetration. (Table:2) In the sample test the respondents were asked their preferred medium of news and most accessible medium of news. There were three answer choices: Print, Broadcast, and Online. This study wants to test for an association between the preferred medium of news and most accessible medium of news using a Chi Square Test of Independence. The p value obtained using Chi-Square test is .000, since the p value is lesser than the chosen significance level (a=0.05), so the alternative hypothesis is proved.

Percentage of Internet Penetration growth in India from 2000 -2016
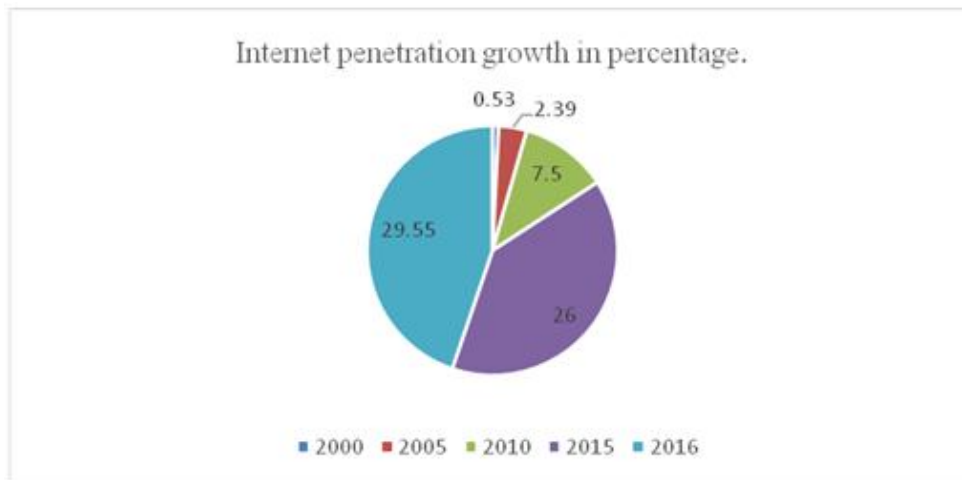
Figure-2: Distribution of Internet Penetration growth in India

Figure 2 shows the percentage rise in internet penetration rate in India from the year 2000-2016, that can improve the accessibility of online media. The internet penetration is increasing this will result in an increased use of internet and online news portals.

Fig-3: Percentage of mobile internet user penetration in India
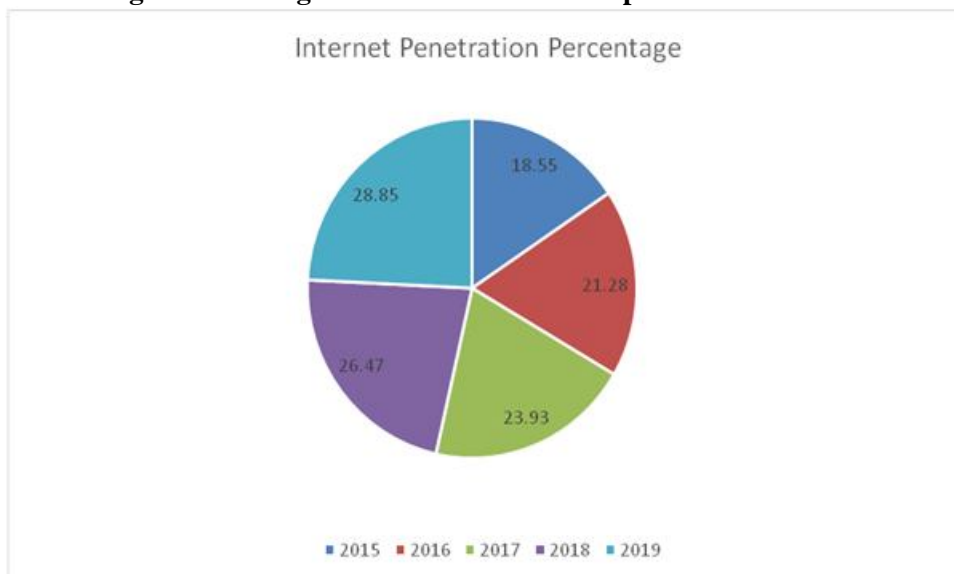

Figure-3

Figure: 3 The statistics provide information regarding mobile internet penetration in India from the year 2015-2019. The table shows the percentage of Indian population who accessed the internet from their mobile phones. The percentage shown in the table contains both the urban and rural usage data. The rate in 2019 i.e.; (28.85%) is expected to reach 34.85% in 2022.

Hypothesis: 3 The readership patterns of the print consumers will change

FIG: 1.1 DISTRIBUTION OF PREFERED MEDIUM OF NEWS OF THE RESPONDENTS
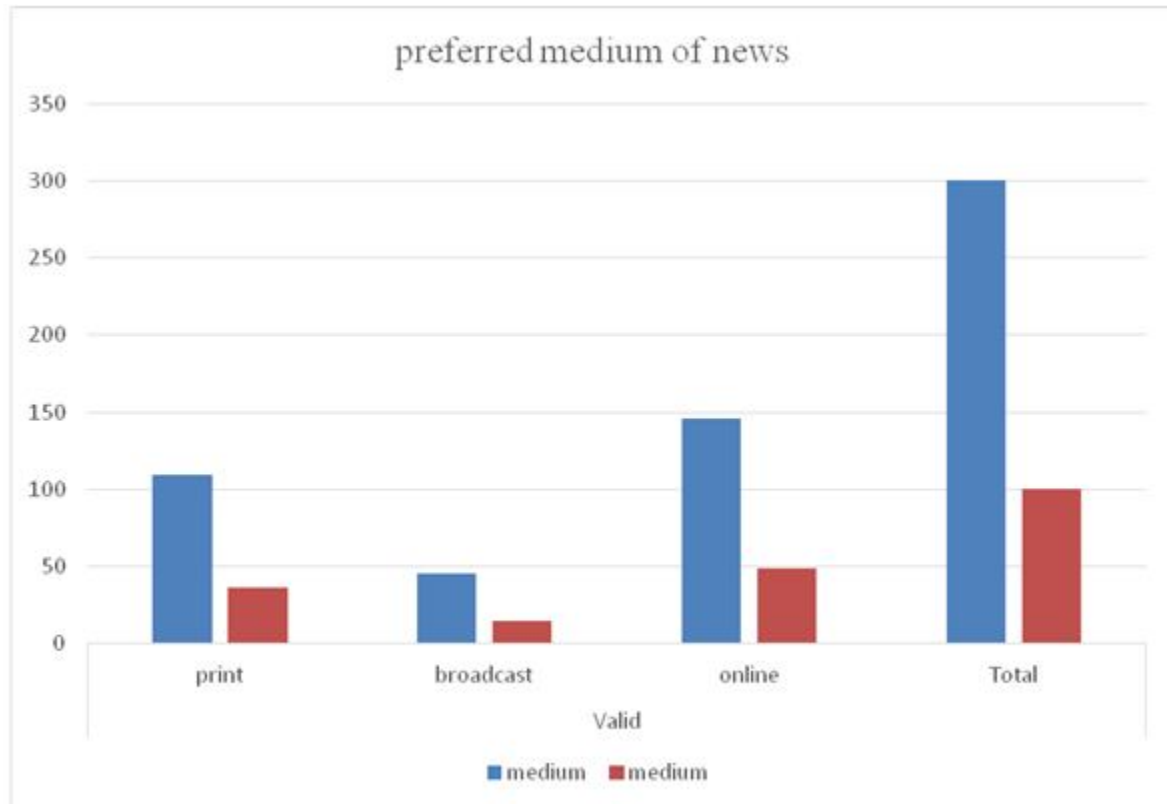
Figur-1.1

The fig 1.1 shows the distribution of the medium of news preferred by the respondents with the highest frequency of Online (n=146) with the distributed percentage of 48.7 and distributed percentage of 15 broadcast medium of news preferred by the respondents. Most of the respondents prefer online as the medium of news and lowest used medium of news is broadcast.

FIG:1.2 DISTRIBUTION OF MOST ACCESSIBLE MEDIUM OF NEWS OF THE RESPONDENTS
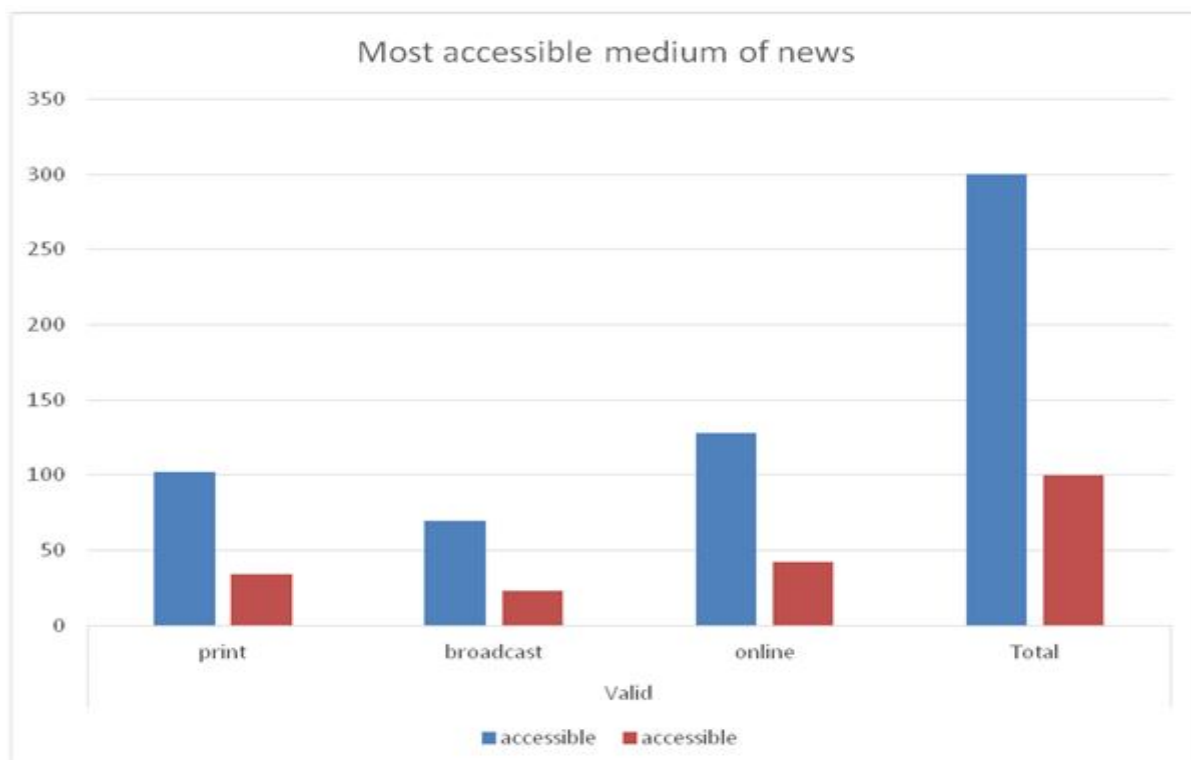
Figure-1.2

The chart 1.2 shows the distribution of the most accessible medium of news by the respondents with the highest frequency of online media of news with (n=128) with a distributed percentage of 42.7 and lowest distributed frequency of 23.3 of broadcast media. Among the total 300 respondents 128 respondents have online as the most accessible medium of news.

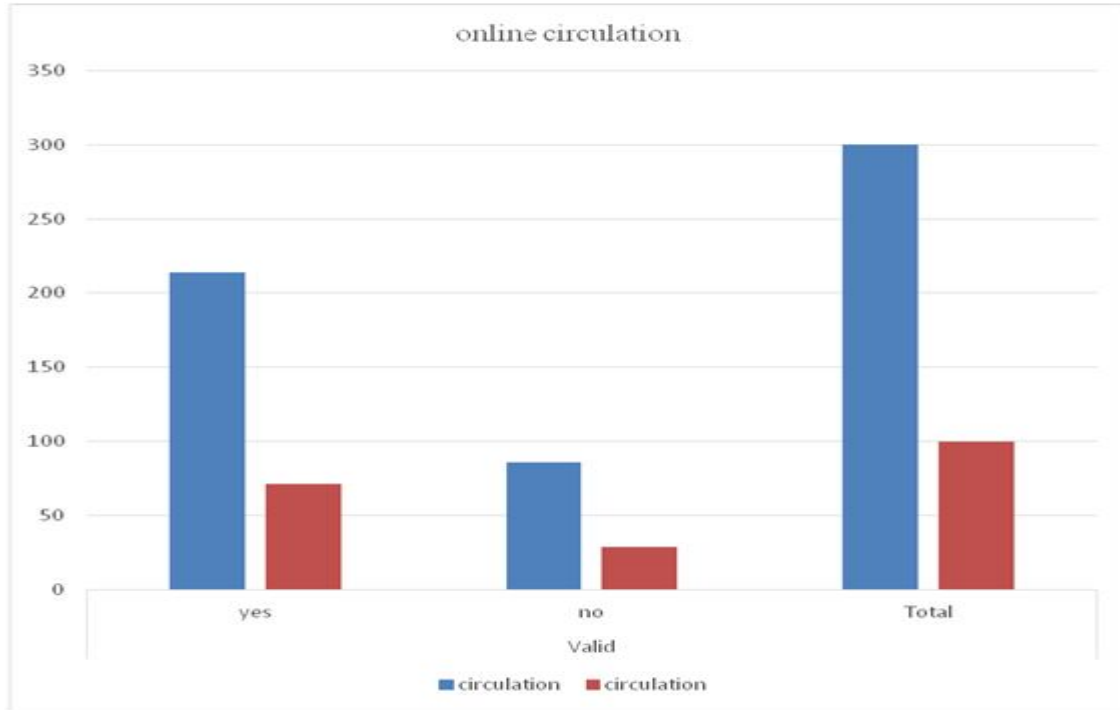## 1.3 DISTRIBUTION OF ONLINE CIRCULATION DATA OF THE RESPONDENTS

Figure-1.3

The figure 1.3 shows the distribution of online circulation data of the respondents with the highest frequency of 'yes' (n=214) with a distributed percentage of 71 and the lowest distributed percentage of 28.7

The chart 1.4 shows the distribution of the credible medium of news as responded by the respondents with the highest frequency for online (n=115) with percentage distribution of 38.3 and the lowest distributed frequency of 30.0 percentages. Among the total 300 respondents 115 prefer online as the most credible medium of news.

1.4 DISTRIBUTION OF E-PAPER READING HABITS OF RESPONDENTS
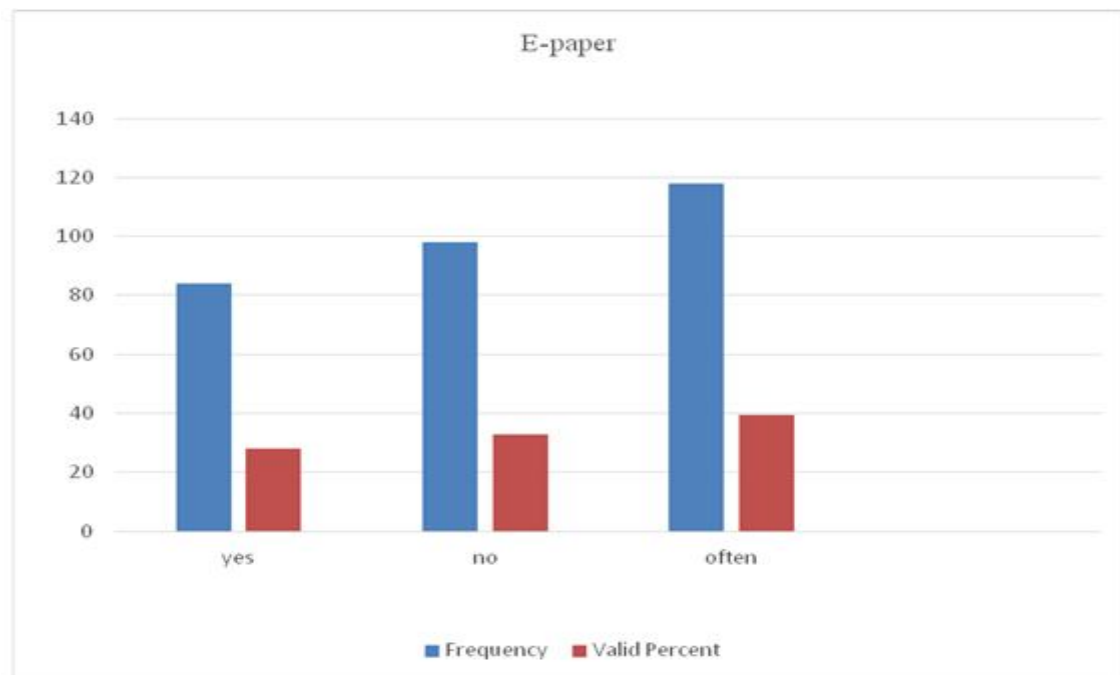

Figure-1.4

The figure 1.4 shows the distribution of e-paper reading habits of the respondents with the highest frequency of often (n=118) with the distributed percentage of 39.3 and the lowest distributed percentage of yes (28.0) of the total respondents.
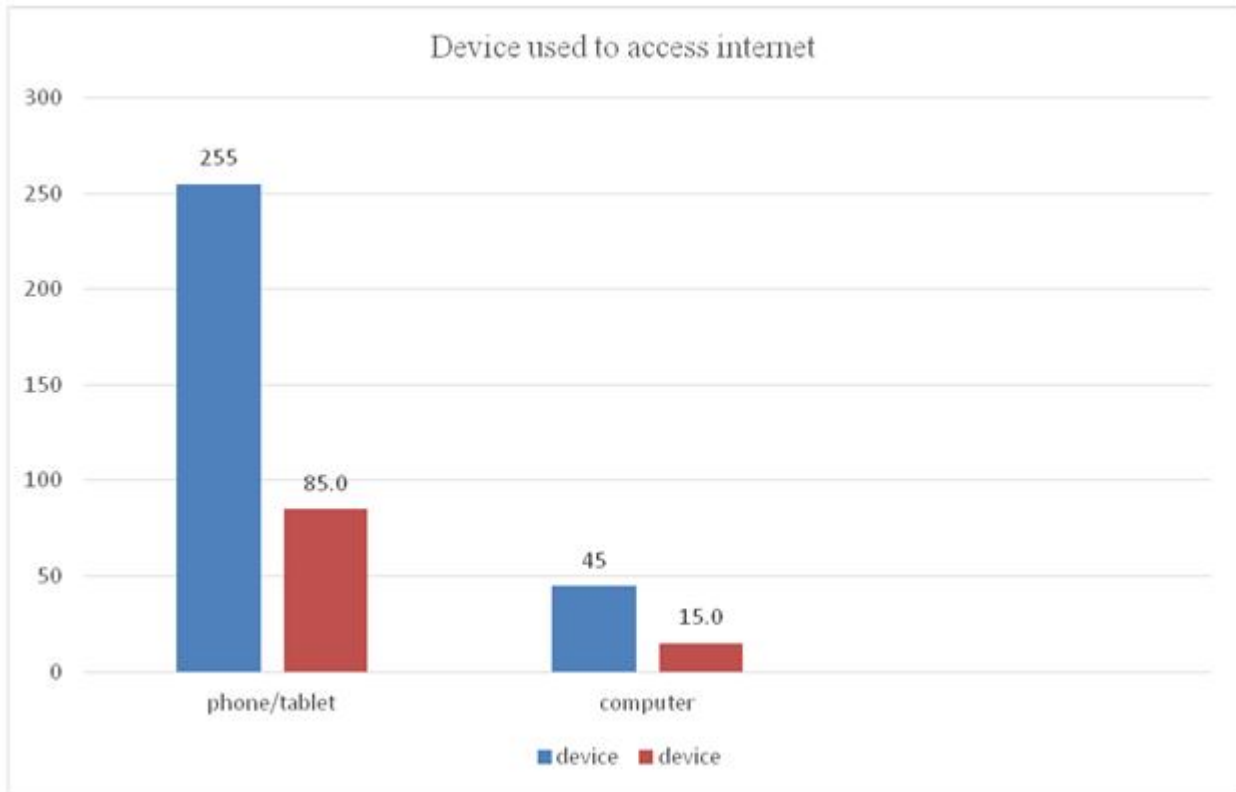
1.5 DISTRIBUTION OF DEVICE USED TO ACCESS INTERNET

Figure-1.5

The figure1.5 shows the distribution of device used by the respondents to access internet with the highest frequency (n=255) with the distributed percentage of 85 and the lowest distributed percentage of 15 (using computer).

As we see in the figure: 1.1, maximum numbers of respondents are in the age group of 18-25. In the figure: 1.1, which contains the distribution of media preference of the respondents in which 48.7 percentages of people prefers online media for news consumption. This clearly indicates that internet has become an easily available source of information, but the major point to be noted is that majority of the respondents of the survey are of the age group 18 -25 and 50 above. So we can conclude that the youth and the respondents of the age group above 50. In the figure: 1.2 which shows most accessible medium of news of the respondents. And it is the online medium is accessible to 42.7 percentage of the respondents. Which means that online is the most preferred and at the same time most accessible medium of news. About 85 percentage of the respondents uses mobile phones to access internet as they as easy to carry and portable at the same time. The survey had been conducted among the respondents in Southern parts of India especially Kerala. This small number of respondents will not represent the country in total. The hypothesis is proved by the frequency distribution tables and the chi square tests. The survey data proves that most of the respondents prefers online media for news consumption.

DISCUSSION

The primary and very first purpose of this research was to find out the future of Indian English language newspapers and to examine whether the online media is affecting the circulation and readership pattern of the print media. The study further explored the impact of increasing internet penetration rate and the use of online newspapers. The study also focusses on the internet accessibility of users in India. In a previous paper N., Tekawade. (N.d.). *The Future of the Indian Print media industry in the Digital Age* the author states that there are two factors which positions the Indian print media industry distanced and creates a declining trend. It is also added that India is a country with low internet penetration and only 34 percentage of Indians have access to the internet. This clearly depicts the role of Indian Newspapers. But in accordance with the survey data we can say that most of the respondents prefer the online medium of news because its accessibility and portable in character. We can assume that the preferred medium of news of the respondents and the assumption that the

online and the broadcast media will affect the circulation of the print media has no association. And at the same time with the circulation data available for the English language newspapers in India also proves that the print media is not facing threat from online and broadcast media. The preference for online media is increasing due to easy accessibility and internet penetration. The respondents preferred medium of news consumption and at the same time the most accessible medium of news is online as the result of increasing internet penetration. The most important advantage of electronic or the online media is that news or information can be shared using online or other electronic media which is not possible while we are using print media. And at the same time the latest newspaper circulation details points out that the circulation is in hike but the future growth rate of the print media will be slower than other types of media. As India's population is growing, the growth of the print media will continue until the country achieves universal literacy. Yet another significant point is that for the serious readers, reading news on such a small screen is not the substitute for reading the news in the printed form. The percentage of illiterate people in the country add to the advantage if the print media. About 280 million people in India is still illiterate and when they became literate the newspapers will be in need. It is an age old belief that the print media is facing unprecedented threats from the internet. Though the research states that the print media is not facing any threats from internet and other online media this can change over period of time.

CONCLUSION

In India internet had established itself as a platform for consuming news and at the same time India is a developing country and a fixed amount of the population still depends on the print media industry. There is a major point to be noted that is the decline of the print industry in the developed countries and the European countries are entirely different from a developing country like India. Even the survey conducted shows that the respondents have easy access to online media this cannot be used to prove that they access internet to log on to online news sources. On the other side the total circulation and growth of English language newspapers in India is showing a positive trend. Along with this the main point to be noted is that the growth of English newspapers in India had slowed down to 3.5 percentage at the same time the newspapers of vernacular medium is high at 10 percentages. But the statistics and reports of readership survey and audit bureau circulation details shows that the circulation of the English language newspapers in India is increasing. At the same time the accessibility of online media is also increasing due to the increasing internet penetration in the country. The main factor thing which makes the newspaper as the primary source of information is that newspapers are delivered at home. This is not the indication that the internet and the online media don't offer any significant information. The youth in the age group of 18-25 always prefer online media, but the elderly population, even have access to online they prefer the print form of news. The fact is that the increasing internet penetration and online accessibility has increased the usage and dependence over print media. Thus the main point to be noted is that even though the online media is emerging and taking up the time spend for using internet, the print media has its own importance and significance. And the preference for online media for the younger generation is increasing.

LIMITATIONS

The survey done to attain data for the research is limited to people those who live in rural and suburban areas. Only a small sample of data is collected from the respondents of urban areas. The research does not focus deeply on the urban population. And is limited to Kerala and southern states of India and Pondicherry. Detailed analysis from the Northeast, Punjab, Kashmir, Maharashtra and other states will provide further data.

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CONCEPTUALISING GLOBALISATION: A FEMINIST PERSPECTIVE

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Globalization, in its broadest sense refers to the economic, social, cultural and political processes of integration that result from the expansion of transnational economic production, migration, communication and technologies. Although both Western and non-Western feminists working in various areas of philosophy, including ethics, metaphysics, political philosophy, epistemology and aesthetics have made important contributions to debates about globalization, this entry focuses on one subset of these critiques. Below, the outline the ways in which predominantly Western feminist political philosophers who explicitly discuss globalization have articulated and addressed the challenges associated with its economic and political dimensions.

Economic globalization refers to the processes of global economic integration that emerged in the late 20th century, fuelled by neoliberal ideals. Rooted in classical liberal economic thought, neoliberal's claims that a largely unregulated capitalist economy embodies the ideals of free individual choice and maximizes economic efficiency and growth, technological progress and distributive justice. Economic globalization is associated with particular global political and economic institutions, such as the World Trade Organization, the International Monetary Fund and the World Bank and neoliberal economic policies.

In this regard political globalization refers to changes in the exercise of political power that have resulted from increased transnational engagement. Prior to World War II, the international political system was understood in terms of the so-called Westphalian model. According to this model, political power is exercised primarily through governance at the level of the territorial state. The international political system is comprised of sovereign states, which enjoy a monopoly on political power within their own territories. International treaties govern relations among states, however, states generally cannot legitimately intervene in the domestic affairs of other nations. Thus, when problems, such as famines, genocides, and civil wars arise, they are seen primarily as security issues for individual states, not matters of justice affecting the global community.

Feminist philosophers tend to adopt the non-ideal theoretical perspectives, which focus on specific, concrete issues. Early feminist analyses focused on issues that were widely believed to be of particular importance to women around the world, such as domestic violence, workplace discrimination, and human rights violations against women. While gendered analyses of these issues have provided valuable insights into the distinctive nature of the harms involved, many feminist philosophers view this approach as too narrow, both in terms of the specific issues it addresses and its methodological approach to these issues. They contend that even apparently gender-neutral global issues often have a gendered dimension, including war, global governance, migration, southern debt, and climate change. Moreover, by addressing specific global "women's issues" as independent phenomena, early feminist analyses failed to take into account the systematic and structural gendered injustices associated with neo-liberalism. Although gender oppression takes different forms in different social, cultural, and geographical locations, women in every society face systematic disadvantages, such as those resulting from their socially assigned responsibility for domestic work. Because of these structural injustices, women of all nationalities tend to suffer more from the poverty, overwork, deprivation, and political marginalization associated with neoliberal policies. Thus, more recent feminist analyses of globalization tend to understand the outcomes of globalization not as disparate or contingent phenomena, but rather as a result of systematic, structural injustices on a global scale. Indeed, some contend that the global basic structure itself is implicitly biased against women.

The second key feature of feminist approaches to globalization is a shared commitment to core feminist values, including an opposition to the subordination of women. Some theorists also draw upon feminist interpretations of mainstream moral and political ideals, such as equality, democracy and human rights to develop critiques of neoliberal policies. For instance, Jaggar appeals to liberal democratic norms to argue that many southern debt obligations are not morally binding because their citizenries were "largely uninformed and/or their options were virtually non-existent" when they undertook these supposed debts. Many feminists also use the language of human rights to address the challenges of globalization. While they acknowledge that traditional understandings of human rights are implicitly male-biased, they contend that feminist rearticulating these norms can help to identify the gendered harms involved in sexual slavery, forced domestic labour, and the systematic withholding of education, food, and healthcare from women and girls that follow from severe economic deprivation. However, not all feminist political philosophers agree with this approach. Some believe that new feminist

ideals, such as relational understandings of power, collective responsibility, and mutual dependence, are needed to diagnose the gender injustices associated with globalization. For instance, Iris Marion Young argues the traditional ideal theories of justice are unable to account for the unjust background conditions that contribute to the development of sweatshops in the global South. She argues that a new relational model of responsibility, which she calls the social connection model, is needed to articulate the obligations that people in affluent northern countries have to workers in the global South. The social connection model holds that individuals bear responsibility for structural injustices, such as those suffered by workers on the global assembly line, because our actions contribute to the institutional processes that produce such injustices. In particular, northern consumers have a responsibility to organize collectively to reform the injustices associated with sweatshop labour.

The third key feature of feminist approaches to globalization is an emphasis on feminist methodologies. In particular, these approaches tend to embody three key methodological commitments. The first is intersectionality, which maintains that systems of oppression interact to produce injustices, and thus, that gender injustices cannot be understood solely in terms of sex or gender. Feminists who theorize about justice on the domestic level argue that women's experiences of gender oppression are shaped by other forms of oppression, such as those based on race, class, disability, and sexual orientation. Feminist theorists of globalization contend that gender oppression interacts with these systems of oppression, along with other forms of systematic disadvantage that arise within the global context. Salient categories include nationality, geographical location, citizenship status, and socioeconomic position within the global economy. Given this broad conception of intersectionality, feminist theorists of globalization insist that gender injustices arise within specific transnational contexts, such as historical relationships among nations and current global economic policies. The second methodological commitment shared by feminist approaches to globalization is sensitivity to context and concrete specificity. Feminist philosophers strive to accurately reflect the diverse interests, experience, and concerns of women throughout the world, and to take seriously differences in culture, history, and socio-economic and political circumstances. In this way, feminist approaches to globalization attempt to move between local conditions and global pressures, between historical realities and contemporary experiences of oppression and vulnerability, while being attentive to complex interactions among social, economic, and political forces. This has led some feminist theorists of globalization to distinguish their views from well-known feminists, such as Martha Nussbaum and Susan Okin, whom Ackerly and Attanasi refer to as "international feminists" by virtue of their methodological commitments. In their view, Nussbaum and Okin do not pay sufficient attention to the ways that justice and injustice are mediated by local conditions in their attempts to identify universal moral ideals. As a result, their theories tend to privilege Western perspectives and undermine their own commitment to reflecting women's lived experience. Finally, feminist theorists of globalization are committed to developing self-reflexive critiques. At the heart of this methodology is a willingness to critically examine feminist claims, with particular attention to the ways in which feminist discourses privilege certain points of view. For instance, Schutte insists that ostensibly universal feminist values and ideas are likely to embody the values of dominant cultures. This helps to explain why the voices of women from developing countries are often taken seriously only if they reflect the norms and values of the West and conform to Western expectations. Thus, Schutte insists that feminists must engage in methodological practices that de-centre their habitual standpoints and foreground perspectives that challenge accepted ways of thinking.

The struggle to develop feminist theories that embody these methodological commitments has been ongoing for feminists. In the 1980s, Chandra Talpade Mohanty observed that Western feminist scholarship tends to adopt an ethnocentric perspective, depicting so-called Third-World women as one-dimensional, non-agentic, and homogenous. In her often-cited words, such scholarship tends to suggest that: the average third world woman leads an essentially truncated life based on her feminine gender (read: sexually constrained) and her being "Third World" (read: ignorant, poor, uneducated, tradition-bound, domestic, family-oriented, victimized, etc.). This is in contrast to the (implicit) self-representation of Western women as educated, as modern, as having control over their own bodies and sexualities and the freedom to make their own decisions. Mohanty claims that this perspective leads to a simplistic understanding of what feminists in Western countries can do to "help" women in developing nations. Many of the recent developments in the feminist literature on globalization can be understood as a response to this theoretical failure. In addition to recognizing the ways in which power influences the production of feminist theories, feminist critics of globalization strive to understand the ways in which Western women share responsibility for gender injustices in developing countries and at home and to articulate their obligations to eliminate these injustices. Despite these common aims and methodological commitments, feminists have analyzed globalization from a number of different theoretical perspectives. Below, we examine three prominent approaches to globalization, developed by postcolonial, transnational, and ethics of

care feminists. Although it is not possible to draw sharp boundaries around these theoretical perspectives, we identify some distinctive features of each.

Postcolonial and Third-World feminisms offer primarily critical theoretical frameworks to globalisation, which analyze globalization within the context of the history of Western colonialism and imperialism. They begin with the claim that Western colonialism and imperialism have played important roles in shaping the contemporary world, and highlight their enduring effects on global relations and local cultural practices. Although postcolonial and Third-World feminists write from all over the world, they foreground non-Western epistemic standpoints and criticize North-South power asymmetries from the diverse perspectives of members of the global South. Postcolonial and Third-World feminists make several important claims. First, they insist that it is impossible to understand local practices in developing countries without acknowledging the ways in which these practices have been shaped by their economic and historical contexts, particularly their connection to Western colonialism and imperialism. Moreover, they warn that attempts to explain the suffering of women in developing countries in simplistic terms often tend to reproduce a "colonial stance" toward the global South. For instance, as explained above, some Third World feminists, such as Chandra Mohanty, see elements of imperialism in Western feminist scholarship on women in the global south. Similarly, postcolonial feminists, such as Uma Narayan, criticize feminists for unwittingly adopting a Eurocentric perspective. For instance, some Western feminist scholars, such as Mary Daly, strongly criticize cultural practices, such as sati, the Indian practice of widow immolation, as self-evidently wrong. However, Narayan argues that approaching sati as an isolated, local phenomenon fundamentally misrepresents it. Understanding sati in the context of colonial history provides a richer analysis of this practice, since it gained its symbolic power during British rule as an emblem of Hindu and Indian culture Highlighting the role that colonialism has played in shaping local practices enables feminists to avoid adopting a Eurocentric perspective. Likewise, postcolonial and Third-world feminists insist that any feminist analysis of the harms of globalization must take seriously the history and ongoing cultural, economic, and political effects of colonialism and imperialism. Postcolonial feminists further argue that although colonialism has formally ended, many aspects of globalization are best understood as neo-colonial practices.

Another prominent school of feminist theoretical responses to globalization puts care, both caring labour—the work of caring for the young, old, sick, and disabled, and the everyday maintenance of households—and the moral ideal of care, at the centre of its analyses. Proponents of this approach begin by observing that most mainstream analyses of globalization either ignore or devalue care. This is problematic, they argue, for at least two reasons: care work, which is done almost exclusively by women, has been profoundly influenced by globalization; and any viable alternative to neoliberal globalization must prioritize the moral ideal of care. Thus, ethics of care approaches to globalization have both practical and theoretical dimensions.

Theoretically, ethics of care feminists aim to provide a systematic critique of neoliberal assumptions and develop moral ideals capable of guiding more just forms of globalization. In their view, neo-liberalism presupposes a problematic notion of the self, which posits individuals as atomistic, independent, and self-interested, and an inaccurate social ontology, which suggests that human relationships are formed by choice rather than necessity or dependency. These assumptions lead neo-liberalism to prioritize economic growth, efficiency, and profit making over other values, such as equality, human rights, and care. Ethics of care feminists reject these assumptions. In their view, human beings are fundamentally relational and interdependent; individuals are defined, indeed *constituted*, by their caring relationships. All persons experience long periods during which their lives literally depend on the care of others, and everyone needs some degree of care in order flourish. Thus, vulnerability, dependency, and need should be understood not as deficits or limitations, but rather as essential human qualities requiring an adequate political response. Ethics of care feminists contend that relational values, including care, should form the basis of more just forms of globalization.

In Hankivsky's view, a global ethics of care begins with three assumptions:

1) Care is considered to be a fundamental aspect of all human life. 2) All human beings are interdependent by virtue of being part of ongoing relations of care and 3) People are entitled to care because they are part of ongoing relations of care. Because a global care ethics begins with a relational ontology, it requires global political leaders to develop social and economic policies that aim to meet human needs and reduce suffering rather than to expand markets and increase economic competition. Held endorses a similar view. According to her, an ethic of care requires leaders to foster a global economy that is capable of meeting universal human needs .Similarly, Miller advocates a "global duty to care," which requires individuals to take responsibility for their role in contributing to global oppression, and obligates leaders to advocate for institutions that embody the moral value of care.

Concretely, feminist theorists who favour an ethics of care approach highlight the role of care work in the global economy and put forth recommendations for re-evaluating it. For example, Robinson develops a relational moral ontology that sheds lights on the features of globalization that are usually invisible: the global distribution of care work and the corresponding patterns of gender and racial inequality; the under-provision of public resources for care work in both developed and developing countries; and the ways in which unpaid or low-paid care work sustains cycles of exploitation and inequality on a global scale. Similarly, Held advocates for increased state support of various forms of care work and for policies designed to meet people's needs in caring ways.

Transnational feminism maintains that globalization has created the conditions for feminist solidarity across national borders. On the one hand, globalization has enabled transnational processes that generate injustices for women in multiple geographical locations, such the global assembly line. Yet on the other, the technologies associated with globalization have created new political spaces that enable feminist political resistance. Thus, transnational feminists incorporate the critical insights of postcolonial, Third World and ethics of care feminists into a positive vision of transnational feminist solidarity. Transnational feminism is sometimes contrasted with global or international feminism, a second-wave theory that emphasizes solidarity among women across national boundaries based on their common experience of patriarchal oppression. However, transnational feminism differs from global feminism in at least three significant respects.

First, transnational feminism is sensitive to differences among women. Global feminists argue that patriarchy is universal; women across the globe have a common experience of gender oppression. They promote the recognition of a "global sisterhood" based on these shared experiences, which transcends differences in race, class, sexuality, and national boundaries. This solidarity is thought to provide a unified front against global patriarchy. Transnational feminists also advocate for solidarity across national boundaries. However, their approach emphasizes the methodological commitments discussed above, specifically inter-sectionality, sensitivity to concrete specificity, and self-reflexivity. Transnational feminists are careful to point out that although globalizing processes affect everyone; they affect different women very differently, based on their geographical and social locations. They are also quick to acknowledge that many aspects of globalization may benefit some women while unduly burdening many others.

Second, transnational feminist solidarity is political in nature. Whereas global feminists advocate a form of social solidarity defined on the basis of characteristics shared by all women, such as a common gender identity or experience of patriarchal oppression, transnational feminist solidarity is grounded in the political commitments of individuals, such as the commitment to challenge injustice or oppression. Because transnational feminist solidarity is based on shared political commitments rather than a common identity or set of experiences, advantaged individuals, including those who have benefited from injustice, can join in solidarity with those who have experienced injustice or oppression directly.

Third, transnational feminists focus on specific globalizing processes, such as the growth of offshore manufacturing, rather than a theorized global patriarchy, and often take existing transnational feminist collectives as a model for their theoretical accounts of solidarity. For instance, Ann Ferguson argues that anti-globalization networks, such as worker-owned cooperatives, labour unions, fair trade organizations, and land reform movements, are creating the conditions for North-South women's coalition movements based on non-essentialist political commitments to global gender justice.

On the whole, globalization presents a number of challenges to feminist political philosophers who seek to develop conceptions of justice and responsibility capable of responding to the lived realities of both men and women. As globalization will most certainly continue, these challenges are likely to increase in the coming decades. As we have outlined above, feminist political philosophers have already made great strides towards understanding this complex phenomenon. Yet the challenge of how to make globalization fairer remains for feminist philosophers, as well as all others who strive for equality and justice.

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