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Editorial.....

It is heartening to note that our journal is able to sustain the enthusiasm and covering various facets of knowledge. It is our hope that IJMER would continue to live up to its fullest expectations savoring the thoughts of the intellectuals associated with its functioning .Our progress is steady and we are in a position now to receive evaluate and publish as many articles as we can. The response from the academicians and scholars is excellent and we are proud to acknowledge this stimulating aspect.

The writers with their rich research experience in the academic fields are contributing excellently and making IJMER march to progress as envisaged. The interdisciplinary topics bring in a spirit of immense participation enabling us to understand the relations in the growing competitive world. Our endeavour will be to keep IJMER as a perfect tool in making all its participants to work to unity with their thoughts and action.

The Editor thanks one and all for their input towards the growth of the **Knowledge Based Society**. All of us together are making continues efforts to make our predictions true in making IJMER, a Journal of Repute

Dr.K.Victor Babu
Editor-in-Chief

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LEGAL EDUCATION IN THE ERA OF INFORMATION TECHNOLOGY: AN ANALYSIS

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ABSTRACT

Technology has influenced the way we think, the way we work and the way we spend our daily life. From books to search engines, the world of IT has affected our life. When we talk about IT we talk about databases, faster research, Artificial intelligence, cloud etc. and this has influenced our education system in every possible way. The influence of IT on legal education system is inevitable as in a competing era the need of faster research, better research environment, sound infrastructure and career development opportunities are much needed. In this paper, we will review and discuss the various aspects relating to legal information retrieval systems, with special reference to the various essential legal databases and the emergence and use of Information Communication Technology (I.C.T) in developing our legal education system. This paper also examines the impact of Information Technology in Courtrooms and judiciary for a faster delivery of Judgements and its impact in legal profession as whole.

INTRODUCTION

Technological advancement or developments taking place in 21st century, affects every sector of economy. Education sector is one of the sector, influenced by the use of technology. The Education System in the recent years have recently expanded with the blessings of Information and communication Technology. Use of computers, Artificial Intelligence, websites etc. as the source of education has made the education easier and accessible to all. Information Technology in Education System attracts several benefits for the students. Use of Technology in Education sector is inevitable and one branch of this tree is Legal Education.

*“Technology will not replace Great Teachers
But technology in hands of great teachers
Can be transformational”*

~ George Couros

Law is like cement that fertilizes a barren land for the people to live their lives with dignity and without injustice. Information technology has drastically impacted on our extant laws and thereby stretching the application of the laws and subjecting the laws to either more liberal approach so (Itany, 2015). Recent development in technology is precisely transforming the way of storing, communicating and retrieving of information etc. While triggering changes in institutions, practices, and values, these new developments also offer new possibilities and challenges to the legal profession. Legal Education is the root of Legal Profession, because without education there is no future



in profession. In the Era of globalization, 'Legal Education' touches multi-dimensional streams of education globally with the blessings of information technology. There are not any definite terms which can explain Legal Education similarly as the law cannot be understood without including the social segments in its ambit. Though for an explanation, Legal education is a human science which furnishes relationship of law with the society. Education in law equips the future lawyers, judges, administrators, counsellor and legal scientists to fashion and refashion ways of peace and ordered attainment of the ideals of human governance (Yadav, 2016).

Technology proficiency is recognized as a competency for lawyers, they stand a better chance of getting hired by a decent law firm. Traditional ways of hiring will slowly be replaced by those law graduates who are familiar with technological tools used in law practice (Bains, 2018). Cyber law, is good example to understand the impact of technology. Internet crimes like cyber-crimes including hacking of accounts, cyber-squatting, etc., are yet to be properly covered. It is unfortunate that, our commercial laws did not cogitate electronic transactions and e-commerce – buying and selling through online stores like Quicker, OLX etc.

The development of general educational, general cultural and professional skills in working with information, communicative skills of working with students, the ability to design electronic educational publications — all this together is the basis of information and communication competence of modern teachers of legal disciplines (Akhmetov, 2017). Thus the ambit of technological influence on the legal profession is much wider. But to understand the use of technology in legal profession, its use in legal education must be analysed and understood.

REVIEW OF LITERATURE

Computer technology is now being used for legal storage and retrieval, legal analysis and prediction. Many research have been conducted worldwide to study the influence of Technology on Legal profession. Legal education as a research topic has bought a definition of legal education. According to it Legal education is the concept of great importance and plays a vital and significant function in the implementation of the cherished ideals of Justice, liberty, equality and fraternity as laid down by the framers of the constitution (Bharti, 1999).

The debate about technology being helpful or dangerous still continues to be discussed. But in Legal field it has bought some positive and commendable changes. In a journal published in September 1986, the researchers were of the view that the legal profession cannot ignore the potential that technology will offer (Debesonnet & Cross). Legal futurist Susskind in one of his books mentioned that "disruptive technologies" will have a very huge impact on the lawyers in future (SUSSKIND, 2008). Good Court administration is an essential prerequisite for quick disposal of litigation. Court staff equipped with modern technologies is indispensable for good administration (Upadhyay). Even our judiciary has pointed out the relevance and importance of technology in legal profession.

Use of technology in Legal Education is a wider topic to discuss and analyse. Yuan (1997) monitored the LexisNexis quick law searches of a group of law students over a



period of one year. Yuan examined several aspects of their searching behaviour, including the increase of their command and feature repertoires, their change in language usage, the increase of search speed and the change of learning approaches(Yuan, 1997). In this study it was found that although participants with higher levels of quick law experience used a greater variety of commands and features than those with lower levels of experience, some commands remained rarely or never used.

Students nowadays uses various legal websites like indiankanoon, lawoctopus etc and various legal platforms like Manupatra, lexisnexis etc. for searching the case laws and studying for their examination. This is nothing but the use of technology in the field of education, books being replaced by laptops. The student can be acquainted not only with texts but also the other ways of demonstration can help the student to acquire a sharp knowledge of a particular topic or subject.

ELECTRONIC LEGAL DATA BASES

1) Manupatra Online Legal Database:Manupatra provides legal, taxation, corporate and business policy database. With primary documents and proprietary analytical content covering commentaries, treaties, digests, editorial enhancements, Manupatra has created the largest and most comprehensive online resource of Indian materials(indianlegislation, 2020).It is paid database research system having different subscription polices for different members of legal fraternity. It provides privileged access to its users and empowers them with in-depth legislative regulatory and procedural information critical for decision making in single online platform. It may be useful for law students for preparing their moot court problems as well as doing legal research as a part of their curriculum(manupatra, n.d.).

2) LexisNexis Database: LexisNexis® is a worldwide provider of content-enabled workflow solutions designed specifically for professionals in the legal, risk management, corporate, government, law enforcement, accounting, and academic markets. It provides customers with access to billions of searchable documents and records from more than 45,000 legal, news and business sources(LexisNexis, n.d.).

3) Westlaw is Thompson West's online legal research data base service. It provides quick, easy access to statutes, case law materials, public records, and other legal resources journals and law reviews published from all around the world. The primary legal materials are available on jurisdictions of UK, USA and Commonwealth countries(Burrall & Madasu, 2013).

4) SCC Online Web Edition: It provides top quality information with an interface which makes legal research a quicker, easier and more effective process for the students or other legal professional. It has a collection of over 380 databases, with more than 3.4 million documents and over 16.7 million pages(Scconline).

5) Judgement Information System (JUDIS): Judgement Information System Consists of the judgements of Supreme Court of India and several other High Courts. All Supreme Court reported judgments which are published in Supreme Court Reporter Journal since its inception i.e. 1950 till date are available(Judgements).



RESEARCH METHODOLOGY

The research methodology used is primary research. The Kai Square test will be used to validate the data. The primary research was conducted in several of the law colleges where 65 Students in total filled a google form and there data will be analysed to conclude the research.

BACKGROUND OF THE RESEARCH

The research would be focusing on analysing the data of 65 students and finding out the source of their legal education in 21st century. Research will be conclude that, whether still students prefer to use books as their primary source of Education or Technology has impacted their way of attaining education.

REVIEW OF LITERATURE GAP

Many researches have been done on the impact of technology in Legal profession but there was no significant research was done related to its impact on legal education. The other researches that were done especially talks about the impact of technology on legal education in developed countries like USA and U.K although very less research was done related to India.

STATEMENT OF PROBLEMS

Legal Industry is a growing industry in India and in the era of Globalization and advancement of technologies the scope of it thus has expanded. The research will analyse the data collected of Indian students, to find out if still traditional methods of imparting education prevails over the digital sources. This help the Bar council and various other organizations who controls education department in India to better structure the courses of students, that gradually will prepare them in advance to use technology as their tool in the profession.

OBJECTIVES

1. To highlight the extensive use of Information Technology in Legal Education nowadays.
2. To study whether students prefer to use Digital Sources for their studies or still they stick to traditional methods of books & lectures.
3. To study whether Information Technology will be used to automate or augment legal professionals.

HYPOTHESES

H1: Using Information Technology (Online Sources) in Legal Education is a better option than using Traditional methods.

H2:Use of Information Technology has made the study material more accessible and increased transparency.

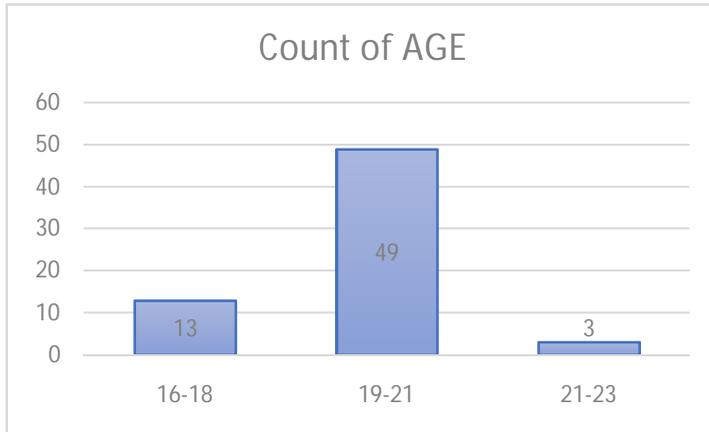
H3:Benefits of using Information Technology exceeds the benefits of sticking to Traditional Methods of getting Legal Education.



DATA ANALYSIS

Use of Information technology includes sources like Online Websites, Legal research data systems and traditional methods includes using books, or lectures in classes etc. These 2 methods are students generally follow to study legal Education. Below given is the data of 65 students that will check if the hypothesis so formed is correct or incorrect.

INTERPRETATION NO. 1 – AGE OF RESPONDENTS

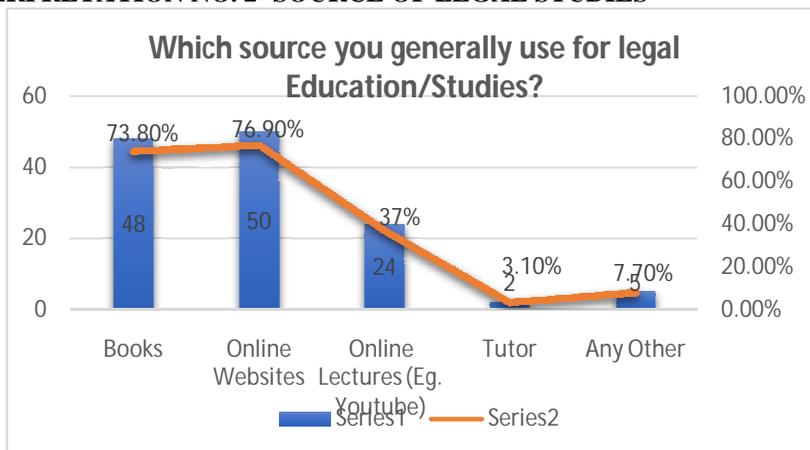


Source: Primary Data

Interpretation

From the above graph it can be observed that the ambit of the data collected majorly is catered to adults of age (19-21). The other respondents are teen agers (16-18) and few are adults (21-23). Thus it can be interpreted that the ambit of data covers students and as per the data requirements the data has been filled by law students. As the research focuses on Legal Education, the data by law students would be analysed further.

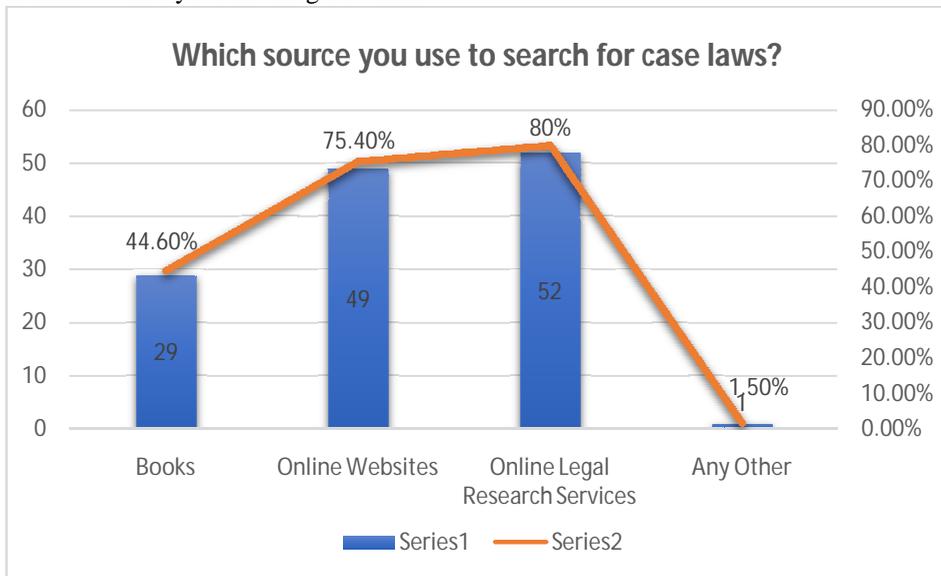
INTERPRETATION NO. 2- SOURCE OF LEGAL STUDIES



Source: Primary Data

Interpretation

The above given graph is to evaluate that which source do students ascertain better to get Legal Education – Books, Online Legal Websites/Platforms, Tutor etc. It can be observed in the above given graph that the number of respondents for Online Legal Websites dominates the other options. Thus it can be interpreted that Students prefer to read online (76.9%), though the fact that the 73.8% of students still prefer Books cannot be ignored. The Books and lectures (37%) both were important to students of legal background although use of Online source was more preferable for them the reason can be determined by the below given data.



Source: Primary Data

Interpretation

The above data seeks to know that which source students find better to search for the case laws, Judgements etc. It can clearly being observed that Students prefer to search on Online Legal Research Systems (80%) - E.g.Manupatra, Westlaw etc. and Online Websites (75.4%) both, though Legal research services dominates online websites. Legal Research services holds vital importance in Legal Education of Students as it is the best source to search for case laws related to any court of any country, although Online Websites like Indiankanoon etc. also proved to be helpful. Books are not preferred so much for searching of case laws by students may be because it consumes a lot of time to search case laws and its non-availability.

Final Interpretation

Evaluating the Data under Part 2 brings us to the conclusion that ‘Online Sources’ are more preferable by students to search for case laws rather than other options and on the hand too Online mode of studies dominated traditional method of studying from books,



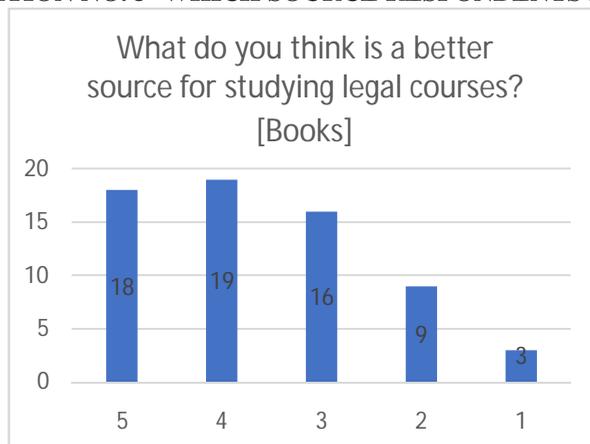
though the fact that there was a minor difference between number of respondents, Books hold a significant position in imparting the Legal Education. This brings us to Rank the sources on the bases of Searching case laws and Imparting Education.

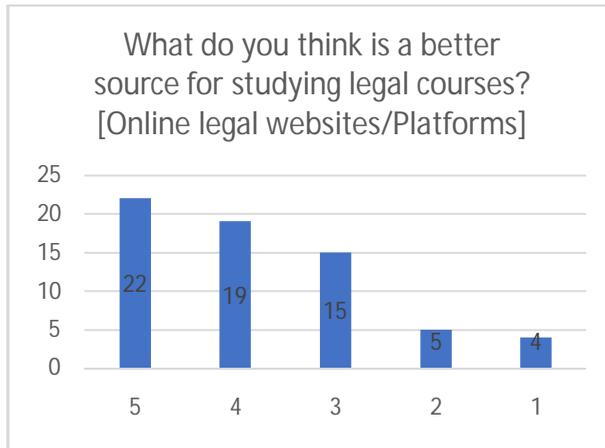
RANK	Searching Case Laws	Imparting Education
1	Online Legal Research Services	Online Websites
2	Online Websites (Other)	Books
3	Books	Online Lectures
4	Any Other	Any Other
5	-	Tutors etc.

Thus it was observed that Students are using Online sources for both searching the case laws and to studying their courses. The above data proves that Technology have influenced the Legal Education and the Traditional methods of paper skimming is becoming old, though in the present era the students still prefer to read from books other than online sources. In the Legal Profession also nowadays Judges and Lawyers both prefer to look for case laws or judgements online rather than finding it in the books. This shows the influence of technology in the Legal Field.

Nowadays when Corona virus affected the whole world the justice has also been affected, though Indian courts went online and used video conferencing to give the judgements. Giving a kick-start to digital judicature, the first paperless e-court, High Court got inaugurated in Hyderabad where it claims that the e-court would provide an electronic case list (e-case list) before the presiding judge for him/her to make digital noting's on a computer that has electronic case records(HC gets its first paperless e-court, 2016). Thus the influence of Technology in Legal field can be observed and it will soon influence all the Indian Courts to go Digitalized.

INTERPRETATION NO. 3- WHICH SOURCE RESPONDENTS FIND BETTER

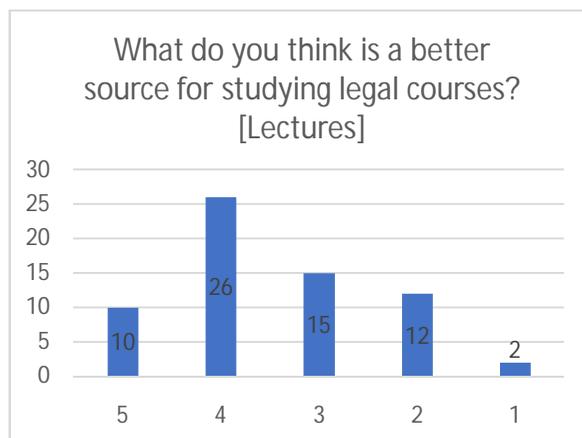


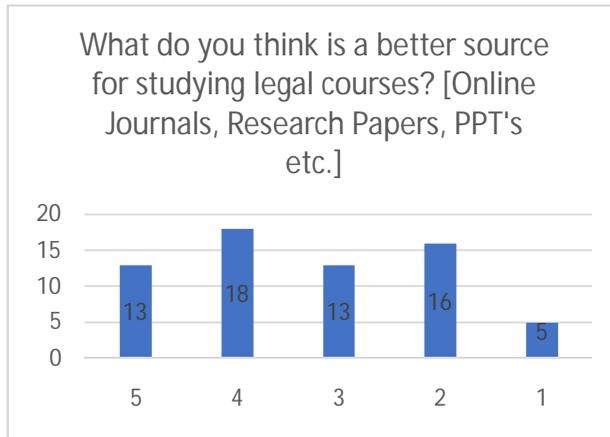


Source: Primary Data

Interpretation

From the above given data it can be observed that the number of respondents voting for 'Online Legal websites/Platforms' dominates the respondents using 'Books' as their source of study. For the interpretation of data Range of 5 & 4 will be given the prime importance. Thus it can be interpreted that students prefer 'Online websites/Platforms' (Range 5+4=41) as their source of studying rather than traditional method of 'Books' (Range 5+4 =37). Other respondents within the Range of '3' uses both the Books and Online platforms in a proportionate way. It can be concluded that the students prefer reading online rather than reading books, although the fact that they have very less difference in number of respondents creates a benefit of doubt that still in the present era the vital need of books cannot be ignored. In the present scenario, Online Legal Websites/Platforms dominates Books as a source of Education.





Source: Primary Data

Interpretation

From the above given data it can be observed that the number of respondents voting for 'Lectures' dominates the respondents using 'Online Journals, Research paper, PPT's etc.' as their source of study. Like the interpretation of data given in 'fig no. 4' Range of 5 & 4 will be given the prime importance for evaluating data. Thus it can be interpreted that the students prefer to listen to Lectures (Range 5+4= 36) rather than studying from Journals, PPT's etc. (Range 5+4 =31). To support the statement it can also be interpreted that the majority of students dislike reading journals or PPT's (Range 2+1=21). It can be concluded that the Traditional method of imparting Education have preferred more by the students rather than self-reading the Journals, Research Papers, PPT's etc., although the fact that emergence of self-reading through Online Journals, PPT's etc. cannot be ignored. In the present scenario, lecture as a source of Education dominates self- reading Journals etc.

Final Interpretation

The above given data can be converted into Ranking system where they can be Ranked according to their preference by students.

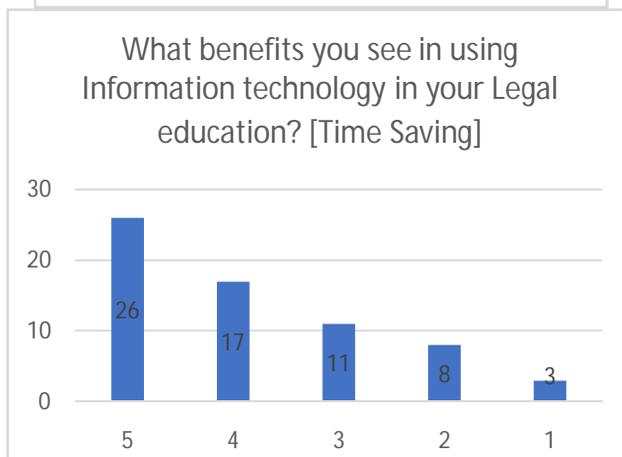
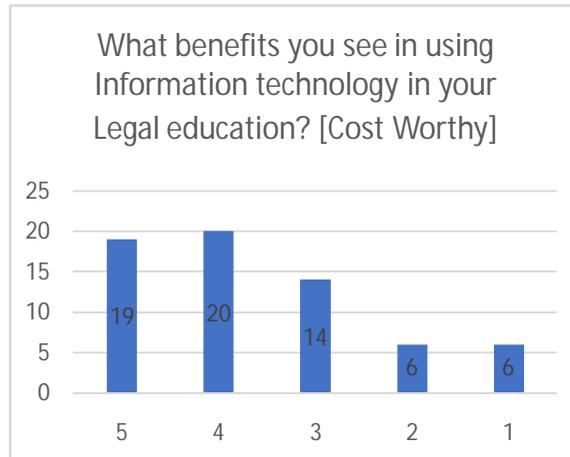
RANK	SOURCES
1	Online Legal Websites/Platforms
2	Books
3	Lectures
4	Online Journals, Research Papers, PPT's etc.

The above Rankings defines it all. As we saw in Final interpretation above, similarly it can be concluded that the wind of technology have also influenced the Legal Field. Various applications of ICTs such as audio-video aid to present practical legal problems can motivate and challenge students and thus enhance their analytical and problem solving skills. But for effective use of ICT in education, there is a need to change the attitude of teachers and students (Singh, 2018). Supporting the statement, it can also be



said that the extensive use of Information Technology has made the study material more accessible and increased transparency to students among students and teachers. Effective use of Information Technology into teaching-learning process could engage the potential of students.

INTERPRETATION NO. 4- BENEFITS OF USING INFORMATION TECHNOLOGY



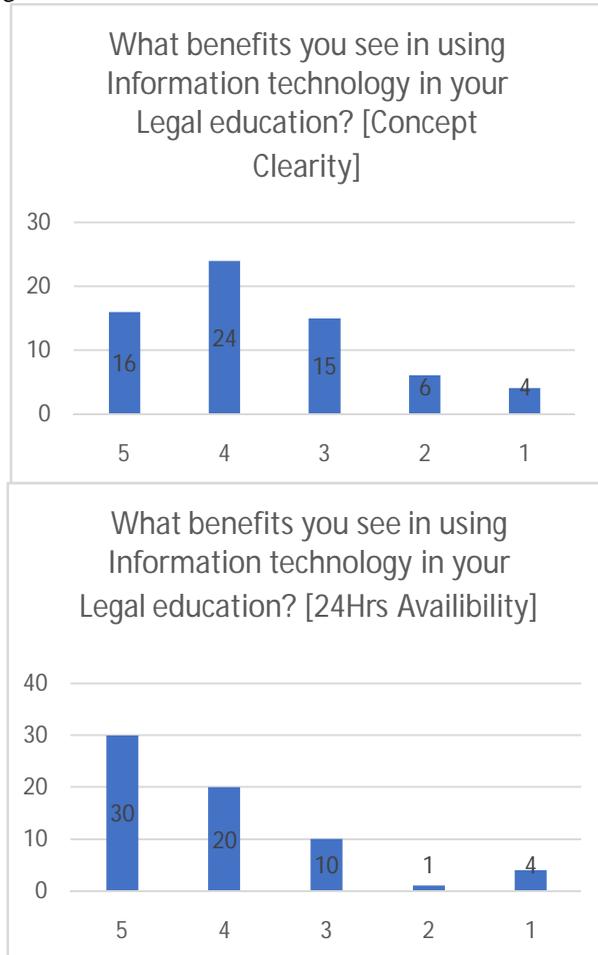
Source: Primary Data

Interpretation

From the above given data it can be observed that respondents find Information Technology as Cost Saving as well Time saving option though if statistically if we observe then it can be observed that respondents find use of Technology as more 'Time Saving' (Range $5+4=43$) option rather than 'Cost saving' option (Range $5+4=39$), also respondents pertaining to Range 5 for 'Time Saving' option exceeds the 'Cost Saving' option. Thus it can be interpreted that students find technology as more time saving friend rather than cost saving friend. Students nowadays have a lot of work load and



because of libraries & being from an efficient families, they do not worry so much about cost rather they need to be time efficient to complete their projects on time. Technology have made it easier for students to find case laws, judgements etc. at one click, thus being a time efficient option for legal students, though the fact that it is also a benefit to cost cannot be ignored.



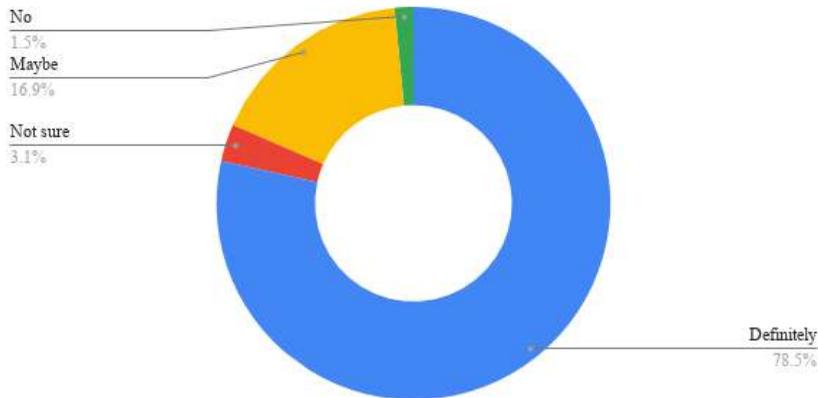
Source: Primary Data

Interpretation

From the above given data it can be observed that respondents find technology more as a 24 Hr friend rather than concept clearer teacher. Evaluation of data will more concentrate to respondents pertaining to Range 5 rather than Range 4 as there is major gap between numbers of respondents between two data provided. 24 Hr availability (Range 5=30) of technology is more beneficial to students rather than using it for clearing concepts (Range 5= 16). It can be concluded that Students uses technology as it

more available option, though the fact that it somewhere helps students to clear their concepts cannot be set aside (Range 4= 24).

Count of What do you think, does use of Information Technology in Legal education has scope in future?



Source: Primary Data

Interpretation

From the above given pie chart it can be interpreted that according to the respondents Information Technology has scope in future. This may be because we already see digitization in courtrooms and judgements being delivered online on various legal platforms. Thus it was observed that 78.5% of people choose technology to be the vital part of Legal education in coming times on the other hand 1.5% voted 'No' and they think that legal studies will only be studied in the traditional way. Other respondents (47.9%) were not sure that Information Technology will be helpful and reliable in future. To conclude it can be observed that in the coming era the technology will dominate the traditional way of teaching and imparting education. Technology for lawyers, effective use of technology means new clients, stronger work product, and more efficient use of time; for law students, it means better job prospects and a smoother transition into practice(Bains, 2018)

CONCLUSION – *Following Data and figures satisfies Hypothesis 1, 2 and partially satisfies 3.*

Evaluation of data concludes that the above interpretation of data satisfies Hypothesis 1 & 2 but partially satisfies 3. Emergence of technology sure have influenced the Legal education sector in a positive way. It has made made the study material more accessible and increased transparency for both students and teachers. The projects are now being circulated on student portals, and students have to prepare it with the help of various applications like MS Word, MS powerpoint etc. which on the other hand do increase the technical knowldege of students. Technical knowledge is very important in near future for legal students, as the profession demands technicality. The resent situation of corona virus spread has forced the classes to go online for law students, thus the change can be seen and future can be imagined.



Before 2005, students mostly use to search for the case laws in the books, and the assignments were given in the classes, there was no mode of getting judgments other than the law journal that was published with the recent judgements, though the technology was emerging at those times. Books, journals, Notes, and reasearch papers were few traditional teaching methods that were used by the teachers for imaprting legal education. The time has changed, laptop facilities should be provided in Law Colleges. Some lectures with the help of I.C.T. Application should be compulsory as a norm of Education Methods (M.Pandya, 2012). The present evaluation data also reveals that the traditional methods of studying Legal Education have gradually started to vanish and adoption of technology took place among the teachers and students. Although the fact that Books ranked 2nd in the table, reveals that still their usage cannot be ignored. Technology have proven its benefits to students, who finds it more accessible (24hrs availability), helping in clearing clarity, Cost worthy and most importantly time saving option. The benefits of traditional methods cannot be determined or interpreted directly, thus in a plenary sense it can cannot be said that benefits of Technology exceeds benefits of using books although the fact of data cannot be denied. Thus it can be said that, hypothesis 3 is partially satisfied.

FINDINGS

- After the evaluation of the data, the no. of respondents have been converted into percentages and the Findings of the data are given below-
- 76.9% of students prefer using technology as they like to read from online websites rather than other sources.
- 73.8% of students still prefer traditional source of reading from books rather than online.
- 37% of students prefer going to colleges to attend lectures (Traditional source) where as 10% of students prefer other sources like tutors etc.
- 80% of students prefer to search case laws from legal research platforms like LexisNexis, Manupatra etc. whereas 75.6 % prefer to search for it online on websites like IndianKanoon etc. (Use of Technology preferred).
- 44.6% of students prefer to search for case laws in books whereas 1.5% prefer using other sources. (Traditional source)
- 78.5% of students prefer that technology have a better scope of Legal Education in coming future and it will be an indispensable part of it where as 21.5% of students are not sure or prefer that it will never replace the traditional sources of Education.
- More than 50% of students finds use of technology as time saving, cost worthy and concept clarity friend where more than 75% of students prefer it to be useful because it is 24Hrs available.

CONCLUSION

The transformation of the legal education is positive change as per future perspective. Future requires the lawyers to possess technical as well as theoretical knowledge. The courtrooms are now begin to become digitalized and lawyer's profess profession now demands technical skills as well. There is total flexibility in legal education research methods and sources as latest technology evolves.



The research concludes that there is implementation and use of digital sources for studying legal courses. The books holds a prime importance in educating students, though it has slowly started to be replaced by online sources where students prefer to study from online websites rather than from books. The sources for searching for case laws have drastically changed to online sources from books. The students have understood the importance and benefits of technology over traditional sources. The digitalization of legal studies have helped students to increase their ambit of research and knowledge as well. Even the use of digitalization in the current situation of COVID-19 is visible and praised by the experts.

Though there is implementation of technology for imparting education to law students but still legal education has to cover a long distance to reach its destiny and its goal is peace, justice, equality, integrity and confidence in the virtual world by educating young legal minds in various fields of law. To achieve this goal, competent legal education to law students holds a prime importance. It shall be competent enough to tackle all the upcoming challenges in Legal profession.

LIMITATIONS

The research conducted restricts itself to Legal Education. Legal profession as a whole might have some negative effects of adopting technology too. The laws in India are still not ready to welcome the control of technology in. For example Cyber law is the domain at the intersection of technology, networking and law. To check for the offences, India has only one enacted act namely the Information Technology Act, 2000 which got amended in 2008. In order to develop e-commerce and international acceptable level of legal uniformity, certain rules and practices must be adopted. The computerized or digitalized environment is more process based rather than personalization, it thus becomes necessary to have an environment of confidentiality integration, and authentication of communication. Thus it can be an important area for future researches.

References

- 1) (n.d.). Retrieved from manupatra: <http://www.manupatra.co.in/Asp/CompanyInfo.aspx>
- 2) (n.d.). Retrieved from LexisNexis: <http://www.lexisnexis.co.in/en-in/about-us/about-us.page>
- 3) (n.d.). Retrieved from Scconline: https://www.scconline.com/downloads/SCC_OnLine_Web_Edition_Brochure.pdf
- 4) Akhmetov, A. (2017). Retrieved from articlekz: <https://articlekz.com/en/article/17780>
- 5) Bains, A. (2018, July 25). myadvo. Retrieved from <https://www.myadvo.in/blog/technology-in-the-legal-education-system/>
- 6) Baker, J. J. (2018). A legal research odyssey: Artificial Intelligence as disruptor. *Law library journal*.
- 7) Bharti. (1999). 'Legal Education- Some Critical Issue. *FLJD*, 122.
- 8) Burrell, M. R., & Madasu, V. N. (2013). Importance of Internet Facility in Support of Legal. *2(5)*, 44.



- 9) Debesonnet, C. G., & Cross, G. R. (n.d.). An Artificial Intelligence Application in the law. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.926.7352&rep=rep1&type=pdf>.
- 10) HC gets its first paperless e-court. (2016, July 18). Retrieved from The Hindu: <https://www.thehindu.com/news/national/andhra-pradesh/HC-gets-its-first-paperless-e-court/article14495840.ece>
- 11) indianlegislation. (2020). Retrieved from <http://www.indianlegislation.in/Aboutus.aspx>
- 12) Itany, N. (2015, May). IMPACT OF INFORMATION TECHNOLOGY ON LEGAL EDUCATION. Retrieved from https://www.researchgate.net/publication/313063802_IMPACT_OF_INFORMATION_TECHNOLOGY_ON_LEGAL_EDUCATION_A_Proposal_for_the_Introduction_of_Information_Technology_Law_in_the_Nigerian_Law_Curriculum?enrichId=rgreq-db69525ed0b1a258a2e45a06c68ed0b2-XXX&enrichS
- 13) Judgements. (n.d.). Retrieved from <http://164.100.79.153/judis/>
- 14) M.Pandya, P. (2012, December). The Concept of I.C.T. Application in Legal Field. 2(12).
- 15) Singh, D. A. (2018, June 29). Role of Information and Communication Technologies in Transforming. International Journal of Research and Analytical Reviews, 5(3). Retrieved from <http://ijrar.com/>
- 16) SUSSKIND, R. (2008). THE END OF LAWYERS. (Oxford University Press.
- 17) Upadhyay, S. A. (n.d.). Information & Communication Technology and judiciary. Guhati: Judge, Guhati High Court .
- 18) Yadav, D. J. (2016). Legal Education in the Era of Information and Communication Technology: An Analysis. JIJ.
- 19) Yuan, W. (1997). End-user Searching Behavior in Information Retrieval: A Longitudinal Study. JASIST, 218-34.



THE CASE OF JYOTI STRUCTURES LTD. – FROM LIQUIDATION TO RESOLUTION

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Introduction

The advent of the Insolvency and Bankruptcy Code, 2016 brought unprecedented changes in the landscape of insolvency laws in India. It is considered to be a well-intentioned piece of economic legislation as it was implemented to address NPA issues affecting the economy. The major test for the IBC has been the entry of twelve large cases identified by the Reserve Bank of India.

In June 2017, an Independent Advisory Committee (IAC) for RBI had its first meeting on June 12, 2017. In the meeting, IAC decided to focus on large stressed accounts at that time and accordingly took up for consideration the accounts which were classified partly or wholly as non-performing from amongst the top 500 exposures in the banking system. The IAC came up with an objective, non-discretionary criterion, whereby those accounts were shortlisted whose fund and non-fund based outstanding amount was greater than Rs 5,000 crore, along with 60% or more classified as nonperforming by banks as on March 31, 2016. According to the recommended criteria, the IAC identified 12 accounts totaling about 25% of the current gross NPAs of the banking system to be referred to NCLT. The RBI also requested the NCLT to accord priority to these cases.¹

Together they had an outstanding claim of *Rs.3.45 lakh* crore as against liquidation value of *Rs.73,220* crore. Of these, resolution plan in respect of seven CDs have been approved and orders for liquidation have been passed in respect of two CDs. Due to failure of implementation of approved resolution plan in respect of one CD (Amtek Auto Ltd.), the process has restarted. Thus, CIRPs in respect of three CDs and liquidation in respect of two CDs are ongoing and are at different stages of the process.²

Jyoti Structures Ltd. is first among the 12 large accounts referred by the Reserve Bank of India under India's new Insolvency and Bankruptcy Code 2016 (IBC).

Detailed study of the Case

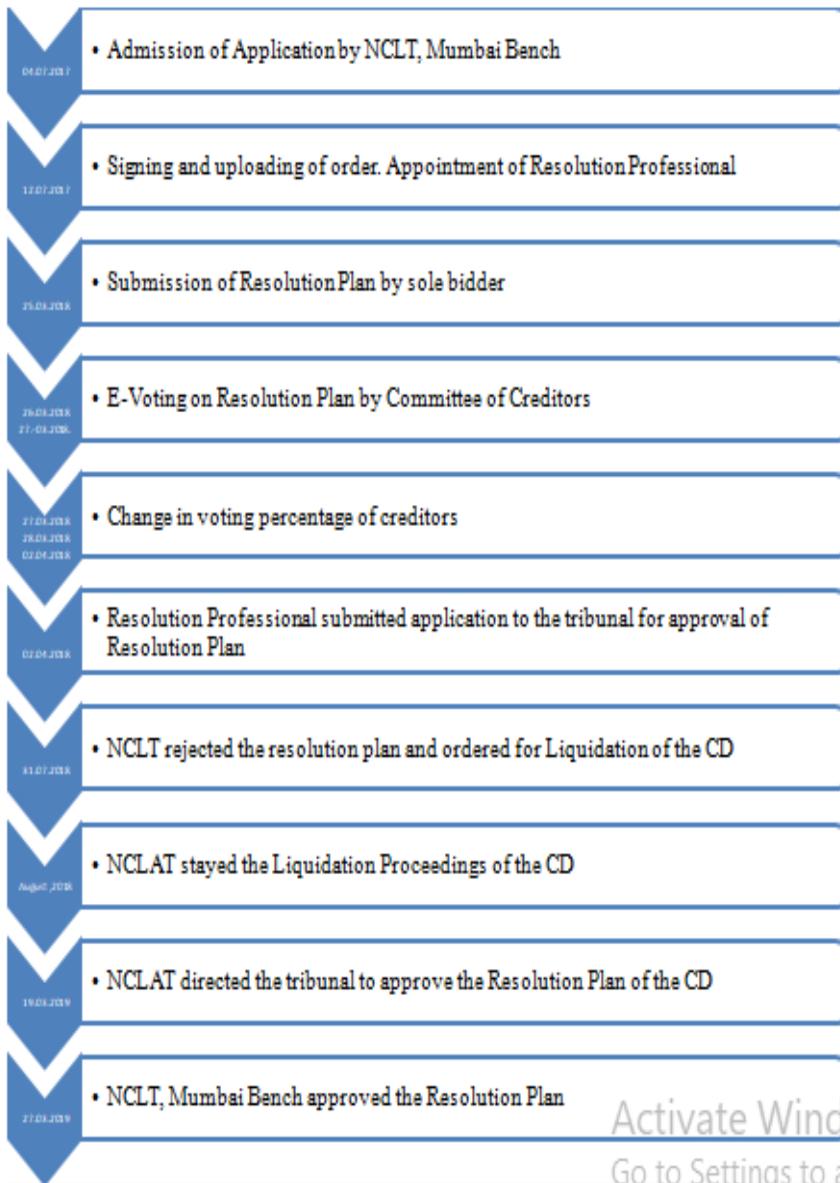
Jyoti Structures Limited (JSL) was registered as a private company in 1974 and it began its commercial operations in 1979. The company went public in 1989.

¹<https://www.cenfa.org/wp-content/uploads/2019/07/IBC-Report-Final.pdf>

²<https://ibbi.gov.in/uploads/publication/62a9cc46d6a96690e4c8a3c9ee3ab862.pdf>

Jyoti Structures is involved in executing projects related to power transmission and distribution. The company manufactures transmission line towers, sub-station structures, antenna towers and railway electrification structures.

Flow Chart depicting series of events:



Activate Windows
Go to Settings to activate Windows



▪ Commencement

The application under section 7 of the I&B Code for initiation of Insolvency Resolution Process of Jyoti Structures (Corporate Debtor) was filed by State Bank of India (Financial Creditor) for a default of Rs. 1600.74 crores as on 20.06.2017. Corporate Debtor had availed a loan of Rs. 1,227.25 crores from State Bank of India through fund and non-fund based arrangements, thereafter defaulting in payment.

The application was admitted by NCLT, Mumbai Bench on 04.07.2017 and the order was signed and uploaded on 12.07.2017. Ms. Vandana Garg was appointed as an Interim Resolution Professional and later also appointed as Resolution Professional.

▪ Voting on Resolution Plan

- Resolution Plan was submitted on 25.03.2018 by **Mr. Sharad Sanghi, sole bidder** who heads software firm NetmagiconSolutions along with Kedaara Capital Advisors Managing Partner Manish Kejriwal and Reliance Capital's former chief investment strategist MadhuKela and the same was put to vote via e-voting on 26.03.2018. However, resolution did not achieve minimum requisite percentage of 75% votes in terms of Section 30(4) of the Code.
- 62.66% votes were polled in favour of the Resolution Plan, 23.12% votes were cast against the said plan and remaining 14.21% abstained from e-voting.
- Subsequent to conclusion of e-voting, on 27.03.2018 one of the Financial Creditors named IDBI Trusteeship Services requested RP to accept its assenting vote of 0.42% as it could not vote on the prescribed date due to technical glitches. Similarly, Indian Bank on 28.03.2018 indicated its desire to put affirmative vote of 6.31% to the Resolution Plan. On 02.04.2018, Standard Chartered Bank who earlier voted with 3.31% against the plan issued a letter for reconsideration of its dissenting vote as assenting vote.
- Resolution Professional on 02.04.2018, circulated an email to COC informing the same.
- Bank of India, holding the voting share of 9.11% filed an application stating that once vote on Resolution is cast by a member of the Committee such members shall not be allowed to change subsequently.



▪ **Rejection of Resolution Plan and order of Liquidation**

On 12.04.2018, RP circulated an email to CoC contending that votes in favour of Resolution Plan has stood 81.31% after reconsidering the votes of the dissenting financial Creditors.

The Resolution Professional submitted the approved Resolution Plan before Adjudicating Authority (NCLT) Mumbai Bench.

Singapore-based DBS Bank had approached NCLT to challenge the resolution plan, claiming that the voting for the resolution plan had not been conducted in a “fair manner”. DBS Bank was one of the secured financial creditors and DBS Bank would have got more out of liquidation as it was a secured creditor.

Adjudicating Authority by impugned order dated 31.07.2018 rejected the resolution plan and ordered for Liquidation.

▪ **Grounds of rejection of Resolution Plan and imposing of cost on Resolution Professional as per order dated 31-07-2018**

Resolution Plan was rejected by the Adjudicating Authority mainly on the following two grounds:

- Firstly, CIRP period for the corporate debtor after an extension of 90 days ended on 31.03.2018. Therefore, total period of 270 days had lapsed by the time last voting took place on 2nd April, 2018.
- Secondly, as on 26th and 27th March, 2018, when resolution plan was put to vote, the voting percentage was 62.66% which is less than 75%.

Resolution Professional argued that she had taken charge w.e.f. 12.07.2017 i.e. 8 days after the admission of Company Petition. So, 8 days should be excluded while counting the period of 270 days. This exclusion enabled RP to get the affirmative vote of 81.39% for approval of Resolution Plan. Further, RP stated that threshold for approval of resolution plan is directory in nature and not mandatory as Sec 30(4) of the Code states ‘*the committee of creditors may approve a resolution plan by a vote of not less than 75%*’. It was also stated that object of the Code is to promote restructuring of the Debtor Company through resolution over liquidation, therefore to achieve the purpose and object despite requisite votes not given at the time of voting, but later given affirmation, resolution plan shall be approved.

Adjudicating Authority was of the view that in Section 30(4) of the Cod the word ‘may’ denotes discretion as to whether to approve or reject the resolution plan, but not in respect to as to whether voting could be less than



75% of voting. It is a discretion given to CoC for approval of plan depending upon feasibility and viability of the plan. It further stated that after closure of e-voting facility on 27th March, 2018 voting share obtained in respect of the approval of final Resolution Plan was only 62.66% which was given by Resolution Professional herself in the MA 491/2018 and this being factual situation RP should have filed report stating that company has to go for liquidation under Section 33 of the Code. AA held that it is true that code has enunciated to try for restructuring of the CD by way of resolution before liquidation, if it does not happen within timeframe, it is also laid that it shall go for liquidation. As per Regulation 26(2) of the CIRP Regulations a person already voted on the resolution shall not be allowed to change its decision subsequently. RP in this case tried to muster strength saying that she got consent from dissenting creditors and resolution plan needs to be approved.

Resolution professional has been imposed with the cost of Rs.50,000 for going beyond the duties endowed upon her. Resolution Professional who should have remained impersonal in discharging her duties as RP, has simply gone out beyond the Sections and the Regulations.

As per the resolution plan submitted before the tribunal, admitted claim against the Corporate Debtor is Rs. 7,010.55 crores, liquidation value is Rs. 1,112.52 crores. There was a haircut of 43% to the creditors of the Company. Value of the amount of Resolution Plan shall be Rs. 3,965.06 crores. Rs. 50 crores shall be paid upfront. Rs. 75 crores shall come in 1 year and remaining will be paid as staggered payments in a period of 15 years from the effective date.

▪ **Stay on the Liquidation Proceedings by NCLAT**

An Appeal was filed by 800 employees of the corporate debtor led by Sharad Sanghi, founder, Netmagic Solutions to stay the liquidation proceedings. NCLAT in August, 2018 stayed the liquidation of Jyoti Structures Ltd, and asked the Mumbai bench of National Company Law Tribunal and the resolution professional of the company to not sell any movable or immovable asset of the company until further order.

▪ **Reconsideration of Resolution Plan vide NCLAT order dated 19.03.2019**

NCLAT vide its order dated 19.03.2019 stated that it is clear that the 'Committee of Creditors' is required to notice the 'Resolution Plan' to find out its viability and feasibility apart from the financial matrix and in



appropriate cases may ask the ‘Resolution Applicant’ to improve the plan. The date of approval for ‘Resolution Plan’ is fixed by the ‘Committee of Creditors’. They may fix the date of voting and in appropriate case they may extend the period of voting. There is no provision that once a voting is made, after the final result, if it comes to the conclusion finally in absence of approval of the plan, the ‘Corporate Debtor’ may be ordered for liquidation. It is always open to the ‘Committee of Creditors’ to change their opinion.

It further held that as far as voting is concerned, Regulation 26(2) being directory cannot override the power of the ‘Committee of Creditors’, which is the final decision making

authority in accepting or rejecting a ‘Resolution Plan’. The Insolvency and Bankruptcy Board of India also noticed that Regulation 26(2) is not workable and will amount to interference with the power of the ‘Committee of Creditors’ as vested under the Insolvency and Bankruptcy Code, 2016 and therefore, the Insolvency and Bankruptcy Board of India deleted Regulation 26(2) w.e.f. 4th July, 2018.

A ‘Resolution Plan’ which may be viable, feasible and of acceptable financial matrix and which is not against the provision of Section 30(2), if majority of the members having voting shares approve it but falls short of the 75% (now 66%) limit as has been prescribed and later on it comes to the notice of one or other members that because of the failure the ‘Corporate Debtor’ will be liquidated, it is always open to the members to change its opinion subsequently with the approval of the rest of the members of the ‘Committee of Creditors’ but it should be within 270 days³.

It also held that the period of non-joining of Resolution Professional i.e. 8 days shall be excluded in considering the time frame of 270 days as the order was signed and uploaded on 12.07.2017. On exclusion of this period, Resolution plan was approved within 270 days.

Submissions made by DBS bank opposing the Resolution Plan, stating that it does not distinguish between first charge holder and second charge

³[https://ibbi.gov.in/webadmin/pdf/order/2019/Mar/19th%20Mar%202019%20in%20the%20matter%20of%20Mr.%20Sharad%20Sanghi%20vs%20Ms%20Vandana%20Garg%20&%20Ors.%20%5BCA\(AT\)\(Insolvency\)%20461-2018%5D_2019-03-20%2019:13:58.pdf](https://ibbi.gov.in/webadmin/pdf/order/2019/Mar/19th%20Mar%202019%20in%20the%20matter%20of%20Mr.%20Sharad%20Sanghi%20vs%20Ms%20Vandana%20Garg%20&%20Ors.%20%5BCA(AT)(Insolvency)%20461-2018%5D_2019-03-20%2019:13:58.pdf)



holder was not accepted as at the ‘Resolution Process’, ‘Financial Creditor’ claims are decided as per provision of the ‘I&B Code’. All the ‘Financial Creditors’ are treated to be similar, if similarly situated.

The case was remitted to the Adjudicating Authority, Mumbai Bench, to approve the plan in terms of Section 31 of the Insolvency and Bankruptcy Code, 2016 with modification i.e. that the plan is to be implemented within the period of 12 years as offered by the ‘Successful Resolution Applicant’.

▪ **Approval of Resolution Plan vide order dated 27.03.2019**

NCLT Mumbai Bench, approved the Resolution Plan in terms of Sec 31 of the I & B Code 2016 with modification that the plan shall be implemented within the period of 12 years as offered by the resolution applicant . It held that Adjudicating Authority can scrutinise the approved Resolution Plan only under parameters of Sec 30(2) and Sec 31 of the Code and Hon’ble NCLAT has already given a finding that Resolution Plan conforms with the provision of Sec 30(2) of the Code.

NCLT, Mumbai Bench vide its order dated 27.03.2019 approved the resolution plan of Jyoti Structures.

Conclusion

Jyoti Structures became the first company among the RBI “Dirty Dozen” list to be liquidated. However, it could not be liquidated and finally headed towards Resolution. Going through the scenarios of this case it can be said that IBC has actually given more teeth to lenders in terms of taking companies to Insolvency Courts. The objective of IBC keeping resolution before liquidation always considered and acted upon. The government has been hailing the IBC as a key determining factor in improving ‘India’s Ease of Doing Business’ rankings. The IBC has gained an extremely favourable response from a wide range of industry experts. The presence of the IBC framework goes a long way in changing the business landscape.

References

- <https://www.bloombergquint.com/markets/nclat-sets-aside-jyoti-structures-liquidation-asks-nclt-to-consider-rs-4000-crore-plan>



- <https://economictimes.indiatimes.com/news/company/corporate-trends/jyoti-structures-goes-to-netmagics-sanghi-as-nclt-approves-new-bid/articleshow/68599>
- <https://ibbi.gov.in/webadmin/pdf/order/2017/Jun/4thJuly2017inthematterofJyotiStructuresLtdCPNo1137BP2017.pdf>
- [https://ibbi.gov.in/webadmin/pdf/order/2019/Apr/27th%20Mar%202019%20in%20the%20matter%20of%20Jyoti%20Structures%20Limited%20MA%201129-2019%20In%20CP\(IB\)1137\(MB\)-2017_2019-04-01%2018:34:13.pdf](https://ibbi.gov.in/webadmin/pdf/order/2019/Apr/27th%20Mar%202019%20in%20the%20matter%20of%20Jyoti%20Structures%20Limited%20MA%201129-2019%20In%20CP(IB)1137(MB)-2017_2019-04-01%2018:34:13.pdf)
- [https://ibbi.gov.in/webadmin/pdf/order/2019/Apr/31st%20July%202018%20in%20the%20matter%20of%20Jyoti%20Structures%20Ltd.%20MA%20491-2018,MA%20341-2018,%20MA%20515-2018,%20MA%20410-2018,%20MA%2091-2018,%20IA%2035-2018%20&%20IA%2030-2018%20In%20CP%20\(IB\)%201137\(MB\)-2017_2019-04-04%2016:02:55.pdf](https://ibbi.gov.in/webadmin/pdf/order/2019/Apr/31st%20July%202018%20in%20the%20matter%20of%20Jyoti%20Structures%20Ltd.%20MA%20491-2018,MA%20341-2018,%20MA%20515-2018,%20MA%20410-2018,%20MA%2091-2018,%20IA%2035-2018%20&%20IA%2030-2018%20In%20CP%20(IB)%201137(MB)-2017_2019-04-04%2016:02:55.pdf)



COMBINED EFFECT OF SAQ TRAINING AND SKILL TRAINING ON SPEED AND DRIBBLING ABILITY OF INTER COLLEGE MALE FOOTBALL PLAYERS

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Abstract:

The purpose of the present study was to determine the combined effect of SAQ training and Skill Training on Speed and Dribbling Ability among inter College Male Football Players. To achieve the purpose of the study, the subject were selected totally thirty Intercollege male football players were selected from Osmania University, Hyderabad, Telangana, India. The subjects were randomly selected and their age ranged from 18-23 years. The selected groups were divided into two groups, experimental and control group. The experimental group consisted of fifteen (N-15) male football players and they underwent SAQ Training and Skill Training. Fifteen (N-15) Male football Players acted as the control group as without any specific training. The duration of the training period was resected twelve weeks and the session for three days in a week. The combine SAQ Training and Skill Training is considering as the Independent variable. The Speed and Dribbling Ability were known as dependent variables. The statistical technique analysis of 't' test was used to analyse the pre-test and post-test data of experimental group and control group. The results showed that the Combined SAQ Training and Skill training had significant improvement on the selected variables Speed and Dribbling Ability compared to control group.

Key Words: SAQ Training, Skill Training, Speed and Dribbling Ability.

Introduction:

Plyometric exercise is especially useful in sports that require speed – strength. Speed – strength is the ability to exert maximal force during high speed movements. Sports that require speed – strength include, throwing and sprinting; volleyball, baseball, football and basketball. To play Football at any level, we need a great measure of a number of attributes, speed, strength, stamina, judgment, courage, agility, tactical ability but above all, the basic skills are needed. Football is a game, which revolves around the effective utilization of fundamental skills such as shooting, passing, heading, throwing, tackling etc., and a general aptitude of ball sense and ball control. Among these fundamental skills the investigator has chosen some of the following skills for the study, namely, passing, dribbling, shooting (kicking).

Methodology:

The purpose of the present study was to determine the combined effect of saq Training and Skill Training on Speed and dribbling Ability among inter College Male Football Players. To achieve the purpose of the study, the subject were selected totally

thirty Intercollege male football players were selected from Osmania University, Hyderabad, Telangana, India. The subjects were randomly selected and their age ranged from 18-23 years. The selected groups were divided into two groups, experimental and control group. The experimental group consisted of fifteen (N-15) male football players and they underwent saq Training and Skill Training. Fifteen (N-15) Male football Players acted as the control group as without any specific training. The duration of the training period was resected twelve weeks and the session for three days in a week. The combine saq Training and Skill Training is considering as the Independent variable. The Speed and Dribbling Ability were known as dependent variables. The statistical technique analysis of 't' test was used to analyse the pre-test and post-test data of experimental group and control group.

Statistical Analysis:

The analysis of using 't' ratio on combined SAQ and Skill training group and control group have analysed and presented below. The data collected on Speed and Dribbling Ability variables was due to effect of combined saq and Skill training were processed and discussed. Selected subjects were totally 30 intercollegiate levels male Football Players were divided into two equal groups such as experimental group and control group. The data were statistically analysed for significant different if any by using 't' ratio.

Table – I

Computation of 't' Ratio Between pre-test and Post-test Means of Combined saq Training and Skill Training group on Speed

Experimental Group	Mean	SD	Mean Difference	Standard Error Mean	t-Ratio
Pre-Test	7.1540	.39650	.31800	.04246	7.489*
Post-Test	6.8360	.47997			

*Significant at 0.05 level of confidence.

Table – I reveals that the computation of 't' ratio between mean of pre and post-test on Speed of Intercollegiate level Football Players of Combined SAQ and Skill training group. The mean value of pre and post-test of Combined SAQ and Skill training group were 7.1540 and 6.8360 respectively. Since, the obtained 't' ratio 7.489* was higher than the required table value 2.14, it was found to be statistically significant for the degree of freedom 1 and 14 at 0.05 level of confidence. The results clearly indicated that the Speed of the experimental group improved due to combined saq and skill training.

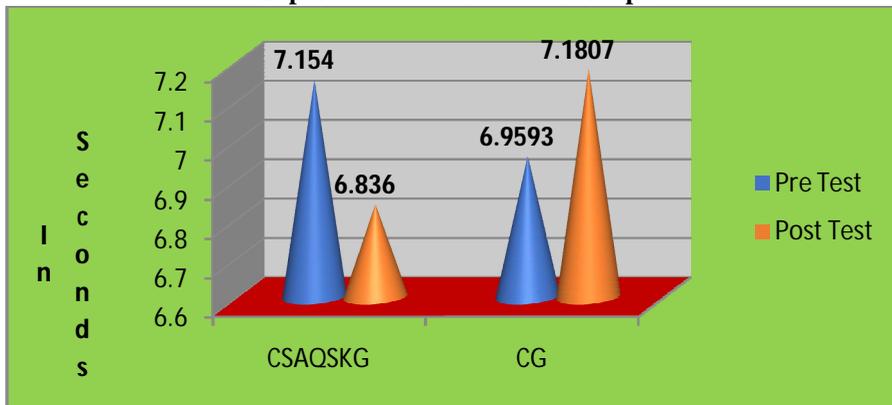
Table – II

Computation of 't' Ratio Between pre-test and Post-test Means of Control group on Speed

Control Group	Mean	SD	Mean Difference	Standard Error Mean	t-Ratio
Pre-Test	6.9593	.45388	.22133	.11458	1.932
Post-Test	7.1807	.56362			

Table – II reveals that the computation of ‘t’ ratio between mean of pre and post-test on Speed of Intercollegiate level Football Players of Control group. The mean value of pre and post-test of Control group were 6.9593 and 7.1807 respectively. Since, the obtained ‘t’ ratio -1.932 was lesser than the required table value 2.14, it was found to be statistically is significant for the degree of freedom 1 and 14 at 0.05 level of confidence. The results clearly indicated that the Speed of the control group is didn’t improved.

Figure –I Bar Diagram Shows the Mean Values of Pre & Post Test on Speed of Experimental and Control Groups



*CSAQSKG – Combined SAQ and Skill Training Group.

*CG– Control Group.

Table – III

Computation of ‘t’ Ratio Between pre-test and Post-test Means of Combined SAQ Training and Skill Training group on Dribbling Ability

Experimental Group	Mean	SD	Mean Difference	Standard Error Mean	t-Ratio
Pre-Test	23.6200	1.52084	1.19953	.21357	5.616*
Post-Test	22.4207	1.39893			

*Significant at 0.05 level of confidence.

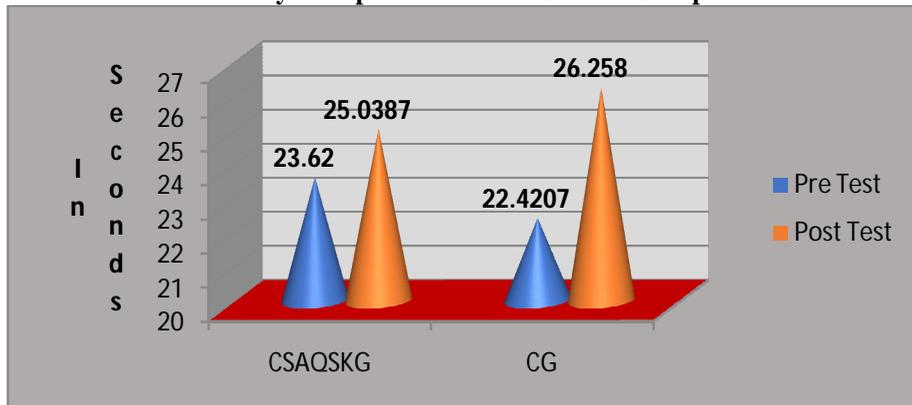
Table – I reveals that the computation of ‘t’ ratio between mean of pre and post-test on Dribbling Ability of Intercollegiate level Football Players of Combined SAQ and Skill training group. The mean value of pre and post-test of Combined SAQ and Skill training group were 23.6200 and 22.4207 respectively. Since, the obtained ‘t’ ratio 5.616* was higher than the required table value 2.14, it was found to be statistically significant for the degree of freedom 1 and 14 at 0.05 level of confidence. The results clearly indicated that the Dribbling Ability of the experimental group improved due to combined SAQ and skill training.

Table - IV
Computation of ‘t’ Ratio Between pre-test and Post-test Means of Control group on Dribbling Ability

Control Group	Mean	SD	Mean Difference	Standard Error Mean	t-Ratio
Pre-Test	25.0387	1.85343	1.21933	.31196	- 3.909
Post-Test	26.2580	1.60607			

Table – IV reveals that the computation of ‘t’ ratio between mean of pre and post-test on Dribbling Ability of Intercollegiate level Football Players of Control group. The mean value of pre and post-test of Control group were 25.0387 and 26.2580 respectively. Since, the obtained ‘t’ ratio -3.909 was lesser than the required table value 2.14, it was found to be statistically no significant for the degree of freedom 1 and 14 at 0.05 level of confidence. The results clearly indicated that the Dribbling Ability of the control group did not improve.

Figure –II Bar Diagram Shows the Mean Values of Pre & Post Test on Dribbling Ability of Experimental and Control Groups



*CSAQSKG – Combined SAQ and Skill Training Group.

*CG– Control Group.

Discussion on the Findings:

The results of the study indicate that the combined SAQ Training and Skill Training were significantly improved on selected variables like Speed and Dribbling Ability of intercollegiate Football players. The results of the study indicate that there is a significant improvement on combined SAQ training and Skill training on the experimental group when compared to the control group. This study is supported by **Jovanovic, Mario, Sporis, Goran, Omrcen, Darija and Fiorentini, Fredi(2011)** who found changes in combined SAQ and skill training can be linked to sports performance. **Dr. S. BinthuMathavan(2015)** and **S.BinthuMathavan, A. Praveen (2015)** who recommend



the appropriate saq training will improve soccer player's speed and Dribbling Ability condition them to manage with the actual pressure of the game.

Conclusions:

The results of the study reveal that there is a significant improvement on combined saq training and skill training group when compared to the control group. These changes are due to training. The training inspires changes in combined saq and skill training of the football players. The unique profile should take into consideration while administering to the football players.

References:

Jovanovic, Mario, Sporis, Goran, Omrcen, Darija and Fiorentini, Fredi(2011) Effects of Speed, Agility, Quickness Training Method on Power Performance in Elite Soccer Players, Journal of Strength and Conditioning Research: May 2011 - Volume 25 - Issue 5 - p 1285-1292

Dr. S. BinthuMathavan (2015) short term training programme's impact on the variables of dribbling and kicking performance among university men soccer players international journal of sports and physical education (ijspe) volume 1, issue 1, 2015, pp 23-28.

S.BinthuMathavan, and A. Praveen (2015) Effect of Core Training and Plyometric Training on Selected Performance Variables for Shooting and Dribbling among men Football Players, International Interdisciplinary Research Journal, {Bi-Monthly}, ISSN 2249-9598, Volume-V, Issue-II, Mar-Apr 2015.



INVESTIGATING THE EFFECT OF VARIABLE SPEED CONDENSER FAN ON PERFORMANCE PARAMETER OF SPLIT

A.C.

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Abstract

The use of split type air-conditioner is popular in residential buildings of India. Its' Aim is to improve the coefficient of performance of system, which is based on vapor compression cycle. To improve the coefficient of performance, it requires that the compressor work should be decreased and refrigeration effect should be increased. It means, the decrement in condenser temperature should occur, so the refrigeration effect can be increased and due to this COP can be increased. This project considers how the use of variable speed condenser fans enables Air Conditioner to operate more efficiently.

The thermodynamic model of 1.0 tone Air Conditioner Condenser will be developed by using the CAD software like Solid work and validated using the field data and specifications of the A.C. The staging of condenser fans and the control of their speed in various operating conditions. To increase the refrigeration effect and COP of the system in minimum time.

Keywords: Condenser fan, COP, Refrigeration effect, Variable speed of cooling fan.

Introduction

This project relates generally to air conditioning and more particularly to a method and apparatus for optimizing the outdoor air flow for overall system efficiency and reliability. In the design of air conditioning, it is common practice to use an outdoor fan motor equipped to operate at one speed. As such, the design is performance and efficiency optimized at specific operating conditions. While performance at other operating conditions is not as efficient, it has generally been considered acceptable on the basis of system design economy.

Literature Review

Amr O. Elsayed, Abdulrahman S. Hariri Worked in thesis an experimental investigation has been carried out to study the performance of a direct expansion air conditioning (A/C) unit having a variable speed condenser fan. The modulation of heat rejection airflow has been controlled with the outdoor air temperature via a Proportional Integral Differential (PID) controller. The control algorithm allows increasing the speed of condenser fan with the increase of outdoor air temperature and vice versa.

It has been found that a 10 % reduction in compressor power consumption is achieved

by increasing the condenser air flow by about 50%.

F.W. Yu, K.T. Chan Worked in thesis air-cooled chillers are generally recognized as energy intensive equipment in air-conditioned buildings in the subtropical climate. This paper considers how the use of variable speed condenser fans enables these chillers to operate more efficiently. The chiller COP due to the use of CTC with variable speed condenser fans together could increase by 4.0-127.5%.

Danny S. Parker and John R. Sherwin Worked in thesis with sponsorship from the U.S. Department of Energy, a research project has designed, fabricated and tested improvements to an air conditioner outdoor unit fan system. The primary objective was to improve condenser fan performance while reducing motor power. The changes in exhaust configuration are also important in that they allow for slower fan speeds to obtain equivalent flow. When coupled with a developed vortex shedding control strip and an asymmetrical fan design we showed reductions to fan sound levels of 1-2 dB according to ARI Standard 270-1995.

Ooi Yongsona, Irfan Anjum Badruddina, Z.A. Zainala, P.A. Aswatha Narayanab Worked in thesis the aim of superior air conditioning system is no longer constrained to advancing the efficiency of cooling machine, but includes the study of airflow with the assistance of the distribution of several significant parameters. A simple numerical study of the turbulent flow over an enclosed air conditioning system was not practicable a few decades ago since the computer facilities were not sufficient. This work can also be extended to a more complex air conditioning system like in the industries, hospitals as well as the gigantic shopping malls.

(Amr O. Elsayed, Abdulrahman S. Hariri, 2011) (F.W. Yu, K.T. Chan, 2013) (Danny S. Parker and John R. Sherwin, 2014) (Ooi Yongsona, Irfan Anjum Badruddina, 2015).

Methodology

The simple three dimensional model based computation will be taken place showing the significant effect of several parameters and their variation combinations. After performing simple calculation, the modeling has been performed on the Solid work version and then after the analysis work has been performed on the ANSYS version.

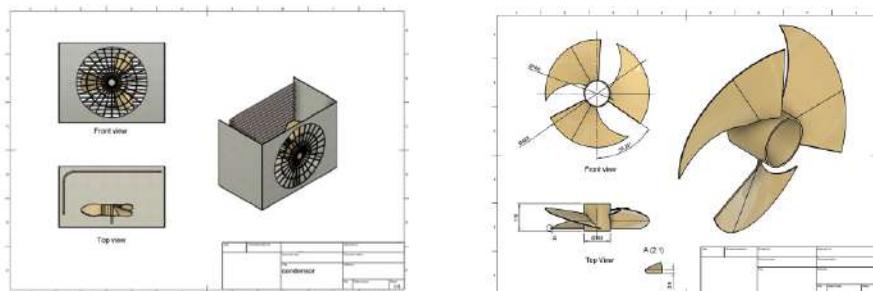


Fig. 1 Drawing of Assembly and Condenser Fan

Experiment Setup

Experimental apparatus and procedure A split type 1ton nominal capacity, air conditioner using R-22 was employed to examine. The temperature was measured via a Type-T thermocouple with a maximum uncertainty of $\pm 0.2^{\circ}\text{C}$. Thermocouples were placed at the inlet and outlet of the evaporator and condenser. Also, thermocouples were installed along the tube length of the evaporator and condenser to determine the condensation and evaporation temperatures. The thermocouple junctions were soldered at the outer surface of the tubes and the thermocouple wires were connected to a digital thermometer. A Proportional Integral Derivative (PID) controller was used to control the speed of condenser fan. The controller had been connected with a temperature sensor, thermistor (LM35), which was positioned inside the foam duct at the front of condenser. When the condenser inlet air temperature is increased above the desired set point, the condenser fan speed is increased and vice versa.



Fig 2: Experimental set up Fig 3: A.C. out Side unit Fig 4: Schematic view

Experiment detail description regarding model (Product Specification)

Normal Capacity	:1.0 Tr.	Air Flow Volume (High/Medium/Low)	:460/383/325
Voltage	:230 V	Noise Level Indoor (High/Medium/Low)	:42/38/36
Frequency	:50 Hz	Moisture Removal (Liters/Hours)	:1.8
Phase	:Single	Compressor Type	:Rotary
Cooling Capacity (Watt)	:5260	Refrigerant	:R22
Power Input (Watt)	:1495	Maximum Ambient Temperature	:50 ⁰ C
Electricity Capacity In 1600 Hrs. (Units/Year)	:1157.29	Indoor Unit Dimension (W×H×D)	:940×298×200
Running Current (Ampere)	:7.4	Input Power Supply	:Indoor Unit
Net Weight Indoor Unit	:13 Kg	Outdoor Unit Dimension (W×H×D)	:897×644×365
Net Weight Outdoor Unit	:30 Kg	Noise Level Outdoor In Decibel	:56

Reading Taken In Experiment Room at 930 Condenser Fan Rpm

Room temp	: 35	Condenser inlet temp	: 49 ^o c
Ambient temp	: 27	Condenser outlet temp	: 29 ^o c



Reading Taken In Experiment Room at 508 Condenser Fan Rpm

Room temp	: 35	Condenser inlet temp	: 50 ^o c
Ambient temp	: 27	Condenser outlet temp	: 31 ^o c

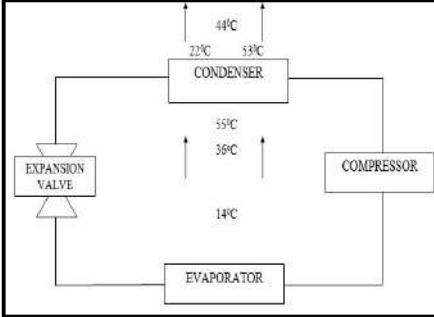
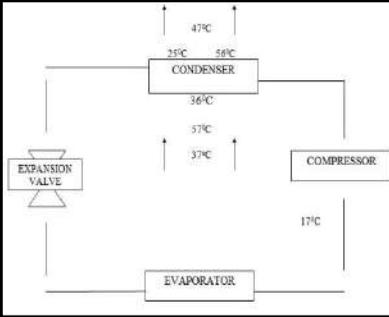


Thermodynamic Calculation

AC Set Temperature = 24⁰C

Refrigerant= R22

Ambient air temperature = 34⁰C

System Practical Data (Starting Reading)	System Practical Data (After 10-Minute Reading)
	
<p>Refrigerant= R22 Specific heat at 53⁰C = Liquid/vapor 1.439/1.113 Specific heat at 22⁰C = Liquid/vapor 1.236/0.8528</p> <p>Heat rejection =specific heat of vapor at 53⁰C × specific heat of liquid at 22⁰C [T_{max} – T_{min}] = 1.113 × 1.236 [55-22] = 45⁰C</p>	<p>Refrigerant= R22 Specific heat at 56⁰C = Liquid/vapor 1.485/1.208 Specific heat at 25⁰C = Liquid/vapor 1.261/0.87</p> <p>Heat rejection = specific heat of vapor at 56⁰C × specific heat of liquid at 25⁰C [T_{max} – T_{min}] = 1.208 × 1.261 [56-25] = 47⁰C</p>

Experiment Data

In load condition one person sit inside room during data is taken. In Unload condition No person sit inside room during data is taken.



Comparison Between 930 And 508 Rpm

RPM	Set AC Temp (°C)	Ambient Temp (°C)	Room Temp (°C)	Cutoff time (min)	Power (watt)	Condenser inlet Temp (°C)	Condenser outlet Temp (°C)
930	16	27	35	44	0.733	49	29
508	16	27	35	52.2	0.87	50	31
930	18	27	35	17.34	0.289	48	29
508	18	27	35	21.18	0.352	50	31
930	20	27	35	8.30	0.138	48	29
508	20	27	35	12.48	0.208	50	31
930	22	27	35	7.33	0.122	48	31
508	22	27	35	9.4	0.150	50	31
930	25	27	35	3.51	0.068	48	29
508	25	27	35	4.45	0.072	50	31

Unload Condition

RPM	Set AC Temp (°C)	Ambient Temp (°C)	Room Temp (°C)	Cut off time (min)	Power (watt)	Condenser Inlet Temp (°C)	Condenser Outlet Temp (°C)
930	16	27	35	46.30	0.771	49	29
508	16	27	35	55.14	0.919	58	31
930	18	27	35	26.32	0.438	48	29
508	18	27	35	31.54	0.525	59	31
930	20	27	35	13.50	0.225	48	29
508	20	27	35	19.38	0.323	58	31
930	22	27	35	8.53	0.142	48	31
508	22	27	35	9.30	0.155	58	31
930	25	27	35	5.05	0.084	48	29
508	25	27	35	6.10	0.101	58	31

Load Condition



Results and Discussion

From the experimental data in unload and load condition, multiple readings were taken with different room set temperature and measured condenser inlet and outlet temperature, compressor inlet and outlet temperature, Capillary tube inlet and outlet temperature, power consumption of unit, compressor cut off time with variable fan speeds and noted result in compressor cut off time.

Sr No.	Fan RPM	Condenser Inlet Temperature	Condenser Outlet Temperature	Difference
1	930	55	24	31
2	1300	55	23.70	31.30
3	1600	55	23.60	31.40

By increased cooling capacity of the AC as discussed above, results in reduced equipment size for the given heat load. Heat rejection rate is increase when increase the condenser fan RPM and reduce compressor load, saving power consumption and increase COP.

Conclusion

From the experiment, the results were observed, by using variable speed of condenser fan, we observed that power requirement of split air conditioner has been reduced at 27°C at ambient temperature and compressor work has also been reduced at 27°C. By using variable speed of condenser fan, we have increased COP of split air conditioner also. We have observed that we can minimize cooling effect time if we increase the condenser fan speed.

References

- Amr O. Elsayed, Abdulrahman S. Hariri, "Effect of Condenser Air Flow on the Performance of Split Air Conditioner" (World Renewable Energy Congress 2011-Sweden)
- F.W. Yu, K.T. Chan, "Modelling of the coefficient of performance of an air-cooled Screw chiller with variable speed condenser fans" (Department of Building Service Engineering, Hong Kong /Science Direct)
- Danny S. Parker and John R. Sherwin, "Development of High Efficiency Air Conditioner Condenser Fans" (Florida Solar Energy Center)
- Ooi Yongsona, Irfan Anjum Badruddina, Z.A. Zainala, P.A. Aswatha Narayanab, "Airflow analysis in an air conditioning room." (School of Mechanical Engineering Malaysia/Science Direct)
- Eugene L. ills, James P. Sodo, "Airflow analysis in an air conditioning room." (United State Patent)
- F.V. Yu*, K.T. Chan, "Improved condenser design and condenser –fan operation for air cooled chillers"(Department of Building Services Engineering, Hong Kong-2005 /Science Direct)



Ran Duana, Xin Wangb, Yue Songb, and Jiagen Liua “Influence of air-conditioning outdoor unit arrangement strategy on energy consumption” (ScienceDirect / 2015)

N. Venkatesh, B B Kishore “Design and Analysis of AC Condenser for Improving Efficiency” (International Journal for Modern Trends in Science and Technology Volume: 03, Issue No: 09, September 2017)

M. M. Awad*, H. M. Mostafa*, G.I. Sultan*, A. Elbooz*, A. M. K. El-ghonemy “Performance Enhancement of Air-cooled Condensers” (Faculty of Engineering, Mansoura University, Egypt)

Mallikarjun, Anand Kumar S Malipatil “CFD Analysis of Air Cooled Condenser by Using Copper Tubes and Aluminum Fins” (IJRASET/ Volume 2 Issue X, October 2014)

Patents

<https://patents.google.com/patent/US20140096547A1/en?q=US+2014%2f0096547+A>

<https://patents.google.com/patent/US20130139529A1/en?q=US+2013%2f0139529+A1>

Website

<https://www.brighthubengineering.com/hvac/45044-parts-of-the-split-air-conditioners-outdoor-unit/>



AN EMPIRICAL STUDY TO UNDERSTAND THE CONCEPT OF BRAND MANAGEMENT

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Abstract

This paper represents the concept of brand management in marketing . In this paper we understand all about the brand management and how it affects the business growth . Brand management is an important part of every organisations who are trying to expand their business. This is a function of marketing by which we using the techniques to increase the perceived value of product line or brand over the time. a perfect brand management helps the organization to build a good image in the eyes of customer and increase the brand loyalty. It is also helpful to increase the goodwill of the company.

Keywords: Brand, Management, Brand management, Marketing, Business, Organization, Techniques, perceive, Loyalty, Brand loyalty, Goodwill.

INTRODUCTION

Brand management is an intangible resource for business performance improvement. In present time brands are belongs to a pool of resources, which generate the market value of the company , but it is not directly influenced. It leads to create the useful value for customer. Highly ranked brands are influence more customers. Only customer based brands are raise tge value of the owner. Because customer is the king of the market. It is also helpful to increase the finances and business performance.

The aim of this study is to identify, what is brand management, what kind of brand management practices are influence the business performance. Brand management is a practice which helps to understand the group of variables are influence these factors: Brand analysis, brand measurement, and control.

There is no matter whethere a company is big, medium or small . Brand is a part of every business. Branding makes easier to customers to choose products, faster, and reduce the risk. Williams (2017) say's in his study " Your brand is your promise to your customer". So, You should keep your promise. When think about Apple smartphones , they expect their smartphones gave better output bas they want.

SIGNIFICANCE OF STUDY

- To identify the concept of brand management.
- Brand management will help increase the market value of the organization.
- Reduce the risk.
- Highly ranked brands influence more customs.

SCOPE OF STUDY



- Brand management create a mental structure which helps the customer to identify their choice.
- It create a image in tge mind of customer whether it is positive or negative.
- It creates the difference between the product or service.
- It can be applied anywhere a customer has a choice.

OBJECTIVE OF STUDY

- To understand the concept of Brand Management.
- To identify how it is helpful to the organization for its growth.
- To know the attitude of the customers about a particular brand.
- To investigate how it effect the sales of the organization.

DEFINITIONS OF TERMS

Brand :- Brand is a promise that the product give output as per customer's expectations as they want. It gives a particular information about the company and the product. It makes the product or service unique. It is a quality symbol and helps to reduce the risk.

Management:- Management is the process of dealing with or the managing the things and people in the systematic way.

Brand Management:- Brand management developing a promise to its consumers and maintaining it. Brand define the position of the product or service into the market. It is an art and comfort the brand.

Marketing:- It is the activity of showing and advertising a product of a company in the best possible way to attract the more customers and buyers.

Business:- It is a way of earning money by buying or selling the goods and services.

Organisation:- Organization is a group of people who are working together in the form of business to achieve the common goal or a particular aim.

Technique:- It is a particular way of doing something.

Perceive :- To understand, notice, realize, think something in a particular way.

Loyalty:- It is faithfulness, Loyaltyness to someone or something.

Brand Loyalty:- A tendency of a customer to continue buying the same Brand of good and service rather than competing brands.

Goodwill:- It is intangible in nature. It is associated with the purchase of one company by another.

RESEARCH METHODOLOGY

This paper's research is totally based on my knowledge and on secondary data. The data is collected from various resources like journals, online sites and books. This paper providing you lots of knowledge.

LITERATURE REVIEW

According to D. A. Aaker(1991),brand is a symbol, slogan or a name as well as each of five understanding assets of a company. They clarify for managers exactly does contribute it's value. A consumer recognize brand's equity as the value add up the usefulness of the product or service by linking with its brand name (Aaker, D. A. and Biel, A. L. (1993)). A CEO of a company is last and the final decision maker. A CEO



has a personal brand which conspiracy with worker & a business. Brand casts give glory impact on the clients, customers and the employees in present and future [Aaker D. A. & Joachimsthaler E. (2002)]. A thing considered in a brand which influence the buyers, it raises many challenges to the brand managers how they make a name, symbol, alphabet which become a brand in future & how psychology desirable association among consumers (Kapferer, 2008). The author describe in his study, saliency, diffrenciation, intensity these elements are make together a name which become a brand. He underline there is a significance development in this theory of brand towards more aggregate approach to the brand instead of a single conceptual approach. Brand Concept at a corporate level and change from a decent, one-dimensional concept of a product or service to a multidimensional and attractive one, the importance of the brand as a core asset of business strategy, although limited by the strategic elements of marketing No, and finally, brand management is designed in a great way, which means that the brand is compatible with local practical applications [Tavares (2005)]. Additionally, the author also states that some of the major market players launched price war, which hurts brands, is not resolving as a result during the economic downturn, especially for well-known and established brands. because meditation economy where consumers feel overwhelmed by information and most time can not spend its time comparing to make a choice. The brand must be able to convey the trust and build the confidence in the heart of consumers and also a risk reducer. To face these challenges, brand management such as development and maintenance , set of attributes and values of a product and service must be compatible, appropriate, clear and make serious to consumers (Murphy, 1992) and managers may need to reconsider. Their market outlook regarding its relationship with consumers.As Prahlada and Ramaswamy (2004) stated in their article, "co-production". Unique value with customers ", nowadays consumers feel that there are more options, however, less satisfied. This reality has forced company leaders to reevaluate participate in traditional systems and co-creation of company-centric value creation of unparalleled value with customers. The authors advocate that managers should participate in the quality of co-creation experiences, not just the quality and processes of the firm's products.According to (Edgar, 2000) The longevity of organizations depends on their ability to adapt to and in their context. Flexibility of your human resources to overcome strategic challenges and face adversity, mainly in times of recession. About the application of flexibility to It is important to outline the sociological definition of the management of organizations as "the ability of groups or communities to handle pressure and external disturbances from the result of social, political and environmental changes ".For leaders, the world has become faster, more interconnected and riskier. The style of leadership must be dynamic, as the adaptive cycle has different stages, which is required adaptation of the leader to different problems of each stage. Inspiration and cooperation are strongly dependent on and on the structure of social networks the flow of information (Walker et al., 2006). Lack of trust and interference the flow of information or systems in the structure of social networks is caused by flexibility to reduce (Walker et al., 2006). In the context of the economic downturn, this is It is essential for brands to boost confidence in their internal and external customers, so that communicate with transparency, ethics and integrity (Ceitil, 2006). The authors support the central concept in S-D logic is that service -



application of resources for the benefit of another party - is exchange for service. Following this perspective, customers engage in a dialogue and negotiate with your suppliers during product design, production, distribution and The terms consumption, and co-creation have been used to describe this customer-interaction. The service-oriented logic proposes that price begins with suppliers understanding customer value creation processes and learning to support Co-creation activities of customers. This implies that the fundamental pretense of this. The rationale is to consider the customer as "always being the co-creator of value" (classes and Lusch, 2004)

NOW WE NEED TO DISCUSS IN DETAIL

CONCEPT OF BRAND MANAGEMENT

BRAND MANAGEMENT

Brand management is the function of marketing. It is the combination of strategies and the technology to analyzing and plan how the customer perceived brand in the market. The aim of brand management is to increase the overall perceived value in the market of a brand for long term and make loyal customer base through positive brand association.

DEFINITION:- According to business dictionary: This is a process to maintain and improve your brand and may the Associate Name give you positive results. Some companies completely change their brand, which we also call rebranding.

IMPORTANCE OF BRAND MANAGEMENT

- Main object of brand management is to build the loyal customer, measurement, control and brand equity. Making a brand who having its own value in the market and increase vthe demand of the product . It helps to increase bthe monetary and non monetary value of the organization in the market.
- Reduce the large scale competition where many companies sells same product with same features. It provides a unique way and offer the company with marketplace advantage and boosts the value of the product.
- Not creating only a brand but also creates an experience which stays in the mind of customer . When they having a excellent experience with previous product they are ready to buy same product for life time.
- Not only creates an experience which just only increase the sales but create that experience which helps to increase or expanding the product line in the future.

➤ KEY ELEMENTS OF BRAND MANAGEMENT

Brand Equity:- It is the value of a brand as a separate asset and brand equity as a financial for financial understanding of brand equity ; the concept is the way to account how much value holds a brand. You need to able in account to know how much brand is extremely important both in financial statements, merger and acquisition. The subjective understanding of brand equity is the customer's perception for a brand and strategically valuable for brand management.

Brand image:- customer holds beliefs , ideas and impression regarding a brand is called brand image. What do customers think about the brand and what is the picture in their mind for any brand. A solid brand image attract more customers and determining the product sales. Brand image is ultimately the mirror through which the company's core values are reflected.



Brand Positioning:- It is the occupied space in the mind of customers and make different to the competitor's products and where and how it sits in the mind of the customers.

Brand positioning should ensure that:

- Is it specific / specific vs. competitive?
- Is this niche important and encouraging for the market?
- Is it suitable for all major geographic markets and businesses?
- Is the offer unique, suitable and valid with original products?
- Is it sustainable - can it be delivered consistently to all points of contact with the consumer?
- Is it helpful for the organization to achieve its financial goals?
- Is it able to support and promote the organization?

Brand Associations: The images and symbols associated with a brand or a brand benefit. Brand association is anything that sits deep in the mind of the customer about the brand. The brand should be associated with something positive so that customers relate to your brand being positive. Brand associations are the characteristics of a brand that come to the mind of consumers when talking about a brand.

➤ **Functions Of Brand Management**

Brand management is the subset of marketing. It deals with overall growth of the brand From the beginning and till the exit of the brand. The main functions of brand management are:-

- Identify the ideal target market, understand what motivates the customers to buy their products in the million of alternatives.
- Developing an ideal brand message which repeats both with the needs of the target market and with the logic of the offering.
- Tell the brand promise to the customers by making use of almost every possible way.
- Construct the efforts to build brand equity and time to time measure it.
- Handle the brand structure and making sure sub-brands structure and communication align with the master brand structure and communication policies.
- Building the brand identity and making sure that it match with the brand image in the market and in the mind of customers.
- Handling brand communication in the marketplace.

➤ **IMPORTANCE OF BRAND MANAGEMENT**

- From the customer point of view brand management is the reflection of your company whatever you show in your brand it gives a reflection of your company.
- If you say truth about your product or brand it creates a positive image but, if you show only the lie about your product in the advertisements it spoil all your efforts and creates a bad image about your company.
- Brand management helps to define your personality in front of your customers.
- It helps to increase the brand communication.
- It helps to maintain brand loyalty with your existing customers.



- It helps to provide position yourself.
- Brand is an identification of the source of the product like sign of little eaten apple to identify the customer this product is sell by Apple company.
- This is an assignment to product maker they understand their responsibility and make fine product according to the requirements of company and also the customers.
- It is a signal of quality & promise, bond with product makers.

➤ **ATTRIBUTES OF BRAND**

consumer expectations:- The consumer's hope is for any brand that they want to be exactly the same as they think about a brand. If you want to take your company upwards, then you have to build your brand according to the needs of your customer so that it is successful. You need to fulfill the requirements of your customers.

Price:- In brand management there is competition between your price and Competitor's price. The customer will want to buy the same range of product, they can give the price for it. So you have to make your product according to how much customer can afford. There are many brands whose products are very expensive and poor people cannot take them like Apple company mobile phones. Another side Xiaomi company is selling its phones in the market with the same feature.

Competitive factors:- This means that the quality and benefits that the rest of the brand is offering, are they also giving it. It is the expectation of the customer to take only that thing where they have not to spend too much money. If they get from any other brand, then they will go towards it. You have to take care of what is going on in the market and what your customers want. You have to create a product and brand that can beat your competitor in one stroke and which has a different and unique identity.

Consumer Perceptions:- This is a personalized quality and value in your mind's mind, what they think about your brand. You have to strengthen those beliefs so much that they don't exploit you and go to someone else, they become one of your loyal customers. Their thinking towards you has to be positive, it is very important for any company. Because if any customer is wrong about you, then he will also affect the rest. These are some points that any company should keep in mind:-

- ★ There should be value for money because the customer wants that he gets as much or as much benefit as he wants.
- ★ Is Your Brand Giving What a Customer Wants?
- ★ Is it different from others brand or products.

PRINCIPLES OF BRAND MANAGEMENT

There are 6 major and effective principles of brand management:-

1. Strong Definition and Laser Focus:- First of all, you have to tell in brand management whether actual may is your brand and whether it meets today's time or not and is it affected it's target audience. When your ideas will be told clearly and successfully, then you will create a different identity in your mind. In today's age, social media will help you a lot, you may reach your point and your customers quickly. And you don't have to focus too much if you can do it once. Brands to learn from: Apple, Costco.



2. Simplicity and Appeal:- Clear ideas help you to define you what you want and what you want. But it is also important that how do you keep your thoughts in front of people. The essential message and promise that the brand carry needs to communicate well, within the range of space and the time that users get to interact with the brand.Brand to learn from: Dollar Shave club.

3. Consistency:- You have to define again and again that you have to give the message of what your brand is and what its value is. It is necessary to state that the trust remains and retained. Expectations defined are reinforced and retained in customer minds only with consistency in every touchpoint, be it production or marketing. Brand to learn from: Starbucks.

4. Staying nimble:- By being nimble and having ears near the ground, brands can quickly find out how the strategy created in the drawing board is working on the ground. It also empowers brands to stay close to customers and ensure that their needs are being met and aspirations are captured for further development and analysis. Being agile means being responsive to the needs of the customer and once the 'emotional engagement' with the customer is established and trust is gained, then not looking back. Brands to learn from: Zara.

5. Power to innovate:- You have to change over time so that you stay in the market and maintain your position. You should bring your product may innovate again and again so that people are not bored with you.You should change your product with technology. Brands to learn from: Amazon, Tesla.

6. Feedback and measurement:- Feedback helps to know what is the position in your market and what people think about you.You should take feedback with the help of time so that you can improve your brand and improve it.

Conclusion

A strong brand strategy adds tangible value and creates a memorable experience for customers. Once a positive reputation is established, only the sky is the limit for growth prospects.There is a need for a brand that can change the life and attract people at once. To be successful, you must keep your image clean. You should not make false promises with your customers, due to which the customer moves to the other product.This paper will help you to know about the brand.

Reference

- Aaker, D. A. (1991), Managing Brand Equity,Publication: New York: Free Press
- Aaker D. A. & Biel A. L. (1993) :Brand Equity & Advertising: Advertising's Role in Building Strong Brands,Publication Hillsdale NJ: Lawrence Erlbaum Associates.
- Aaker, D. A. & Joachimsthaler, E. (2002), Brand Leadership, Publication: Sydney: Free Press Business
- Kapferer, J. N. (2008). The New Strategic Brand Management: Creating and Sustaining Brand Equity Long Term: Kogan Page, Insec Business School, Paris, France.



Murphy, J. M. (1992). *Branding: A Key Marketing Tool*: Macmillan. Payne, A., S. & K., Frow, P., & Knox, S. (2009). "Co-creating brands: Diagnosing & designing the relationship experience", *Journal: Journal of Business Research*, 62, 379-389.

Prahalad, C. K., & Ramaswamy, V. (2004): "Co-creating unique value with the customers", *Strategy & Leadership*, 32(3), 4-9.

Walker, B. Gunderson, L. Kinzig, A. Folke, C. Carpenter, S. Schultz, L. (2006). "A handful of heuristics & some propositions for understanding resilience in social & ecological systems", *Ecology & Society*, 9 (2), 1-15.

Websites

<https://www.google.co.in/amp/s/marketbusinessnews.com/financial-glossary/brand-management/>



ESTABLISHMENT OF ZEBRAFISH MODEL FOR SCREENING OF VARIOUS DRUGS ASSOCIATED WITH NEUROLOGICAL DISORDER AND INTRODUCTION TO CHRONOTHERAPEUTICS: A REVIEW

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ABSTRACT:

The upsides of antipsychotic medications are now and again obfuscated by their unpleasant effects. These effects reach out from modestly minor decency issues (e.g., smooth sedation or dry mouth) to incredibly upsetting (e.g., stoppage, akathisia, sexual brokenness) to anguishing (e.g., exceptional dystonia's) to misshaping (e.g., weight increment, tardive dyskinesia) to life-threatening (e.g., myocarditis, agranulocytosis). Basically, ominous effect profiles are unequivocal to each antipsychotic sedate and don't immaculately fit into first- and second-generation orders. With a potential answer for this is Chrono pharmacology that incorporates both the assessment of prescription effects as a component of biologic arranging and the assessment of drug impacts upon rhythm characteristics. Chrono pharmacology decidedly holds ensure for the creation of the best conditions for cure effects and security and may in this manner address a noteworthy technique for improving the treatment of various diseases. The goal of chrono pharmacology is to improve the remedial effect and control or decrease the threatening effects without changing the working of the medicine in the body

Keywords: Antipsychotic Sedate, Chrono Pharmacology, Disease, Threatening.

INTRODUCTION:

From the start, in the mid-1970s, the excitement on zebrafish was as a model structure, when it was picked to develop the essential vertebrate measure enabling forward genetic screening (Grunwald & Eisen.,2002). During the subsequent 30 years, zebrafish was almost used to mull over organ improvement. This achieved the depiction of a remarkably gigantic number of characteristics related with vertebrate pathways, which added to the establishment of zebrafish as a significant model for human disease and pharmaceutical researches (Bretaud et al.,2004). For pharmacology assessments a charming segment of zebrafish tests is the anticipated to use them in medium-to-high-throughput screening mode, considering the way that the zebrafish is a little (5 cm for an adult and 5 mm for 7 days post-planning (dpf) hatchlings) and healthy fish that is definitely not hard to keep up appreciation to their high richness (Grunwald & Eisen.,2002). Earlier zebrafish have been used for surveying the hurtfulness of agrochemical operators (Abdel-Wahab et al.,2014) anyway more starting late, their use for harmful quality assessment of pharmaceutical blends has been colossally increased (Adams & Kafaligonul et al.,2018). In zebrafish hatchlings, an in vivo toxicology

appraisal can be reached in seven days; the shorter time distribution required performing equal mammalian measures (Abdel-Wahab et al.,2014). Toxicology focuses often uncover impacts that require further assessment to explain purposes that are expensive and dull. Screening progressions exist and are overall furthermore made in zebrafish, which should give early nuances of potential off-target impacts on the heart structure similarly as various limits, for instance, ramifications for central tactile framework, on the intestinal tract, sound-related and visual limits, ace convulsant potential and bone turn of events. Thusly, the zebrafish advancement should be considered as an accommodating pre-station to help assurance of the most secure lead contenders as in front of timetable as possible in the prescription disclosure process (Baraban et al., 2013).

Despite higher animals have been for a long-term model of enormity used to evaluate drugs destructiveness, the zebrafish presents itself as a strong vertebrate model to choose, developmental harmful quality, general lethality and to play out a basic prescription screening.

DRUGS: SOLUTION TO PSYCHOSIS

Antipsychotics are a class of solutions basically used to regulate psychosis (tallying dreams, mental excursions, or disarranged thought), particularly in schizophrenia and bipolar issue, by alleviating such symptoms as representations, both visual and sound-related, and suspicious musings (Bruni et al., 2014). In any case, the first of antipsychotics has generally speaking been connected with raised cardiovascular mortality due to QTc break prolongation and may cause TdP. Various adversaries of crazy meds must be pulled once again from the market, and starting from 2005, the ICH E14 bearing has recommended driving a "cautious QT/QTc study" made arrangements for looking over whether the medicine influences QT interim(Adams & Kafaligonul et al.,2018). Early antipsychotic prescriptions had huge responses, driving investigators to continue with their work for better drugs, avoiding impacts as genuine ventricular arrhythmias and surprising cardiovascular destruction.

Table I: Existing studies, describing cardiotoxicity of antipsychotic drugs

MODEL	ANTISYCHOTIC ANALYSIS	REFERENCES
Rats	Clozapine actuates myocarditis, indicating fiery react, myocyte vacuoles debasement and myofiber corruption	(Buss & Drapeau., 2001)
Mice	7-or 14-days clozapine day by day treatment causes myocarditis just as incendiary injuries after	(Buss & Drapeau., 2001)
Rats and mice	Histological assurance of cardio toxicological impact of antipsychotic as aripiprazole, olanzapine, quetiapine, risperidone or ziprasidone	(Buss & Drapeau., 2001)



MODEL	ANTISYCHOTIC ANALYSIS	REFERENCES
Zebrafish larvae	Cardio toxicological impacts of original antipsychotics (aripiprazole, clozapine, olanzapine, quetiapine, risperidone and ziprasidone) on pulse, morphology and motility	(Buss & Drapeau., 2001)

Despite these revelations, there is a nonattendance of organized evidence of the cardio toxicological effects of various antipsychotic drugs (Chan et al., 2002). On the contrary side, the cardiotoxicity of antipsychotics, for instance, aripiprazole, olanzapine, quetiapine, risperidone and ziprasidone has not been investigated in rodents, likely due to the huge cost that such examinations would include (Colwill&Creton., 2011). As needs be, most examinations about the cardiotoxicity of these drugs in rodents have relied upon histological affirmation, which yields a poor cognizance of their cardiotoxicological effects Conn & Roth., 2008). This underlines the necessity for elective, logically reasonable models for these tests.

1. TABULAR REVIEW:

The 2010-2020 national investigation of insane infirmity gives information on the inescapability of crazy issue and the amount of people getting treatment. The regularity is the degree of people in the masses who meet rules for an assurance of these disarranges at a given point in time. Prevalence was settled for Australians with an ICD-10 crazy affliction in contact with open explicit mental prosperity organizations in March and in the eleven months sooner (Ducharme et al., 2015).

- In March 2010, a normal 3.1 cases for each 1,000 masses developed some place in the scope of 18 and 64 years had a twisted illness and were in contact with open explicit enthusiastic wellbeing organizations(Ducharme et al., 2015).
- The regularity of crazy issue was higher in folks than females (3.7 cases per 1,000 stood out from 2.4 per 1,000)(Ducharme et al., 2015).
- Guys developed 25-34 years had the most essential paces of crazy infirmity (5.2 cases per 1,000)(Ducharme et al., 2015).
- Right around 8,500 men right currently were assessed to be in contact with straightforwardly sponsored mental prosperity organizations(Ducharme et al., 2015).
- The age packs with the accompanying most essential normality for folks were those developed 35-44 and 45-54 years(Ducharme et al., 2015).
- For female’s regularity was even more even across age packs at directly around 3 cases for each 1,000 masses in those developed some place in the scope of 25 and 54 years(Egan et al., 2009).
- Youthful females developed 18-24 years had the most diminished regularity rates at 1.6 cases per 1,000 people(Ducharme et al., 2015).

Regularity was in like manner assessed for the year time allotment at 4.5 cases per 1,000 masses. Scaled to the national level, this suggests directly around 64,000 people

developed 18 to 64 years have an insane affliction and are in contact with open explicit mental prosperity organizations in a year.

1.1. BASED ON AGE:

TABLE II: age and sex-based prevalence of psychotic disorders.

AGE GROUP	PREVALENCE CASES PER 1000(MALE)	PREVALANCE CASES PER 1000(FEMALE)	REFERENCE
18-24	2.5	1.5	(Farghali et al., 2016)
25-34	5.4	2.8	(Farghali et al., 2016)
35-44	4.8	3	(Farghali et al., 2016)
45-54	3.4	2.9	(Farghali et al., 2016)
55-64	3.5	2	(Farghali et al., 2016)

2.2.EXTENT OF SYMPTOMATIC PROFILE OF ICD-10 PSYCHOSIS:

TABLE III: psychotic disorders and their prevalence

PSYCHOTIC DISORDER	PROPORTION (%)	REFERENCE
Schizophrenia	47.0	(Ducharme et al., 2015).
Bipolar, mania	17.5	(Ducharme et al., 2015)
Schizo-affective disorder	17.5	(Ducharme et al., 2015)
Severe depression without psychosis	8.7	(Ducharme et al., 2015)
Delusional, other non-organic psychosis	5.0	(Ducharme et al., 2015)
Depressive psychosis	4.4	(Ducharme et al., 2015)
Other	1.4	(Ducharme et al., 2015)

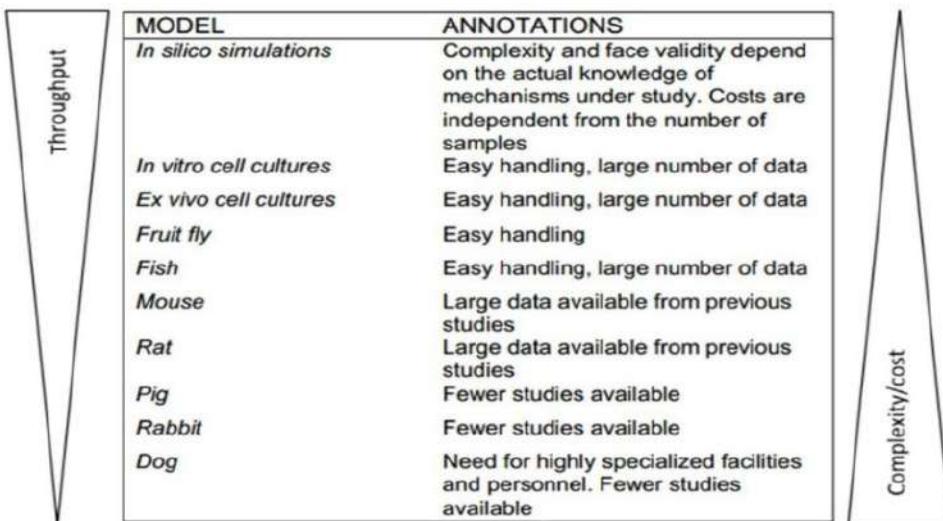
2. TESTING THE EFFICIENCY OF ZEBRAFISH ON SCREENING OF ANTIPSYCHOTIC DRUGS

Antipsychotic drugs, including haloperidol and clozapine bind to a wide extent of targets including dopamine, serotonin, histamine and adrenergic receptors that all things considered add to their practicality and their reactions (Fetcho & McLean., 2009). Haloperidol, an ordinary antipsychotic cure and serious D2 enemy is known to tie in any occasion 20 nuclear concentrations in the human brain¹. Used to treat patients since the 1960s, haloperidol is one of the most valuable therapeutics to treat schizophrenia and has been allocated an inside drug on the WHO Model List of Essential Medicines (Adams & Kafaligonul et al., 2018). Clozapine, an atypical antipsychotic, ties even more immovably to serotonin receptors⁹ and causes less extrapyramidal symptoms, yet can in like manner cause unprecedented and deadly agranulocytosis and myocarditis similarly as seizures (Fleisch & Neuhaus 2006). Recognizing blends in with antipsychotic-like phenotypes may

explain new supportive frameworks and animate the headway of therapeutics with improved security and response profiles (Fontana et al., 2018). With enough rich social phenotyping, and a colossal inspecting of blends, it ought to be possible to perceive neuroactive disturbs that have needed multi-target frameworks of action. Regardless of their differences, the receptors, cell types and neuronal models that underlie human and zebrafish CNS limits are particularly conserved (Fontana et al., 2018). Antipsychotics, antidepressants and anxiolytics impact swimming models in grown-up and larval zebrafish by methods for safeguarded nuclear targets(Fontana et al., 2018).

3. WHY WITH ZEBRAFISH?

As it has been depicted, destructiveness testing of meds of late has used distinctive animal models (Garcia et al., (2016). Notwithstanding the way that mice, rodents, rabbits and mutts are incredible models according to most



measures, they present some real imprisonments.

"Figure II": Depiction of various characteristic framework and creature model used to test lethality of meds, mentioned in breaking point of face realness, expenses and throughput sufficiency Investigations assessing drug danger for the most part requires enormous measures of creatures expanding the monetary expense of the assessments without a doubt comparably as, those creatures managing is routinely outstandingly repetitive(Heffern et al., 2018).

As a toxicology model, zebrafish can reveal the pathways of developmental peril as a result of their similarity with those of very much advanced animals. Zebrafish thus, gives a sound reason to the danger assessment of prescription association in individuals (Heffern et al., 2018). Subsequently, in various respects, the use of the zebrafish as a model for examinations of cardio-lead, genotoxicity or hepatotoxicity would allow the researcher to beat countless the troubles presented by using various animals' models,



recalling obstructions for test size and higher cash related and time costs (Heffern et al., 2018).

4. EXPERIMENTATION PARAMETERS USED IN SCREENING DRUGS WITH ZEBRAFISH MODEL:

4.1. CONDUCT ON LARVAL ZEBRAFISH:

It is remarkable that zebrafish hatchlings are unstable to a grouping of redesign modalities, including contact, olfaction, chemo sensation, tryout, vestibular information sources, warmth, and vision (Huang., 2008). Among the practices, development or swimming in zebrafish hatchlings is continuously getting thought in neuropharmacology (Huang., 2008). Swimming beginnings in zebrafish at 48–72 h post readiness (hpf) following deliver regardless of the way that zebrafish early living beings as exactly on schedule as 27 hpf, when dechorionated, can swim due to contact (Huang., 2008). In the wake of deliver, the as of late brooded hatchlings show burst swimming, which by then creates to beat and coast swimming by 4 days post planning (dpf) (Huang., 2008). Zebrafish hatchlings after 4 dpf, when introduced to a subbing light and diminish updates, make a case of extended improvement in lack of definition followed by resting state in the light (Huang., 2008). This lead has been logically utilized in the high-throughput screening of various neuroactive meds as of late (Huang., 2008).

4.1.1. THIGMOTAXIS

The propensity of a creature to move in contact with a vertical surface is called thigmotaxis (Hwang et al., 2013). In thigmotaxis, a creature keeps away from the purpose of intermingling of a field and moves towards the edge or edges of a novel condition, for example, a divider (Khan et al., 2017). In this way, it is regardless called divider getting a handle on conduct. It is a generous rundown of anxiety and is formatively safeguarded across different species, for instance, fish, rodents, and individuals (Khan et al., 2017).

4.1.2. OPTOKINETIC RESPONSE

The optokinetic response is the generalized eye advancement considering improvement in the field of vision (Kokel et al., 2013). It helps in the modification of pictures in the retina. It is moreover noteworthy in keeping up visual sharpness, which in this way helps animals' spatial way, pursuing for prey, and escaping from predators (Kokel et al., 2013). Zebrafish hatchlings make optokinetic response by 4 dpf, following which it will in general be unquestionably assessed (Kokel et al., 2013). The optokinetic response is evoked in zebrafish hatchlings by improvements through moving plans on a LCD screen (Kokel et al., 2013) or a striped exceptionally differentiating turning drum (Kokel et al., 2013). Various meds following up on the central tactile framework, for instance, sedatives, adversaries of psychotics, and antidepressants, direct eye improvements. Thus, the optokinetic response can be used as an equal test for depicting the central tangible framework effects of meds (Kokel et al., 2013).



4.1.3. OPTOMOTOR RESPONSE

When zebrafish hatchlings are given moving stripes, they will as a rule swim a comparable route as the moving stripes (Koponen et al 2008). This visual-motor lead of zebrafish is known as the optomotor response(Koponen et al., 2008).

4.1.4. HABITUATION

Habituation is a non-partnered sort of learning in which a reiterated improvement prompts a choked response (Liu et al., 2018). It is formatively checked and present in a wide extent of creature classes from cowardly animals, for instance, *Aplysia* and *Drosophila*, to vertebrates, for instance, rodents . It fills in as a part by which the tactile framework channels immaterial lifts. Zebrafish hatchlings at 6 dpf have been displayed to show habituation. Harmed habituation is connected with a couple of neuropsychiatric ailments, for instance, schizophrenia and thought lack hyperactivity (ADHD) (Liu et al., 2018). Habituation studies could be used for the high-throughput screening of new blends in with express effects on non-subsidary learning (Liu et al., 2018).

4.1.5. REST/AWAKE BEHAVIOR

The rest/ready case of zebrafish resembles that of individuals. Zebrafish hatchlings from 6 to 10 dpf have been used for rest investigate. Like human children, larval zebrafish at 6–10 dpf exhibited a more elevated level of rest appeared differently in relation to the adult zebrafish. The rest/ready case of zebrafish hatchlings has been abused for examining drugs affecting the tangible framework (Rihel et al., 2010).

4.1.6. LOCOMOTOR BEHAVIOUR

Development is fundamental for the continuance of animals. Zebrafish hatchlings show create swimming at 4–5 dpf(Saint-Amant, & Drapeau., 1998) following the progression of a plunge bladder. Development in zebrafish is a bewildering conduct conveyed by the activity of various neurons—reticulospinal neurons of the cerebrum stem nearby plunging vestibulospinal or neuromodulator projections (Norton & Bally-Cuif.,2010). All of these pathways are formatively directed among the vertebrates (Norton & Bally-Cuif.,2010).

4.2. CONDUCT ON ADULT ZEBRA FISH:

4.2.1. LEARNING TEST:

Adjusted spot tendency is a prize based direct test. During a standard test, the animal is formed or habituated to be in a specific region in the test field in blend in with introduction to drugs (Saint-Amant& Drapeau., 1998). This is generally used to test quiet dependence, in any case, assortments using sustenance as compensation have been used to assess adapting too (Saint-Amant& Drapeau., 1998). To test learning, various systems can be used, specifically revealing the animals again and again to a specific improvement, for example another field. Anxiety/Fear Tests Dread and disquiet are critical practices for continuance, as they can shield the individual from being introduced to unsafe conditions.



5.2.2 TENTION/FEAR TEST:

Fear and strain are critical practices for continuance, as they can shield the individual from being introduced to risky conditions (Saint-Amant & Drapeau., 1998). Some developmental issue has quite recently been connected with weird responses to pressure and fear, for instance, autism spectrum disorder (ASD), making this test a noteworthy contraption when phenotyping models for these disarranges. The testing can be acted in a couple of various ways: place the animal in a novel tank, an open field, or a multifield field containing mix of open/cover and splendid/diminish zones, and assess the tendency of the animal (Pylatiuk et al., 2014).

4.2.2. SOCIAL INTERACTION TEST:

A couple of social association tests can be acted in grown-up zebrafish: (1) shoaling test, by studying the lead of individual fish inside a get-together; (2) social tendency test, a test that surveys the interest additionally, joint effort of fish that are in a comparable tank anyway segregated by a clear limit; (3) social affiliation test, similar to the social tendency test, yet with no physical limit between the two animals; and (4) reflect test, where the reaction of an individual fish set in a tank with a mirror is The social affiliation tests can reveal congeniality or antagonistic vibe, yet what's more fear and anxiety (Paul et al.,2010). Normally, run of the mill zebrafish social direct is seen when the animal swims in reefs(Pylatiuk et al., 2014). Strikingly, the nonappearance of shoaling conduct is as often as possible associated with the nonattendance of socialization rehearses found in patients with substance irregularity, proposing zebrafish can thus show mental unevenness like practices(Pylatiuk et al., 2014).

5. SOLUTION IN FUTURE:

Pretty much all components of the body, including those affecting pharmacokinetic parameters, for instance, sedate maintenance and scattering, steady absorption and renal end, show basic step by step assortments: these consolidate liver processing, hepatic circulatory system and the chief pass sway; glomerular filtration, renal plasma stream and pee volume and pH; circulatory strain, heartbeat and organ perfusion rates; destructive emanation in the gastrointestinal tract and gastric depleting time. The start and signs of diseases, for instance, asthma attacks, coronary dead tissue, angina pectoris, stroke and ventricular tachycardia are circadian stage subordinate. In people, combinations during the 24 h day in pharmacokinetics (chrono-pharmacokinetics) have been appeared for cardiovascular ground-breaking drugs (propranolol, nifedipine, verapamil, enalapril, isosorbide 5-mononitrate and digoxin), enemies of asthmatics (theophylline and terbutaline), anticancer medications, psychotropics, analgesics, near to sedatives and antagonistic to microbials, to make reference to in any case a couple. Impressively more prescriptions have been seemed to show basic assortments in their things for the span of the day (chronopharmacodynamic and chronotoxicology) a lot after wearisome application or reliable imbue. Likewise, there is clear verification that even part/obsession response associations can be basically changed when of day. Thus, circadian time must be considered as a noteworthy variable influencing a prescription's pharmacokinetics and its effects



or side effects. There is convincing coherent work to demonstrate that more thought should be given to the arranging of drug association (Muniandy.,2018). Most prescribers are correct presently progressively stressed over "what" to support instead of "when" to suggest it. Chronotherapeutic emphatically holds ensure for the development of the most incredible conditions for quiet effects and prosperity and may along these lines address a critical system for improving the treatment of various ailments. The goal of chrono therapeutics is to propel the helpful effect and control or reduce the ominous effects without modifying the working of the medicine in the body (Muniandy.,2018). Pharmacologic chronotherapy is a making science that holds a great deal of trust in extending the practicality of medicine treatment and for diminishing the recurrence of harmful drug reaction. Accordingly it tends to be profoundly anticipated that by knowing the specific timings of use of medications we can control the medications harmfulness in people that as well as improve the proficiency of the medications digestion inside body and directs its discharge from body consequently the poisonousness of medications can be invalidated without trading off with the measurements focus.

REFERENCES:

1. Grunwald, D., & Eisen, J. (2002). Headwaters of the zebrafish — emergence of a new model vertebrate. *Nature Reviews Genetics*, 3(9), 717-724. doi: 10.1038/nrg892
2. Breaud, S., Lee, S., & Guo, S. (2004). Sensitivity of zebrafish to environmental toxins implicated in Parkinsons disease. *Neurotoxicology and Teratology*, 26(6), 857-864. doi: 10.1016/j.ntt.2004.06.014
3. Abdel-Wahab, B. A., Metwally, M. E., El-khawanki, M. M., & Hashim, A. M. (2014). Protective effect of captopril against clozapine-induced myocarditis in rats: Role of oxidative stress, proinflammatory cytokines and DNA damage. *Chemico-Biological Interactions*, 216, 43-52. <https://doi.org/10.1016/j.cbi.2014.03.012>
4. Adams, M. M., & Kafaligonul, H. (2018). Zebrafish—A model organism for studying the neurobiological mechanisms underlying cognitive brain aging and use of potential interventions. *Frontiers in Cell and Developmental Biology*, 6. <https://doi.org/10.3389/fcell.2018.00135>
5. Baraban, S. C., Dinday, M. T., & Hortopan, G. A. (2013). Drug screening in *Scn1a* zebrafish mutant identifies clemizole as a potential Dravet syndrome treatment. *Nature Communications*, 4(1). <https://doi.org/10.1038/ncomms3410>
6. Bruni, G., Lakhani, P., & Kokel, D. (2014). Discovering novel neuroactive drugs through high-throughput behavior-based chemical screening in the zebrafish. *Frontiers in Pharmacology*, 5. <https://doi.org/10.3389/fphar.2014.00153>
7. Buss, R. R., & Drapeau, P. (2001). Synaptic drive to Motoneurons during fictive swimming in the developing Zebrafish. *Journal of Neurophysiology*, 86(1), 197-210. <https://doi.org/10.1152/jn.2001.86.1.197>
8. Chan, J., Bayliss, P. E., Wood, J. M., & Roberts, T. M. (2002). Dissection of angiogenic signaling in zebrafish using a chemical genetic approach. *Cancer Cell*, 1(3), 257-267. [https://doi.org/10.1016/s1535-6108\(02\)00042-9](https://doi.org/10.1016/s1535-6108(02)00042-9)
9. Colwill, R. M., & Creton, R. (2011). Imaging escape and avoidance behavior in zebrafish larvae. *Reviews in the Neurosciences*, 22(1). <https://doi.org/10.1515/rns.2011.008>
10. Ducharme, N. A., Reif, D. M., Gustafsson, J., & Bondesson, M. (2015). Comparison of toxicity values across zebrafish early life stages and mammalian studies: Implications for chemical testing. *Reproductive Toxicology*, 55, 3-10. <https://doi.org/10.1016/j.reprotox.2014.09.005>
11. FARGHALI, H., KGALALELO KEMELO, M., WOJNAROVÁ, L., & KUTINOVÁ CANOVÁ, N. (2016). In vitro and in vivo experimental Hepatotoxic models in liver research: Applications to the assessment of potential Hepatoprotective drugs. *Physiological Research*, S417-S425. <https://doi.org/10.33549/physiolres.933506>
12. Fetcho, J., & McLean, D. (2009). Startle response. *Encyclopedia of Neuroscience*, 375-379. <https://doi.org/10.1016/b978-008045046-9.01973-2>



13. Fleisch, V. C., &Neuhaus, S. C. (2006). Visual behavior in Zebrafish. *Zebrafish*, 3(2), 191-201. <https://doi.org/10.1089/zeb.2006.3.191>
14. Fontana, B. D., Mezzomo, N. J., Kalueff, A. V., &Rosemberg, D. B. (2018). The developing utility of zebrafish models of neurological and neuropsychiatric disorders: A critical review. *Experimental Neurology*, 299, 157-171. <https://doi.org/10.1016/j.expneurol.2017.10.004>
15. Garcia, G. R., Noyes, P. D., &Tanguay, R. L. (2016). Advancements in zebrafish applications for 21st century toxicology. *Pharmacology & Therapeutics*, 161, 11-21. <https://doi.org/10.1016/j.pharmthera.2016.03.009>
16. Heffern, K., Tierney, K., & Gallagher, E. P. (2018). Comparative effects of cadmium, zinc, arsenic and chromium on olfactory-mediated neurobehavior and gene expression in larval zebrafish (*Danio rerio*). *Aquatic Toxicology*, 201, 83-90. <https://doi.org/10.1016/j.aquatox.2018.05.016>
17. Huang, Y. (2008). The optokinetic response in zebrafish and its applications. *Frontiers in Bioscience*, 13(13), 1899. <https://doi.org/10.2741/2810>
18. Hwang, W. Y., Fu, Y., Reyon, D., Maeder, M. L., Tsai, S. Q., Sander, J. D., Peterson, R. T., Yeh, J. J., &Joung, J. K. (2013). Efficient genome editing in zebrafish using a CRISPR-Cas system. *Nature Biotechnology*, 31(3), 227-229. <https://doi.org/10.1038/nbt.2501>
19. Khan, K. M., Collier, A. D., Meshalkina, D. A., Kysil, E. V., Khatsko, S. L., Kolesnikova, T., Morzherin, Y. Y., Warnick, J. E., Kalueff, A. V., & Echevarria, D. J. (2017). Zebrafish models in neuropsychopharmacology and CNS drug discovery. *British Journal of Pharmacology*, 174(13), 1925-1944. <https://doi.org/10.1111/bph.13754>
20. Kokel, D., Cheung, C. Y., Mills, R., Coutinho-Budd, J., Huang, L., Setola, V., Sprague, J., Jin, S., Jin, Y. N., Huang, X., Bruni, G., Woolf, C. J., Roth, B. L., Hamblin, M. R., Zylka, M. J., Milan, D. J., & Peterson, R. T. (2013). Photochemical activation of TRPA1 channels in neurons and animals. *Nature Chemical Biology*, 9(4), 257-263. <https://doi.org/10.1038/nchembio.1183>
21. Koponen, H., Alaräisänen, A., Saari, K., Pelkonen, O., Huikuri, H., Raatikainen, M. P., Savolainen, M., &Isohanni, M. (2008). Schizophrenia and sudden cardiac death—A review. *Nordic Journal of Psychiatry*, 62(5), 342-345. <https://doi.org/10.1080/08039480801959323>
22. Liu, C., Li, C., Hu, C., Wang, Y., Lin, J., Jiang, Y., Li, Q., & Xu, X. (2018). CRISPR/cas9-induced shank3b mutant zebrafish display autism-like behaviors. *Molecular Autism*, 9(1). <https://doi.org/10.1186/s13229-018-0204-x>
23. Rihel, J., Prober, D. A., Arvanites, A., Lam, K., Zimmerman, S., Jang, S., Haggarty, S. J., Kokel, D., Rubin, L. L., Peterson, R. T., &Schier, A. F. (2010). Zebrafish behavioral profiling links drugs to biological targets and rest/Wake regulation. *Science*, 327(5963), 348-351. <https://doi.org/10.1126/science.1183090>
24. Norton, W., & Bally-Cuif, L. (2010). Adult zebrafish as a model organism for behavioural genetics. *BMC Neuroscience*, 11(1). <https://doi.org/10.1186/1471-2202-11-90>
25. Saint-Amant, L., & Drapeau, P. (1998). Time course of the development of motor behaviors in the zebrafish embryo. *Journal of Neurobiology*, 37(4), 622-632. [https://doi.org/10.1002/\(sici\)1097-4695\(199812\)37:4<622::aid-neu10>3.0.co;2-s](https://doi.org/10.1002/(sici)1097-4695(199812)37:4<622::aid-neu10>3.0.co;2-s)
26. Pylatiuk, C., Sanchez, D., Mikut, R., Alshut, R., Reischl, M., Hirth, S., Rottbauer, W., & Just, S. (2014). Automatic Zebrafish heartbeat detection and analysis for Zebrafish embryos. *Zebrafish*, 11(4), 379-383. <https://doi.org/10.1089/zeb.2014.1002>



TWO WHEELER PURCHASE BEHAVIOUR IN RURAL HYDERABAD WITH REFERECNE TO SOCIO FACTORS

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Abstract:

The factors affecting purchase intentions of consumers can be understood well by conducting study among consumers who has purchased the product because they have gone through the purchase decision process once and also they know the pros and cons of the product they are consuming. Further, the new and improved features on the two wheelers, their stylish and trendy looks are a rage with the country's youth, who, form a substantial influence in determining the consumer behavior have ensured that the two wheelers remain on top of the automobile industry's agenda in India (Humphrey, 1999). Drive down any of the roads in India, and one would not miss the pulsars, the Hero Hondas, the Bajaj, TVS bikes, Yamaha variants and many others. Two-wheeler segment is one of the most important components of the automobile sector. According to the figures published by SIAM, the share of two-wheelers in automobile sector in terms of units sold was about 76.49 percent during 2018-19. This high figure itself is suggestive of the importance of the sector.

Keywords: Earnings, Family Size , Gender, Mileage, Performance

Introduction:

Hero-Moto Corp is the largest two-wheeler manufacturer in India and has a market share of about 46%. Honda has the second place. Among these companies Royal Enfield produces only Cruiser motorcycles. Royal Enfield has climbed into the fifth position among the motorcycle manufacturers in India, on the back of stupendous growth in 2016. The less popular manufacturers include Triumph, Kawasaki, Harley Davidson and KTM. From a regional perspective, the Southern region leads in terms of two-wheeler sales owing to higher income levels. The eastern region lags far behind the others in two-wheeler demand owing to significantly lower income.

The present day Indian market for durable consumer goods is masterminded by multinationals and their Indian counterparts. The producers are willing to invest large fortunes in competitive advertising and product differentiation. India might not yet be on par with the Asian tigers like, Hong Kong, South Korea, Taiwan and Singapore but it is certainly on the way to becoming one.

Economic liberalization in India has opened the doors for a massive expansion in investment and production in the entire spectrum of industry. Along side of this substantial growth depending of the industrial structure, the age of high mass consumption also seems to be a foreseeable prospect. Thus, India was identified as one of the largest markets for consumption goods in Asia, next only to China. The 200 million strong middle class consumers in India have clearly sent a message to the world

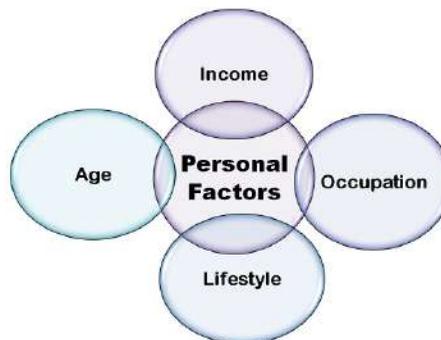
that their appetite for consumer goods is enormous by any standard (Rajni Chada 1996).

The rapid rise in consumer spending which is no doubt derived from higher levels of disposable personal income is not a mere quantitative spurt. It represents a significant qualitative change in the people's perceptions of what they want and how they would go about the job of fulfilling their wants. Thus, the growing numbers of companies are increasingly looking towards orienting their business to go beyond customer needs and wants.

Market Pullers:

The demand for two-wheelers has been influenced by a number of factors over the past five years. The key demand drivers for the growth of the two-wheeler industry are as follows:

- Inadequate public transportation system, especially in the semi-urban and rural areas;
- * Increased availability of cheap consumer financing in the past 3-4 years;
- Increasing availability of fuel-efficient and low-maintenance models;



Source: Yogi K.S (2015).

- * Increasing urbanization, which creates a need for personal transportation;
- Changes in the demographic profile;

Literature:

Yogi K.S (2015) the important factors affecting the purchase of two wheelers were functional aspects, serviceability, conformance, and accessibility. The functional aspects includes Fulfilling the basic needs of a motorcycle , easy to change gear , effective suspension system, easy handling in congested traffic or congested roads and long engine life .The factor serviceability includes the variables aesthetics, reasonable spare parts price, reliability and durability

Akbar and Bakar (2011) focused on the factors that influenced Sians University Penang, Malaysia students to purchase a motorcycle. The survey was conducted and structured questionnaires were administered among 415 students of the very same university and the results were analyzed by using statistical techniques such as, standard deviation, percentage and mean. According to this study, price, place and product has been



considered as 3 main factors that influenced students' purchase decision for motorcycles. Majority of the students would like to buy motorcycles that are not only economical in terms of fuel usage and spare parts, but also have better design and quality along with reasonable prices. However, when it comes to place factor, majority of the students liked to purchase the motorcycles from their own university fellows, who were about to finish the study and will be leaving the university.

Maran and Anbazhagan (2014) analyzed the factors which influenced customer satisfaction towards their two wheelers brand. The study was conducted on four leading manufacturers of 100cc motorcycle, which included TVS Suzuki, Bajaj, Hero Honda and Escort. Since Chennai is the most populous city, therefore the authors employed convenience sampling technique and provided questionnaire to 525 customers and 50 dealers that makes a total of 575 respondents. However, for analyzing the responses, ANOVA, Chi-square and Regression analysis have been used. The results favored the Hero Honda, as customers ranked it as number 1 in terms of their satisfaction.

Social cognitive theory (SCT), of Bandura (1986) A used in psychology, education, and communication, holds that portions of an individual's knowledge acquisition can be directly related to observing others within the context of social interactions, experiences, and outside media influences. The theory states that when people observe a model performing behaviour and the consequences of that behaviour, they remember the sequence of events and use this information to guide subsequent behaviours. Observing a model can also prompt the viewer to engage in behaviour they already learned. So according to this theory a part of the knowledge that a consumer utilizes to make purchase decision comes from his environment. A person basically lives in two environments. One is home surrounded by family members, relatives, neighbors etc. And the other one is work environment surrounded by co-workers, friends etc

Research Methodology:

Objectives:

1. The Socio factors of the respondents on their willingness to purchase of two-wheelers.
2. To study the respondent job nature impact on bike purchase behavior
3. To know the gender social status impact on bike buying behavior.

Hypothesis

H₀₁: There is no significant association between Age of the respondents and their opinion on bike pick up performance is a quality to purchase bike.

H₀: There is no significant relation between respondent job nature and bike maintenance cost is a factor for bike purchase.

H₀₃: Socio Factors Impact is not associated with Gender.

Sample

The study sample consist of two wheeler users in Hyderabad region and who purchase bike in last three (03) years and using regularly and the concern valid data collected from 122 two wheeler dealers in Hyderabad and respective mandal's jurisdiction.

Sample Size:

A Sample of 730, above said profile respondents opinions are collected by using structured questionnaire. The entire Hyderabad region consists of total revenue mandals are: 16 and total revenue villages are 67. A total 122 dealers are approached in Hyderabad district for buyers data and a minimum of 5-7 consumers responses are collected under one dealer jurisdiction. Hence the Total sample nearly reaching 666, however the analysis was made with 730 sample, i.e 730 >666, Hence it is treated as valid sample.

Analysis:

H₀₁: There is no significant association between Age of the respondents and their opinion on bike pick up performance is a quality to purchase bike.

Table 4.20.1: Chi Square values of Age and Bike Pickup

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	597.460 ^a	12	.003
Likelihood Ratio	614.470	12	.000
Linear-by-Linear Association	132.695	1	.000
N of Valid Cases	730		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 12.66.

From the above table, the chi square value is not significant (Chi-square sig. value is $0.003 < 0.05$), Reject the null Hypothesis i.e there is a significant different of opinion between respondents age and their opinion on bike pick up is a criteria before purchasing of bike.

H₀₂: There is no significant relation between respondent job nature and bike maintenance cost is a factor for bike purchase.

Table 4.23.1: Chi Square Values of Job Nature and Bike Maintenance

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	252.437 ^a	8	.021
Likelihood Ratio	280.926	8	.000
Linear-by-Linear Association	1.620	1	.203
N of Valid Cases	730		

a. 2 cells (13.3%) have expected count less than 5. The minimum expected count is 2.18.

From the above table, the chi square value is not significant (Chi-square sig. value is $0.021 < 0.05$), Reject the null Hypothesis i.e there is a significant relation between respondent job nature and bike maintenance cost is a factor for bike purchase. The field job

people are much worried about maintenance cost of bike and preferring low maintenance cost bikes for duty.

H₀₃: Socio Factors Impact is not associated with Gender.

Towards resolving the above hypothesis, t-test was run and the results set out in below table

Table No 4.32: Gender and Socio factors Independent test.

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Socio Factors Impact	Equal variances assumed	36.908	.000	-4.041	728	.000	-4.785	1.184	-7.109	-2.460
	Equal variances not assumed			-4.196	661.527	.000	-4.785	1.140	-7.024	-2.546

The data does not meet the equality of variances assumption. So the second line(not the first line) in the answer table is taken to check the hypothesis.

The two-tailed sig value is less than 0.05 (0.000), and hence null hypothesis is rejected. It means there is an association between Socio Factor Impact and Gender.

Discussion of Results:

The aim of this study is to find the factors influencing the purchase intention of consumers towards two-wheelers. It finds some conclusions about different aspects of the topic under consideration and observations about the survey made so far. The conclusions drawn in this chapter are based on the primary and secondary data collected and concerned parties interviewed during the field survey and systematically analyzed in the different chapters. The hypothesis has been tested and verified with the object of this research work. Recommendations are made after a detailed and objective analysis of the brand management

Family Size and Purchasing Behavior

The study reveals the significant difference on the various purchase decisions dimensions with respect to size of the family of the respondents. From the above table, it is evident that there is significant difference of size of the family of the respondents with regard to Compatibility, Attributes, External Factors and Purchase decision. From the above table, there is no significant difference of size of the family with regard to Sales Support such as dealer network, number of service stations in the city, but the researcher found out that there were quite significant differences among the respondents



with respect to size of the family. The research identified the following reasons as the causes: Location, Trained Service Personnel and neighborhood help.

Conclusion:

Respondents are partially concern about social recognition and status with special reference to two wheeler usage. At the same time the family members impact is high and they are the deciding factors for two wheeler purchase decision which may consist either parents/ life partners and children of the family are influencing that, which model what colour and design etc.. The relative's impact is ignorable in this study area and they are least bothered in purchase decisions. Peers and colleagues are guiding in progressive manner with reference to pro's and con's particular bike qualities and treated as highly impeccable factors. Celebrities are much ahead in attracting customers but they failed to drag them up to show room for enquiry, this may be cost, mileage and quality parameters impact rather than media advertising. Employments status is one of the at most influencing factors with reference to two wheeler purchase decision, this may due to their income levels and availability of financing agencies to them. Personal exposure and job designation is consumer intrinsic taste and preferences accordingly they are responding which are very fewer percentage.

References:

- S. Saravanan, N. Panchanatham & S. Pragadeeswaran, Consumer Behavior Towards Show-Room services of Two Wheelers with Referenceto Cuddalore District, Perspectives of Innovations, Economics & Business, Volume 3, 2009
- Akbar S, Bakar AHA. Factors affecting the Consumers decision on buying power. Journal of Econimcs and Behavioral Studies. 2011; 2(3):108-116.
- Maran K, Anbazaghan V. Analysis of users satisfaction on two wheeler segment performance with refrence to Chennai. Proceeding of international conference on contemporary management, 2014, 499-510.
- Sawant, Shekhar V. (2007). "Buying Two-wheelers: A Changing Scenario." The ICFAI Journal of Consumer Behaviour, Vol. II, No. 3, pp. 52-57.
- Shinde Khamkhar. Pre purchase behavior amongst the youth for two wheeler - with special reference to Mumbai city. International Journal of Advanced research in Management and Social Sciences. 2014; 3(8):104-109.
- Verma DPS and Soma Sen Gupta (2006). "Effect of Brand Image on Buyers' Perception of Product Quality." NICE Journal of Business, Volume 1, Issue 1, pp. 63-71.
- Yogi, K. S. (2015). An empirical and fuzzy logic approach to product quality and purchase intention of customers in two wheelers. Pacific Science Review B: Humanities and Social Sciences, 1(1), 57-69.
- Bandura.A (1986)Social foundations of thought and action: a social cognitive theory Englewood Cliffs,



THE INDISPENSABILITY OF THE UNCONSCIOUS ELEMENTS IN CLASSICAL SANSKRIT LITERATURE

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Abstract :

In the history of Sanskrit literature, poets and dramatists have shown interest in various non-living objects at different times, and these inanimate objects have a special position in the writings and compositions of the poets from time immemorial. Generous readers have repeatedly felt the vibration of the soul of the talented poet in their own chain of thoughts. The contribution of non-living substances to the dynamics of Sanskrit poetry and its excellence must be acknowledged. In course of review, it can be observed that the proper use of non-living substances has brought poetry to the summit of success.

Keywords : Mricchakatikam, Unconscious Elements, Karnavaram

“The emerald becomes green and the ruby becomes colourful with the colour of my consciousness”- this is the real truth of human consciousness hidden in these words of the poet, Rabindranath Tagore. Colourless becomes colourful with the touch of consciousness of the preceptor. The unconscious also becomes conscious with the touch of the coloured pillow of consciousness. In the history of Sanskrit literature, poets and dramatists have shown interest in various non-living objects at different times, and these inanimate objects have a special position in the writings and compositions of the poets from time immemorial. Generous readers have repeatedly felt the vibration of the soul of the talented poet in their own chain of thoughts. The contribution of non-living substances to the dynamics of Sanskrit poetry and its excellence must be acknowledged. In course of review, it can be observed that the proper use of non-living substances has brought poetry to the summit of success. If non-living substances were not in the kavya then it would have become flat and lacking in variety and would not have satisfied the reader. Sometimes, ambassadors, mementos and other inanimate things in the dramas have driven them towards a happy ending. In some cases, conscious organisms failed to achieve the purpose of the drama that was made possible by the unconscious.

Discussion of literatures

Mudrarakshsam:

It is a seven-act play written by VishakhaDutta. The play depicts the role of women and is political in nature. Although the play was composed in the context of various political events, it has proceeded to focus on an unconscious object and made the object play a major role in the further development of the play. The main non-living substance of the play is the nominal finger ring, engraved with the name of the Rakshasha, the chief minister of the Nanda Dynasty. The dramatist deftly uses this inanimate object in the play. The diplomat Chanakya was the prime minister of Chandragupta Maurya. He commissioned his spy, Nipunaka to the house of Rakshasa, a close friend of Chandana



Das, a businessman. Advertently, in disguise he managed to obtain the ring leaving Rakshasha's wife oblivious about the fact; the spy, finally hand-over the ring to Chanakya. In this context the dramatist explains as follows -“तस्याश्चकुमारसरोध-

सम्भ्रम-प्रचलिताङ्गुलेःकरात्पुरुषाङ्गुलिःपरिणाम -

प्रमाणघटिताविगलिताइदमङ्गुलिमुद्रिकादेहलीवन्धेपतितातयाअनवदुद्धवममचरणपाशर्वसमगत्यप्रणामनिभृताकूलवधूरिवनिश्चलासंवृत्ता।मयापिअमात्यराक्षसस्यनामाङ्कितेतिआर्यस्यपादमूलंप्रापिता।तत्तृणःअस्याआगमः” (1) ।"zz

Crafty Chanakya, through his diplomacy, wrote an untitled and unsigned letter with the help of Shakara and put an imprint of the motif-name of Rakshasha on the coin and subsequently, by applying the policy of discord and division separated Rakshasha from Malayketu, which the dramatist describes as follows:

“ किमद्यापिनिहन्यतएवविधेर्विलसितमिदंनममेति।अनार्य!

कन्यांतीव्रविषप्रयोगविषमांकृत्वाकृतघ्न !त्वया

विसम्भ्रमप्रवणस्तदाममपितानीतःकथाशेषताम्।

सम्प्रत्याहितगओरवेणभवतामन्त्राधिकारेरिपोः

प्रारब्धाःप्रणयायमांसवदहोविक्रेतुमेतेबयम्॥” इति (२)

The specific use of the non-living substance in the sequence of events, culmination towards the end of the story has made the drama extremely credible. The dramatist with great precision has shown the importance of the non-living substances in shaping the sequel of events to the gentle readers. This non-living substance is the prime mover of contention that Chanakya cleverly applied to create breach between Malayketu and Rakshasha. In the absence of this non-living object, the play would have lost its essence. The Mudrarakshasa is named after the signature motif of Rakshasha on the ringed coin. It was impossible without the motified ring to devise the policy of dissension by Chanakya. If there had been no division between Rakshas and Molyakatu, it would have been impossible to defeat Molyakatu and replace Rakshasas as the Chief Minister of Chandragupta and Chanakya's desire to take revenge would have remained unfulfilled. The dramatist has demonstrated the presence of the coin and its proper use in the play and therefore, the coin assumed a main character. In the absence of the coin, the drama would have been sluggish.

Abhijnanasakuntalam :

MahakabiKalidasa's immortal creation, AbhijnanaShakuntalam, the famous seven acts drama having drama with Sringeri Rasa. This drama is like a priceless gem all over the world today. As we read this play we come across many non-living objects. Among these non-living objects we can recall the famous ring engraved with the name of Dushyanta. The play is named after the ring of Dushyanta. Upon entering Tapoban, Dushyanta became involved with Sakuntala, the reared daughter of the great sage Kanwa and that involvement gradually transformed into love. The love affair



culminated in marriage in accordance with Gandhava system. After marriage they met and Dushyanta return to the capital to pursue his royal duties .After Dushyanta returned to the capital, Shakuntala became engrossed in her husband's thought and out of misfortune she was cursed by Durvasa, the sage, for neglecting hospitality she was to offer. At the request of Shakuntala's companion, Durvasa's anger was quenched, and he offered a way of remedy to neutralize the curse. From the conversation of the friends of Sakuntala it is clear that, the ring engraved with the name of Dushyanta is at the possession of Shakuntala and the very object could later release her from the curse. In this regard Kalidasa Said –

अस्ति तेन राजर्षिणा संप्रस्थितेन स्वनाम देहे याङ्कितम् अङ्गुलीयकं स्मरणीयमिति स्वयं पि न द्रुम् । तस्मिन् स्वाधीनो पायाशकुन्तला भविष्यति ” (३) z

While Shakuntala was going to her in-law's house, out of her negligence, the ring, which was the last resort or evidence to prove her identity and her matrimonial bond with Dushyanta, fell in the water of river Sachitirtha. Accordingly, Dushyanta could not recognize Shakuntala because of the curse and he lost his memory about his marriage with Sakuntala. Consequently, Dushyanta rejected Sakuntala and her plea in fear of committing a sin of accepting a married woman as his legal wife. A non-living ring crushed the life of Shakuntala in pieces. The ring was later found by a fisherman while fishing in the lake of Sachitirtha. The fisherman revealed that he had found the engraved ring from the belly of a fish and in this context he said –

“एकस्मिन्दिवसे खण्डसोरोहितमत्स्यो मया कल्पितो यावत्तस्य उदराभ्यन्तरे इदं रत्नभास्वरमङ्गुलीयकं दृष्टम्” (४) z

After receiving the ring, Dushyanta remembers all the events and he repented for rejecting Shakuntala and inflicting pain for her. The role of the insentient ring on which this nomenclature of the drama centers on has given the play its essence. In the fourth act of the play, the significance of the curse of Durvasa would carry no importance if the poet doesn't introduce the ring as a unique element in the story. The dramatist shows a deep affection for Shakuntala through different techniques of presentation : the abandonment of Shakuntala in the absence of a memorial and Dushyanta's craving for Shakuntala after his recollection of memorial. Such description of events has given the reader an unbound satisfaction. Without the curse of Durvasa, the drama would have become a simple love story. The absence of the ring justified the curse of Durvasa and made the play a success.

Another faint substance of the play is Sarbadaman's protector, whose role is immense in the play. While playing with the lion's baby, the protective guard was released from Sarbadaman's hand. According to the divine oracle, if anyone other than Sarbadaman's father or mother touches the protective armour, then the armour will turn into a snake and bite him. In this context Kalidasa said that –

“ एतां किल्मातापितरौ आत्मानं च वर्जयित्वा अपरः भूमिपतितां गृह्णाति । ततः तं सर्पः भूत्वा दशति ” (५) .

Dushyanta found the fallen armour in the ground and picked it up but according to the oracle, the accident that was supposed to happen remained ineffective. This proves that



Dushyanta was the father of Sarbadaman. The armor is an unconscious substance, but its unconsciousness plays the role of awareness and renders the play an immersive flavour. If the armour had not been mentioned then there might have been doubt regarding the biological paternity of Sarbadaman. The armour proves the chastity of Shakuntala, as well as confirms that, Sarbadaman is the son of Dushyanta. So eliminating all doubts, the armour paves the way to the ultimate father-son union and brought a happy end of the play.

Meghadutam :

Meghadutam, a lyrical poem, is the immortal creation of poet Kalidasa. In this poem, the poet has appointed the rain clouds as messenger to send the well-being message of separated Yaksha to his beloved wife, so that she could feel the pain of his heart. That unconscious cloud has become sensitive through the composition of the poet. Due to negligence in his duty, exiled Yaksha requested the cloud messenger to convey his well-being message to his beloved which is described by the poet in the following manner –

“सन्तप्तानां त्वमसि शरणं तत्पयोदप्रियायाः

सन्देशं मे हरधनपतिक्रोधविश्लेषितस्य।

गन्तव्याते वसतिरलकानामयक्षेश्वराणां

वाहयोदयानस्थितहरशिरश्चन्द्रिकाधौ तहर्म्या” ॥ (६)

The heartbreaking appeal of Yaksha softened the heart of the cloud. The cloud messenger, like his brother, travelled from Ramgiri, where Yaksha was exiled, to Alaka to deliver his plaintive news to his ladylove. On his way journey, the cloud, with deep feelings, released many people from their fatigue and satisfied their bodies and minds. Receiving their gratitude, the cloud proceeded to its destination. The poetic words go as follows –

“पादन्यासैः क्वनितरशनास्तत्रलीलावधूतैः

रत्नच्छायाखचितवलिभिश्चामरैः क्लान्तहस्ताः।

वेश्यास्त्वतोनखापदसुखान्प्राप्यवर्षाग्रविन्दू

नमोक्ष्यन्ते त्वयिमधुकराश्रेणिदीर्घान्कटाक्षान्” ॥ (७)

Flooding the rivers, who have been weakened due to the long absence of the rain cloud, the messenger cloud crossed the long path and finally reached Alaka. The poet described it in this manner –

–“बेणीभुतप्रतनुसलिलाऽसावती तस्य सिन्धुः

पाण्डुच्छायातटरुहतरुभंशभिर्जीर्णपर्णैः।

सौभाग्यं ते सुभगविरहावस्थया व्यञ्जयन्ती

काश्येन त्यजति विधिना स त्वयैव्येपपादः” ॥

The cloud on its duty had tried to assure Yaksha's spouse and build up her trust. Very personal events are impossible to know by others than the loved ones. So the poet said –



“भुयाश्चाहत्वमपिशयनेकन्ठलग्नापुरामे
निद्रांगत्वाकिमपिरुदतिसम्वरंविप्रबुद्धा।
सन्तर्हासंकथितमसकृत्पृच्छतश्चत्वयामे
दृष्टःस्वप्नेकितवरमयन्कामपित्वंमयेति”॥८)

Accomplishing its duty being entrusted, the cloud returned to Ramgiri to convey the good news of Yaksha's beloved wife. It would be an injustice to regard the cloud inanimate, who freed Yaksha from misery and reassures him of love and attachment of his ladylove in his mind. The unconsciousness of the cloud has become sensitive by the estrangement and mental agony of Yaksha. The awareness of the cloud has given life and solace to a separated and gloomy Yaksha. His assurances gave Yaksha's soft-hearted wife the courage to dream again. The role of the cloud in the lyric Meghaduta is like that of the heart of a human body. Therefore, denying the role of the cloud, the naming and content of the lyric will become irrelevant.

Karnavaram :

This one act play has been written by the dramatist Bhasa, also known as Jwalankavi. The source of this drama is the Mahabharata. The main unconscious object of this play is the trinket coil which was attached to the Karna's body. This drama has moved forward by focusing on this trinket-coil. The warlord of the Kaurava faction is known in the world as DanvirKarna.

The greatness of his gift is universal. Knowing the greatness of the donarKarna, Indra came to him as a Brahmin for begging – “भोःकर्ण !महत्तरांभिक्षायाचे”z For the purpose of defeating Karna in the battle of Kurukshetra, Indra appeared in the disguise of a brahmin and begged from Karna his trinket-coil, his life guard belt . When Karna donated his trinket coil, Indra accepted it with joy. Giving the sun-shielded trinket-coil ,Karna ceded his death knell to his enemy which is described in the poet's language in this way –

“अङ्गैःसहैवजनितंममदेहरक्षा
देवासुरैरपिनभेद्यमिदंसहसैः।
देयंतथापिकवचंसहकुण्डलाभ्यां
प्रीत्यामयाभगवतेरुचितंयदिस्यात्”॥इति। (९)

Although, the trinket coil was unconscious it was the lifeline of Karna. If he had not donated it, then Karna might have not been killed in the Kurukshetra war and the war might take turn in different direction. This unconscious substance has glorified Karna for the magnificence of his donation, giving him the honour of a magnificent and great heroic-donor in the world and has also performed a special role in the battle of Kurukshetra. It would not have been possible for Arjuna to kill Karna if this trinket-coil had been attached to the body of Karna. Since, Karna was a valorous warrior, it would have been impossible to kill the Kauravas as long as Karna remained alive and the state of religion of Krishna would not have been established. So Krishna had diplomatically



removed him from the Kaurava side.Hence, the unconscious trinket coil is the lifeline of Karna and of this drama.

Uttararamacharitam :

This drama, authored by Bhavabhuti, was based on the epic, the Ramayana. It is a seven-act play and anecdotal in nature.Here, the natural unconscious objects have become aware with the touch of the pen of Bhababhuti .In the poet's imagination, two rivers Tamsa and Murla have come alive. From the conversation of the two rivers, we learn that, Rama and Sita are burning in the fire of estrangement and that Sita has given birth to two sons and are growing up in the hermitage of Balmiki. Since his divorce, Ram Chandra has been enduring the grief of mourning. His previous memories surges back with delusion and making Ram unconscious repeatedly. the Murla river describes the tragedy of Ramachandra near the river Tamsa in this manner-

**“तेनचतथाविधेष्टजनपातजन्मनाप्रकर्षगतैनदीर्घशोकसंतापेनसम्प्रत्यातितरांपरिक्षीणोरामभद्रः
।तमवलोक्यकम्पितमिवमेहृदयम्।अधुनाचप्रतिनिवर्तमानेनरामभद्रेणनियतमेवपञ्चवटीवनेवधू
सहनिवास्विश्रम्भसाक्षिणःप्रादेशाद्रष्टव्याः।तेषुचनिसर्गधीरस्याप्येवंविधायामबस्थायामितिग
म्भीराभोगशोकक्षोभसंवेगात्पदेपदेमहान्तिप्रमादस्थानानिशङ्कनीयानिरामभद्रस्य”।(१०)**

From the statements of the Murala, we come to know that, two sons of Sita are being raised in the hermitage of Balmiki.When Ramachandra had abandoned Sita, she plunged herself into the water of the Ganges out of pain and despire to sacrifice her life. By the grace of BhagwatiPrithvi and Bhagirathi, Sita enters Sheol with her two sons. This has been describes by the dramatist as follows

**“किलवाल्मीकितपोवनोपकन्ठात्परित्यज्यगतेलक्ष्मणेसीतादेवीप्राप्तप्रसववेदनाआत्मनमतिदुः
खसंवेगाद्गङ्गाप्रवाहेनिक्षिप्तवती।तदैवतत्रदारकद्वयंप्रसूता।भगवतीभ्यांपृथ्वीभागीरथीभ्याम
भ्युपपन्नारसातलंचनीता।स्तन्यत्यागात्परेणचतद्दारकद्वयंतस्याप्राचेतसःमहर्षेःगङ्गादेवीस्वय
मर्षितवती”।(११) z**

Through the statements of the two rivers Sita's separation and Ram's mourning have been disclosed.Sita has been abandoned by Ram in order to perform his royal duties steadily. On request of river Tamasha, Sita became compassionate towards Ram and the poet said -वत्से! समाश्वसिहिपुनस्त्वत्पवसञ्जीवनोपायोरामभद्रस्य'z

The rivers Tamasha and Murla in the drama are personified and projected as conscious elements in the writings of Bhababhuti. Their consciousness has given Ramachandra and Sita a new life and renewed hope in their hearts.Because of Ramchandra's stubborn royal duties Sita was hurt but, after seeing Ramachandra accompanied by the river, her emotional pride faded away and hope renewed.Sita had been suffering from separation for a long 12 years. She endured the pain of not having her two sons with her. The hope she had in her mind was of getting back her husband and sons. Her aspiration came true after the initiatives taken by the rivers.Without the presence of the rivers, it would not have been possible to reconcile the two hearts with each other. The spirit of Bhavabhuti breathes conscience into the unconscious rivers. This vibrant conscience brings life to the drama.



Mricchakatikam :

It is a ten act play with the variation of Prakaranm and written by Sudraka. The play is based on the love story of Brahmin Chauradutta with VasantSena, a prostitute belonging to the lower order of society. It is a unique and peerless drama written on contemporary society and social norms. The play categorically represents people of different sections, their livelihood, their attitudes, their beliefs, practices, prejudices and superstitions. An earthen cart is an unconscious substance which plays a significant role in this drama and the play is named after it. For various reasons, the Brahmin businessman, Charudutta became poor. Once, his son Rohasen saw a golden cart while at play with the son of a rich neighbour. Naturally, the little boy expressed his utter craving to have the same kind of golden toy cart to their maid, Radanika in the following words-

“रदनिके! किंमम एतयामृत्तिकाशकटिकयातामेवसौवर्णशकटिकादेहि” (१२)

Radanika tries to reassure him and gives him a earthen cart to play instead. At that time Basantasena arrived and hearing all about she gave her gold ornaments to decorate Rohosen's humble cart and introduced herself as mother-like to Rohosen with great maternal affection with the following words as described by the poet –“जात!

मुग्धेन मुखेन अति करुणं मन्त्रयसि। एषा इदानीं ते जननी संवृता। तद्गृहाणैतमलंकारम्,

सैवर्णशकटिकां घटय् इति। (१३)

Although the reference to the earthen toy cart is very short in this play, the magnitude of this inanimate object is far reaching. Through this earthen cart, the dramatist describes the poverty of Charudutta and the unbearable financial condition of his life. The role of this vehicle is very important in the depiction of the character of Vasantasena. The deep affection of Vasantasena for Chauradutta has revealed, that there has been no change in Vasantasena's attitude towards Chauradutta in spite of his unprecedented poverty. The sense of Motherhood in Vasantasena has been aroused after seeing Charudutta's son. Out of affection for the boy and to relieve him of his distress, she lavishly furnished the earthen cart with all her valued gold jewellery. She has no regrets of losing the ornament. With the ornaments of the Vasantasena, the earthen cart turned into a golden one and she became the equivalent to Charudutta in social hierarchy for her selfless commitment in respect to her unconditional love for him. She could never have become worthy of Charudutta if she had not given up the illusion of her gold ornaments. Instead of being proud of richness and abundance, she proved her real treasure of humanity, honesty for love and self submission. Her spontaneous material sacrifice and spiritual ascendancy transform her former identity of a concubine and elevate her to the position of a goddess. An unconscious earthen cart places Vasantasena in the core of the heart of her beloved, Charudutta.

Thus, the waves of imagination of the men of Sanskrit literature depicts the central role of inanimate objects in writings, and their influence on the temporal or material literature, are highly praiseworthy and would certainly have a great bearing, as a motivating force, on the writers and literary works in future.



Foot-notes :

१. मुद्राराक्षसम् -पृष्ठाङ्कः-४६
२. मुद्राराक्षसम्-५/२१
३. अभिज्ञानशकुन्तलम् -४/३ (अनसूया)
४. अभिज्ञानशकुन्तलम् -६/२ (पुरुषः)
५. अभिज्ञानशकुन्तलम् - ७/२३ (तापसी)
६. मेघदूतओसौदामिनी-श्लोकः७फुर्वमेघः
७. मेघदूतओसौदामिनी-श्लोकः३६फुर्वमेघः
८. मेघदूतओसौदामिनी-श्लोकः५०उत्तरमेघः
९. कर्णभारम् -२१
- १०.उत्तररामचरितम् -तृतीयाङ्कः
११. उत्तररामचरितम् -तृतीयाङ्कः
१२. मृच्छकटिकम् -पृष्ठाङ्कः -२९६
१३. मृच्छकटिकम् -पृष्ठाङ्कः -२९८

Reference Books :

- मुद्राराक्षसम्-उदयचन्द्रःवन्द्योपाध्यायःअनीतावन्द्योपाध्यायःच-प्रथमप्रकाशः-२००८
अभिज्ञानशकुन्तलम्-ड.सत्यनारयणचक्रवर्ती
मेघदूतओसौदामिनी - ड.सत्यनारयणचक्रवर्ती
कर्णभारम्-ड. पुरीप्रियाकुण्डु
उत्तररामचरितम्-अध्यापकःश्यामापदचक्रवर्ती-चतुर्थप्रकाशः-२०१५
मृच्छकटिकम् - उदयचन्द्रःवन्द्योपाध्यायःअनीतावन्द्योपाध्यायःच-प्रथमप्रकाशः-२००७



THE OPINIONS OF HIGHER EDUCATION STUDENTS

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Abstract

Introduction: Web-based teaching and learning has experienced rapid change from last twenty years with online learning. Internet role has changed not only for surfing but in demand with online learning. Thus, Technology connected tools is introduced in class education by victimization World Wide net as education delivery medium.

Objectives: To study the Profile and Opinions of Web-based learning amongst Undergraduate students of The Maharaja Sayajirao University of Baroda. **Sample:** 600 students were selected with Purposive convenient sampling method. Data was collected using self- designed questionnaire with Likert Scale Statistical Measures Used to analyze the data: Frequency and Percentage, t-test, ANOVA and Posthoc test.

Major findings: The data revealed that majority of the undergraduate students (69%) belonged to middle age category i.e. above 19 years and remaining thirty one percentages of them belonged to young age category Gender wise male (50%) and female (50%). It also revealed that equal percentages of students belonged to all the selected discipline, Arts and commerce (20%), Science (20%), Technology (20%), Medicine (20%), Family and Community Sciences (20%). Further, it also highlighted that year of study wise the respondents were distributed in three equal parts i.e. first year (33.33%), second year (33.33%), and final year (33.33%). The data presented that further revealed that high majority of the undergraduate students (74.70%) belonged to lower income group category whereas remaining one fourth of the undergraduate students (25.30%) belonged to higher income group. overall and aspect wise opinions of students regarding their experience of web-based learning. It reveals that high majority (77.7 %) students had most favorable opinions, very few students reported their opinions to be favorable (21.5%) and least favorable (8%). Web based learning platform can play variety of role in student's life.

Keywords: Web-based Learning, Higher Education, Opinions, Soft Skill Aspects, Curriculum Aspects

Introduction

The world is considered now days as a small village. Internet has succeeded to connect the whole world. There is a huge scope of web-based learning in India, especially for the Indian youths. Web-based learning has opened new avenues to education in India and has changed the dynamics of educational content. E-learning has surpassed challenges of reaching out to a varied audience overcome the non-availability of adequately qualified teachers in rural India & making rich content available to and an audience that was unreachable earlier. Today, with changing times, basic education is learn with a



single computer in rural villages. This has changed our lives in various aspects, and has contributed in an unforeseen way to changing the patterns of our lives. Some factors affect traditional education, such as traditional lectures about learning, involve books or print outs that are mostly very expensive and sometimes unavailable. The field of learning is one of the fields most impacted by this alternation.

Web – based learning has become the world wide appearance in the different learning and training aspects. This information will help to overcome the obstacles that are likely to impede the growth and advancement of elearning in institutions of higher education. E-learning can also be seen a positive way to improve the quality of higher education and learning effectiveness.

It can give increased flexibility of learning experience to student, enhances access to information resources for more students. The Web-based learning system does not only provides learning objectives but also evaluates the progress of the student. Many of the universities and colleges are conducting their e-learning courses and also certificated will be provided online. The e-learning scenario in India is still growing and at an experimental stage India. e-learning is not only low-cost, but also convenient . Yet there are huge digital divides which need to be bridge on an urgent basis. e-learning is the use of internet technologies to enhance knowledge and performance of the students. It presents an entirely new learning environment for Students thus requiring a different skill set to be successful. E-learning presents numerous research opportunities for faculty also. e-learning refers to the use of internet technologies to deliver a broad use of internet technologies to deliver a broad array of Solutions that enhance knowledge and performance. Learning has become popular because of its potential for providing more flexible to access content and instruction at any time and from any place with 24/7. **Hrastinski (2008)** defined E-learning as learning and teaching online through network technologies, is arguably one of the most powerful responses to the growing need for education. **According to Opinion Research Corporation (2000)** revealed that 54 percent who believe that college courses offered via the Internet are the future of higher education. The study also found that 32 percent of respondents agreed to take the course through the Internet rather than go to a traditional classroom. Another 53 percent of respondents said that the biggest benefit of taking courses online was the ability to work from home, while 19 percent cited that time saved from not having time to commute. Due to a lot of advantage sector the e-learning program as one of the learning methods to enhance learners' knowledge and skills.

Objectives of the Study

- ❖ To study the Profile of the Undergraduate Students of The Maharaja Sayajirao University of Baroda.
- ❖ To study the opinions about web-based learning experience for Undergraduate students of The Maharaja Sayajirao University of Baroda with respect to their
 - Overall learning
 - Learning of curriculum Aspects
 - Learning of Soft Skills



- ❖ To study the differences in overall learning in the opinion of learning in the web-based learning experience for Undergraduate students of The Maharaja Sayajirao University of Baroda in relation to their
 - Age
 - Gender
 - Discipline
 - Monthly Family Income
 - ICT Competencies
 - Attitude towards ICT
- ❖ To study the differences in the opinions about web-based learning experience for Curriculum Aspects amongst Undergraduate students of The Maharaja Sayajirao University of Baroda in relation to their
 - Age
 - Gender
 - Discipline
 - Monthly Family Income
 - ICT Competencies
 - Attitude towards ICT
- ❖ To study the differences in the opinions about web-based learning experience for Soft skills amongst Undergraduate students of The Maharaja Sayajirao University of Baroda in relation to their
 - Age
 - Gender
 - Discipline
 - Monthly Family Income
 - ICT Competencies
 - Attitude towards ICT

Null Hypothesis

- ❖ There will be no significant differences in the overall opinion of web-based learning amongst Undergraduate students of The Maharaja Sayajirao University of Baroda in their learning of Curriculum Aspects in following variables.
 - Age
 - Gender
 - Discipline
 - Monthly Family Income
 - ICT Competencies
 - Attitude towards ICT
 - ❖ There will be no significant differences in the opinion of web-based learning amongst Undergraduate students of The Maharaja Sayajirao University of Baroda in their learning of Soft Skills in following variables.
 - Age
 - Gender
 - Discipline
-



- Monthly Family Income
- ICT Competencies
- Attitude towards ICT

Methodology

Population of the study

The population of the study comprised of the undergraduate students of the Maharaja Sayajirao University of Baroda, Vadodara.

Sample Selection for the Study

- After deciding the population for the study, the next step was the selection of the sample. For this, purposive and convenient sampling methods were used. 600 Students was sample size for the study. Data collection during March 2019 to August 2019 was collected. Data was collected using self-designed questionnaire with Likert scale. Faculties that offers similar courses were merged together.

Categorization of Faculties:

Group No.	Name of Faculty Group	Faculties Merged
1.	Arts and Commerce	Faculty of Arts, Faculty of Fine arts, Faculty of performing arts, faculty of commerce, Faculty of Education, Faculty of Law
2	Science	Faculty of Science
3	Technology	Faculty of Technology and Engineering
4	Medicine	Faculty of Medicine , Faculty of Pharmacy
5	Family and Community Sciences	Faculty of Family and Community sciences, Faculty of social work, Faculty of Journalism and communication

Statistical Measures Used to analyze the data: Frequency and Percentage, t-test, ANOVA and Posthoc test.

Results

About Profile of the student

The data revealed that majority of the undergraduate students (69%) belonged to middle age category i.e. above 19 years and remaining thirty one percentages of them belonged to young age category i.e. 16-18 years. Gender wise the percentage distribution was equal in both the categories viz. male (50%) and female (50%). It also revealed that equal percentages of students belonged to all the selected discipline, Arts and commerce (20%), Science (20%), Technology (20%), Medicine (20%), Family and Community Sciences (20%). Further, it also highlighted that year of study wise the respondents were distributed in three equal parts i.e. first year (33.33%), second year (33.33%), and third year (33.33%). The data presented that further revealed that high majority of the undergraduate students (74.70%) belonged to lower income group

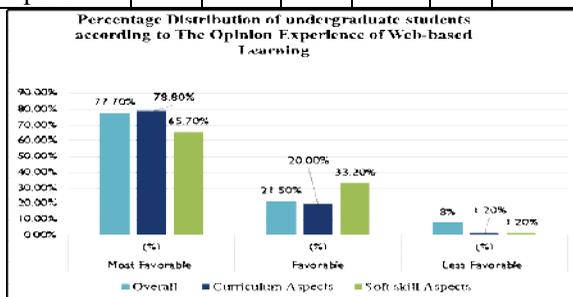
category whereas remaining one fourth of the undergraduate students (25.30%) belonged to higher income group.

Opinion for Experience of web-based learning

An individual forms opinion based on different aspects those aspects include exposure, experience, competence and also at times educational background and gender may affect. Current section of the research gives overview on overall opinions of students regarding their experience of web-based learning, aspect wise opinions regarding web-based learning and differences on the opinions regarding web-based learning in relation with variables.

Percentage Distribution of Undergraduate Students according to their Opinion for Experience of web- based learning

Aspects	Most Favourable		Favourable		Less Favourable	
	F	%	F	%	F	%
Overall	466	77.7	129	21.5	5	0.8
Curriculum Aspects	473	78.8	120	20.0	7	1.2
Soft skill Aspects	394	65.7	199	33.2	7	1.2



The table gives overview regarding overall and aspect wise opinions of students regarding their experience of web-based learning. It reveals that high majority (77.7 %) students had most favorable opinions, very few students reported their opinions to be favorable (21.5%) and least favorable (8%). Web based learning platform can play variety of role in student’s life. It functions as per the need of the user.

Rashid et.al. (2016) listed the advantages of web based learning for undergraduate students. They were distance learning, student centered learning, more convenient for students and saves time, instilling high order thinking skills, and increase motivation and access. The weaker points were also discussed. They were Technological Obstacles and Lack of Moral Value Implementation. It was stressed on that WBL can provide a satisfactory experience for those who faces the challenge of accessing continuing



education. Therefore, It can be understood that those who had favourable opinions regarding web based learning resources might be having more experience of its usage.

Intensity Indices showing opinions of students regarding web-based learning experiences in reference to curriculum Aspects

Opinions for Curriculum Aspects	I.I.
Web-based Learning material is relevant and useful for curriculum	2.6
Downloading material from a learning platform is easy(e.g. YouTube, Academia.edu, Education.com)	2.6
It makes it easier to access educational resources to achieving academic excellence	2.6
Browsing material to collect information to prepare notes (e.g. YouTube, Academia.edu, Education.com)	2.5
Preparation of class notes using different web sites to collect information is easier	2.5
Uploading material on a learning platform is easy (e.g. YouTube, Academia.edu, Education.com)	2.4
Learning becomes interesting through online quiz and exam.	2.4
ICT for downloading result through website has become very accessible.	2.4
Use inflibnet portal to find out material related to course is very convenient	2.3
Refer online e-books and journal for learning new things.	2.3
Easy to download course certificate from websites	2.3
Helps to create and maintain a social network for learning	2.3
To use different software for web-based-learning	2.2
Creating digital learning module for assignments is very convenient	2.2

Table elicits the opinions of students regarding web-based learning experiences in reference to curriculum Aspects. The intensity indices for the same ranged between 2.2 – 2.6 and showed favourable opinions of the undergraduate students for use of web based learning resources related to curriculum aspect. The items which were rated on high on intensity indices were web-based learning material was relevant and useful for their curriculum, Web-based Learning material is relevant and useful for curriculum and Web-based Learning material is relevant and useful for curriculum. The opinion related to curriculum aspects Browsing material to collect information to prepare notes, Preparation of class notes using different web sites to collect information is easier, Uploading material on a learning platform is easy, Learning becomes interesting through online quiz and exam, ICT for downloading result through website has become very accessible, Use inflibnet portal to find out material related to course is very convenient, Use inflibnet portal to find out material related to course is very convenient, Easy to download course certificate from websites, and Helps to create and maintain a social network for learning were rated moderate on intensity indices. Whereas rest were also rated on moderate scale but they were on the lower side. Web based learning can be incorporated in existing curriculum at different levels in the universities. It can added to



provide Student-centered instruction, Multisensory stimulation, Multipath progression, Multimedia, Collaborative work, Information exchange, Active / exploratory / inquiry-based learning, Critical thinking and informed decision-making, authentic, real-world context in line with traditional teaching-learning pedagogies. (Wasim et.al. 2014). Present findings also highlighted that students had favourable opinions for their different experiences of web based learning related to their curriculum aspects. Rusman (2016) suggested that the universities pay attention to learning components in order to develop e-learning services. It should be implemented “ by using popular programming languages so as to enable students to understand; such programs are front page or moodle for designs and MySQL for database engines, presenting pictures to complete e-learning programming, designed for open access and used as both the main source and an enrichment in learning activities”.

Intensity Indices showing opinions of students regarding web-based learning experiences in reference to Soft Skill Aspects

Opinions for Soft Skills Aspects	I.I
Web-based learning develops strategic thinking	2.5
It helps students in decision making at the time of crisis.	2.5
Web based learning, equips the students with presentation Skills	2.5
Helps to develop Interview Skills	2.4
Web based learning is necessary in the corporate world	2.4
Helps enhance communication Skills – both written as well as oral forms.	2.4
Allows developing leadership skills in Group Assignments	2.3
Web-based learning helps to develop a positive attitude in educational life.	2.3
Soft skills help to function effectively in different circumstances	2.3
Soft skills provide opportunities for hands-on learning experience	2.3
Soft Skills bridge the gap between teachers and students	2.2
Web-based learning is credential to enhance CV/resume	2.2
Web-based learning is Useful to handle stress for learning and to stay globally competitive.	2.2

Table throws light on intensity indices showing opinions of students regarding web-based learning experiences in reference to soft skill aspects. All the soft skills aspects related to opinions regarding web-based learning experiences ranged in moderate extent on intensity indices. The aspects included Web-based learning develops strategic thinking, helps students in decision making at the time of crisis, Web based learning, equips the students with presentation Skills, helps to develop Interview Skills, Web based learning is necessary in the corporate world, helps enhance communication Skills – both written as well as oral forms, allows to develop leadership skills in group



assignments, allows developing leadership skills in group assignments. Web-based learning helps to develop a positive attitude in educational life, is credential to enhance CV/resume and also useful to handle stress for learning and to stay globally competitive. Soft skills help to function effectively in different circumstances, provide opportunities for hands-on learning experience, and bridge the gap between teachers and students.

T- Ratio showing Differences in Overall opinions of Web-based Learning Resources amongst Undergraduate Students

Variable	Category	N	Mean	Std. Deviation	T-Value	p-Value	Remarks
Gender	Male	300.0	61.84	10.94	0.465	0.642	NS
	Female	300.0	62.24	10.50			
Age	16-18 Years	186.0	63.01	10.63	1.489	0.137	NS
	19-21+ years	414.0	61.60	10.74			
Monthly Income	Low Income	448.0	62.53	10.60	1.93	0.054	NS

Table revealed that there were no significant differences in the overall opinions of undergraduate students regarding web-based learning experiences in relation with their gender, age and monthly income. Thus, the null hypotheses stating that there will be no significant differences in the overall opinions of undergraduate students regarding web-based learning experiences in relation with their gender, age and monthly income were accepted. This finding indicates that the undergraduate students had similar opinions for overall learning through web based resources according to their gender, age and monthly family income. It can be understood that the undergraduate students did not had much exposure of web based learning experiences. The teaching pattern in the Maharaja Sayajirao University of Baroda is traditional. At undergraduate level students get assignments that required use of different software like MS Word and MS PowerPoint. The reading material and pamphlets are also provided to students for their preparation purposes. The assignment submission is taken in hard copy. Thus, the teaching pattern does not involve much exposure to ICT. However, students may use internet and computer for other purposes like entertainment, socialization and so on. Therefore, it becomes difficult for them to have strong opinions for web based learning experiences and hence no significant differences were found.

Analysis of Variance (ANOVA) Showing Differences in Overall opinions of Web-based learning amongst Undergraduate students in Relation with Selected Variables

Variable	Source	Sum of Squares	Df	Mean Square	F	p-Value
Year of Study	Between Groups	2439.8	3	813.3	7.3	0.01**
	Within Groups	66317.2	596	111.3		
Discipline of Study	Between Groups	3929.5	4	982.4	9.0	0.01**
	Within Groups	64827.6	595	109.0		
ICT competency	Between Groups	21950.2	2	10975.1	140.0	0.01**
	Within Groups	46806.8	597	78.4		
Attitude towards ICT	Between Groups	19105.7	2	9552.9	114.9	0.01**
	Within Groups	49651.3	597	83.2		

The table reveals the significant differences in the opinions of undergraduate students regarding their web-based learning experiences. It reveals that there were significant differences in the opinions of students regarding their web-based learning experiences in relation with their year of study, discipline of study, ICT competences and attitude towards ICT. Thus hypotheses stating there were no significant differences in opinions of students regarding their web-based learning experiences in relation with their year of study, discipline of study, ICT competences and attitude towards web-based learning were not accepted. This indicates that the opinions of them varied on the basis of aforementioned variables.

Tukey’s HSD comparison in overall opinions of web-based learning in relation with selected variables

Table showed the post hoc analysis for overall opinions of web-based learning in relation with selected variables. It highlighted that the undergraduate students who were studying in first year ($\bar{x} = 64.36$) had significantly more favourable opinions in comparison to those who were in second year ($\bar{x} = 61.54$, $p < 0.05$) and final year ($\bar{x} = 60.23$, $p < 0.01$). The reason could be the heavy usage of web based resources among the first year students for various purposes. (Table 40, 43, 46). It can be understood that the first year students had more favourable opinion regarding web based learning because they were using it more in comparison to others. The significant differences were also observed according to the discipline of their study. It was found that those students who were in Science ($\bar{x} = 65.72$) discipline had more favourable opinion for overall experience of web-based learning in comparison to those who were studying in Arts and Commerce ($\bar{x} = 58.81$, $p < 0.01$) and Family & Community Science ($\bar{x} = 59.68$,



$p < 0.01$). Table further revealed that undergraduate students studying in Technology ($\bar{x} = 63.83$) also had significantly favourable opinions for web based learning in comparison to the students studying in Arts and Commerce ($\bar{x} = 58.81$, $p < 0.01$) and Family & Community Science ($\bar{x} = 59.68$, $p < 0.01$). The reason could be the more usage of web based learning resources by Science and Technology students in comparison to those who were studying in Arts and Commerce and Family and Community Sciences. The present findings also showcased heavy usage of web based learning resources among Science students. ICT competency wise it was observed that those students who showed high ($\bar{x} = 65.06$) and moderate ($\bar{x} = 52.52$) ICT competency had overall more favourable opinions for web based learning resources in comparison to those who had low ICT competency ($\bar{x} = 30.17$, $p < 0.01$). Moreover, it was also revealed that those who had positive attitude towards ICT ($\bar{x} = 68.48$) had more favourable opinion for overall web based learning in comparison to those who had neutral ($\bar{x} = 58.84$, $p < 0.01$) and negative ($\bar{x} = 45.10$, $p < 0.01$) attitude. The present findings indicate that technology is playing as a helping hand for undergraduate students in their learning process. **Ghavifekr, Afshari & Amla Salleh, 2012** also stressed upon the ICT integration in school and other educational institutes' curriculum to prepare students to live in a knowledge society.

National ICT Competency Framework for student teachers can be implemented through combining ICT skills and pedagogical knowledge with emergent educational views. (UNESCO 2008)

T- Ratio showing Differences in opinions of Undergraduate students about Web-based learning resources for Curriculum aspects

Variable	Category	N	Mean	Std. Deviation	T-Value	p-Value
Gender	Male	300	37.05	7.38	1.41	0.159 (NS)
	Female	300	36.21	7.21		
Age	16-18 Years	186	37.06	8.46	0.90	0.367 (NS)
	19-21+ years	414	36.43	6.72		
Monthly Income	Low Income	448	37.08	7.45	2.65	0.01**
	High Income	152	35.28	6.70		

The table shows the differences in opinions of Undergraduate students about web-based learning resources for Curriculum aspects. It reveals that there were no significant differences in the opinions of students about web-based learning experience regarding curriculum aspect in relation with their gender and age. Therefore, the null hypotheses that there will no significant differences in the opinions of students about web-based learning experience regarding curriculum aspect in relation with their gender and age was accepted. This indicates that the undergraduate students had similar opinions regarding the same irrespective of their gender and age. However, significant

differences were found in opinions of undergraduate students about web-based learning resources for curriculum aspects in relation with their monthly family income. The mean scores of the same reflected that that the students who belonged to low income group had more favourable opinions in comparison to those who had high family income. Thus, the null hypothesis stating there will no significant differences in the opinions of undergraduate students about web-based learning experience regarding curriculum aspect in relation with their monthly income was not accepted.

Analysis of Variance (ANOVA) Showing Difference in Opinions of Undergraduate Students for web-based learning for curriculum Aspects in Relation with Selected Variables

Variable	Source	Sum Squares	Df	Mean Square	F	p-value
Year of Study	Between Groups	806.6	3	268.9	7.0	0.01**
	Within Groups	22908.1	596	38.4		
Discipline of Study	Between Groups	2031.6	4	507.9	10.1	0.01**
	Within Groups	29920.8	595	50.3		
ICT competency	Between Groups	6934.4	2	3467.2	123.4	0.01**
	Within Groups	16780.3	597	28.1		
Attitude	Between Groups	6934.7	2	3467.4	123.4	0.01**
	Within Groups	16780.0	597	28.1		

Table showcases the analysis of variance for opinions of undergraduate students for web-based learning for curriculum aspects in relation with selected variables. This analysis suggests that there were significant differences in the opinions of students about web-based learning regarding curriculum aspect in relation with their year of study, discipline of study, ICT competencies, and attitude towards ICT. Thus, the null hypotheses stating there will no significant differences in the opinions of undergraduate students about web-based learning experience regarding curriculum aspect in relation with year of study, discipline of study, ICT competencies, and attitude towards ICT were not accepted. It can be inferred from this finding that the opinions of the undergraduate students for web based learning resources for curriculum aspects differed on the basis of above mentioned variables.

Tukey's HSD comparison in Opinions of Undergraduate Students for web-based learning for curriculum Aspects in Relation with Selected Variables.



Table shows the post hoc analysis of the opinions of undergraduate students for web-based learning for curriculum aspects. . It highlighted that the those undergraduate students who were studying in first year (\bar{x} =34.87) had significantly more favourable opinions in comparison to those who were in final year (\bar{x} =32.76, $p<0.01$) The reason could be the more experience of web based resources among the first year compare to other years. It also highlighted that the undergraduate students of Science discipline (\bar{x} =39.81) had more favourable opinions for web based learning for curriculum aspects in comparison to those who were studying in Arts & Commerce (\bar{x} =34.81, $p<0.01$), Medicine (\bar{x} =36.45, $p<0.01$) and Family & Community Science (\bar{x} =34.85, $p<0.01$). Moreover, it was also found that those students who were studying in Technology (\bar{x} =37.19) had more favourable opinions of web based learning for curriculum aspects in comparison to those who were studying in Arts & Commerce (\bar{x} =34.81, $p<0.05$) and Family & Community Science (\bar{x} =34.85, $p<0.01$). This findings indicates that those who were studying in science and technology discipline had significantly more favourable opinions for web based learning for curriculum aspects in comparison to other discipline. The reason could be the high usage of web based learning resources among the science and technology students in comparison to others. There is vast range of resource material available for science and technology discipline.

ICT competency wise it was observed that those students who showed high (\bar{x} =35.41) and moderate (\bar{x} =28.23) ICT competency had overall more favourable opinions for web based learning resources in comparison to those who had low ICT competency (\bar{x} =16.67, $p<0.01$). Moreover, it was also revealed that those who had positive attitude towards ICT (\bar{x} =37.49) had more favourable opinion for overall web based learning in comparison to those who had neutral (\bar{x} =31.85, $p<0.01$) and negative (\bar{x} =22.90, $p<0.01$) attitude. The findings showcased that the majority of the students who had an average attitude were intermediate ICT users. The significant relationship, between the students' computer attitude and their self rated ICT ability was found. The majority of the self rated advanced (n=14) ICT users had very positive attitudes towards ICTs. This supports the present finding that those who had high ICT competency had more favourable opinions for WBL. **Shaikh and Khoja (2013)** found the reasons for delaying in integration of ICTs in higher education. It highlighted "the difficulty in linking ICT to the curriculum was not considered very important" as one of the major reason for the same. This inability of higher education institutions may cause dissatisfaction among the students for using ICT or web based learning resources for their curriculum aspects. Effectively implemented Web based programmes may, encourage more independent and active learning may become an efficient means of delivering course materials. It has the ability to enhance the teaching and learning by the integration of Information distribution, communication, interactivity, Geographical Independence, Temporal Independence (**Javed Wasim et.al.2014**)

T- Ratio showing Differences in opinions of Undergraduate students about Web-based learning resources for Soft Skills aspects

Variable	Category	N	Mean	Std. Deviation	T-Value	p-Value
Gender	Male	300.0	37.05	7.38	1.41	0.159 (NS)
	Female	300.0	36.21	7.21		
Age	16-18 Years	186.0	37.06	8.46	0.90	0.367 (NS)
	19-21+ years	414.0	36.43	6.72		
Monthly Family Income	Low Income	448.0	37.08	7.45	2.65	0.01**
	High Income	152.0	35.28	6.70		

Table reveals that there were no significant differences in the opinions of students about web-based learning experience regarding soft skill aspect in relation with their gender and age. Thus, the null hypotheses stating that there will be no significant differences in the opinions of undergraduate students about web-based learning experience regarding soft skills aspect in relation with their age and gender were accepted. Whereas, significant difference was found in the opinions of undergraduate students about web-based learning for soft skill aspects in relation with their monthly family income. Thus, the null hypothesis stating there will be no significant difference in the opinions of students about web-based learning experience regarding soft skill aspect in relation with their monthly family income is not accepted.

Analysis of Variance (ANOVA) Showing Difference in opinions of Undergraduate students about Web-based learning resources for Soft Skills aspects in relation with Selected Variables

Variables	Source	Sum of Squares	Df	Mean Square	F	P-value
Discipline of Study	Between Groups	855.7	4	213.9	5.7	0.01* *
	Within Groups	22269.6	595	37.4		
Year of Study	Between Groups	478.9	3	159.6	5.8	0.01* *
	Within Groups	16457.9	596	27.6		
ICT Competency	Between Groups	4221.5	2	2110.8	99.1	0.01* *
	Within Groups	12715.3	597	21.3		
Attitude towards ICT	Between Groups	3037.6	2	1518.8	65.2	0.01* *
	Within Groups	13899.2	597	23.3		



Table reveals that there were significant differences in the opinions of students about web-based learning experience regarding soft skill aspect in relation with their discipline of study, ICT Competencies and attitude towards web-based learning. Thus, the null hypotheses stating that there will be no significant differences in the opinions of students about web-based learning experience regarding soft skills aspect in relation with their discipline of study, ICT Competencies and attitude towards web-based learning was not accepted. The possible reasons for difference of opinions were significant with discipline of study, as different stream of study may have more or less possibility of availability of web-based learning experiences. It was also observed that there are more e-resources available in the disciplines like technology and science, whereas there are not many e-resources availability in arts and humanities. Science and technology has always been an advanced field for research and web-based learning strategies. Thus, may opinions differ according to their discipline of study. ICT competences are defined by the years of usage, exposure and number of functions a person can use. Usually it is observed that the student's higher or lower competence of ICT can affect the affect the opinions of students regarding web-based learning experiences in reference to soft skill aspects. Positive or negative attitudes towards web-based learning may affect the opinions of students regarding web-based learning experiences in reference to soft skill aspects.

Tukey's HSD comparison of opinions of undergraduate students for web-based learning for Soft skills in relation with selected variables.

Table throw light upon the posthoc analysis of variables for the opinions of undergraduate students for web based learning for soft skills. It revealed that those students who were studying in first year ($\bar{x} = 29.49$) had more favourable opinions for web based learning for soft skills in comparison to those who were in Second Year ($\bar{x} = 28.10$, $p < 0.05$) and Final Year ($\bar{x} = 27.47$, $p < 0.01$). Those who were studying in Science ($\bar{x} = 34.98$), Technology ($\bar{x} = 33.69$), Medicine ($\bar{x} = 33.43$) discipline had more favourable opinions for the same in comparison to those who were studying in Arts & Commerce ($\bar{x} = 31.75$, $p < 0.01$). Furthermore, it was also observed that those students who showed high ($\bar{x} = 29.66$) and moderate ($\bar{x} = 24.30$) ICT competencies had more favourable opinions for web based learning for soft skills in comparison to those who had low ICT competency ($\bar{x} = 13.50$, $p < 0.01$). Moreover, it was also revealed that those who had positive attitude towards ICT ($\bar{x} = 30.99$) had more favourable opinion for web based learning for soft skills in comparison to those who had neutral ($\bar{x} = 26.99$, $p < 0.01$) and negative ($\bar{x} = 22.19$, $p < 0.01$) attitude.

Similar to the findings for opinions of undergraduate students for overall learning and curriculum aspect wise web based learning, first year students, science and technology students, and those who had high and moderate ICT competencies as well as positive attitude towards ICT had more favourable opinions in comparison to their counter parts. Engineering students consider the internet a very useful tool for their studies. They prefer e-books and study material. It is helpful to boost their confidence for presentations and reports for further studies. The supporting researches also proves that web based learning enhance the soft skills and confidence among the students.



Conclusion

Web-based learning play vital role in students life. E-learning refers to the use of information and communication technologies to enable the access to online learning/teaching resources. Government has already started new free courses for students. **According to Tao et al (2006)**, this new environment for learning that is centered on electronic networks has allowed learners in universities to receive individualized support and also to have learning schedules that is more suitable to them as well as separate from other learners. This facilitates a high interaction and collaboration level between instructors or teachers and peers than traditional environment for learning. E-learning in academics which is characterized by the use of multimedia constructs made the process of learning more active, interesting and enjoyable (**Liaw et al, 2007**). This paper finding indicates that the undergraduate students had similar opinions for overall learning through web based resources according to their gender, age and monthly family income. The present findings also showcased heavy usage of web based learning resources among Science students. Science and Technology discipline had significantly more favourable opinions for web based learning for curriculum aspects in comparison to other discipline. Similar to the findings for opinions of undergraduate students for overall learning and curriculum aspect wise web based learning, first year students, those who had high and moderate ICT competencies as well as positive attitude towards ICT had more favourable opinions in comparison to their counter parts. It can be understood that the undergraduate students did not had much exposure of web based learning experiences. The teaching pattern in the Maharaja Sayajirao University of Baroda is traditional.

References:

- Ghavifekr S, Razak A, Faizal M, Ran N, Meixi Y, Tengyue Z, (2012) ICT Integration In Education: Incorporation for Teaching & Learning Improvement, The Malaysian Online Journal of Educational Technology Volume 2, Issue 2. Retrieved march 8, 2020 from <https://files.eric.ed.gov/fulltext/EJ1086419.pdf>
- **Hrastinski, S., (2008)** A study of asynchronous and synchronous e-learning, *EDUCAUSE Quarterly*, vol. 31, no. 4. Retrieved march 30, 2020 from <https://er.educause.edu/articles/2008/11/asynchronous-and-synchronous-elearning>
- Liaw, S.S., Huang, H.M. (2003). Exploring the World Wide Web for on-line learning: a perspective from Taiwan. *Educational Technology* 40(3): 27–32.
- Opinion Research Corporation. (26 July 2000). Education News, Working Adults like Online Education. [Online] Available form: <http://www.s kyma rkgr oup.com/industry-news-education>.
- Rashid Z, Kadiman S, Zulkifi Z, Selamat J (2016) Review of Web-Based Learning in TVET: History, Advantages and Disadvantages. Retrieved April 23, 2020 from https://www.researchgate.net/publication/300779964_Review_of_Web-Based_Learning_in_TVET_History_Advantages_and_Disadvantages
- Rusman M (2016) The Development of an E-Learning-Based Learning Service for MKDP Curriculum and Learning at the Indonesia University of Education, *Journal of Education and Practice*, ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)



Vol.7, No.31. Retrieved April 21, 2020 from <https://files.eri.c.ed.gov/fulltext/EJ1122549.pdf>

- Shaikh Z, Khoja S (2013) Higher Education in Pakistan: An ICT Integration Viewpoint, Retrieved April 22, 2020 https://www.researchgate.net/figure/Reasons-for-delay-in-integration-of-ICTs-in-HEIs-7-Implications-suggestions-for_fig1_236972680
- Tao, Y. H., Yeh, C. R., & Sun, S. I. (2006). Improving training needs assessment processes via the Internet: system design and qualitative study. *Internet Research*, 16 (4), 427–49.
- Wasim J, Sharma S, Khan A, Siddiqui J (2014), Web-based Learning, *International Journal of Computer Science and Information Technologies*, Vol. 5 (1), 446-449. Retrieved April 23, 2020 from <http://ijcsit.com/docs/Vol%205/vol5issue01/ijcsit2014050194.pdf>
- <https://unesdoc.unesco.org/ark:/48223/pf0000265721>



NATIONAL EDUCATION POLICY DRAFT 2019; GENDER ISSUES AND WOMEN EDUCATION

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Abstract

After a marathon consultation among all the stakeholders of education stakeholders Indian government has come up with the National Education Policy draft 2019. The draft is supposed to meet the requirement of nation and enhancement of quality education. The draft is prepared after the mammoth discussion among the national, state, district and block level stakeholders to incorporate all the related aspects to achieve contemporary educational objectives and goals. It is further proposed to meet the quality and equality. The draft is also aimed to provide the affordable education to one and all. This draft has come up on the time when the entire world is going through drastic change in every sector. Each section of the society demands various objectives to be fulfilled by the educational system. Technology, industry, modernization, migration, etc. needs to be taken into consideration by the educational goals. However it is also important that new educational policy should be pro gender sensitization and shall be address to the gender issues and the women education. This paper is an attempt to analyze the new national education policy draft 2019 in respect with the provisions for women education and gender issues

Key words: Education Policy, Gender Issues, Women Education, Women Empowerment, Equality

Introduction

India is very gigantic and huge nation to implement any policy and when it comes to educational policy it becomes even difficult to address entire nation in one draft. However new National Education Policy 2019 is big exercise to attend the nations educational goals and objectives. Different characteristics of Indian population, social stratification, plural society and uneven socio-eco status of section of society were the challenges to address and satisfy in the new educational policy draft. However it seems that with the lots of consultation and submission by the stakeholders the committee appointed for the draft writing has made excellent effort to present a meaningful document. Indian education system has variety of apex bodies for providing education to all i.e. University Grants Commission, NCERT, AICTE, etc. Providing education to all is joint responsibility of state and center. Various government institutions are providing education in various disciplines and the same is equally provided by the number of private institutions. The draft is an attempt to incorporate new trends and modern aspects of education. It is comprise of all concern fields of education from primary to higher and traditional fields to the technical fields. It is notable that draft has essence of all culture, religion and organization and their views. Moreover the renowned



personalities are also consulted to make it perfect and meaningful. The educational policy is made of all suggestion given by the different stakeholders of different state and province. The draft is divided in four sections viz. School Education, Higher Education, Additional Key Focus Area and Transforming Education. However, women education and gender issues are also important part of draft which may be impact future of education of women in India. So it is important to analyze women education and gender issues at this juncture.

Method

This is a descriptive study based on secondary sources. For the review and reference government reports, related articles and books has been used. Attempt has been made to analyze the gender issues and women education addressed in new educational policy draft 2019. The prime objective of this paper is to find out the provisions and efforts planned for the women education and gender equality in new education policy. It is an attempt to compare the world wide women education policy to the newest policy to compare and check whether it is meeting global requirements.

Quality Education and New Education Policy

The draft is mainly quality centric and is aimed to meet the requirement of twenty first century through education, it is also insured that Indian culture and values must be incorporate in the policy. It is also been ensured that upcoming technology, creation of technology, new concepts must be the parts of new educational pedagogy. The draft undermine the diversity, change in culture and the difference in language, new ideas are with the accordance of Indian social structure. The rich literature in various languages is also taken and being incorporated in this new policy. This draft is an extension of previous policies of education 1986, 1992 and 2009. On the rise of science and technology changes are rapidly visible in all over. The draft is very focused on this change and the preference of youth in science and technology. The draft envisage that coming time is of skill development and employable skills and therefore the new policy must advocate the need of hour i.e, employable education and skill based programme. This draft is also unique as first time it has been discussing corruption in education openly. This was in the discussion earlier also but in unofficial talks and whisper. But this time draft mentioned that corruption is damaging the education system, and it needed the conviction and strong determination to remove it from the educational governance. Draft also urges to bring the honesty in the educational system. It is advocated that the new systems will be incorporated the revival of institutions will ensure removal of corruption. It needs the political initiative and structural reforms to do this. Transparency in all educational matters has to be improving and to be ensured, the drafty says.

The importance of research in university and college is always has a priority in Higher education however the standard and output of research is always questioned. New draft policy has proposed the establishment of National Research Foundation (NRF) to



improve and create research culture in Higher education system. It is always significant that university and colleges may produce the applied and industry related research which can be interest of the society. However, in recent past it has been found that repetitive and nearly meaningless research has been carried out. Most of the time research funds have been the reason but now in new draft first to ensure funding for research a dedicated wing has been proposed. NRF will lead research activities in university and colleges. With all these exceptional policy initiatives draft for new education policy has come up with a hope of reforms in educational system. Women and gender issues remain critical subject for all policies including the present draft. This issue is also taken into consideration. The draft writers have consulted to the ministry of child and women welfare to look for the untouched issues in women education and gender issues.

Participation of Girls in Education

Enrollment of girls in school and higher education system was always task and critical issue for the educators. In history when Sawaitribai Phulev compelled to fight to teach girls because of oppose of orthodox society to today's modern world where girl education is still secondary. Indian government has now taken up a task for hundred percent participation of girl in school and higher education. There is acute gender gap in all level of education sector. There are many educational streams which are fully dominated by men. Now new policy says that it will ensure to reduce the gender gap in various sectors. Moreover it is important that government also wants to change the mindset of the people that is creating obstacle in women education. It is not clearly mention that how they are going to do this. The new policy also expects that society should take initiative to present examples of promoting girls in education sector which may encourage further to rest of the society. Government will help such experiments of promoting girls and making them empowered. Leadership development and capacity development will be on top priority for women in all educational sectors, government also wants help to create role models to inspire others. Interestingly first time this draft has announced the 'Gender Inclusion Fund' to reduce the gender inequality and to promote equitable education. This financial provision is first of it kind and will be spent on quality education for women. The funds will be spent on direct cash transfer and to provide basic facility like sanitation facility, purchasing bicycle etc. Further center will also provide additional funds to the state support local community based issues related to equitable and quality education for women. This fund will spent on various needs of girls education and to provide them technical assistance. Every state will be asked to design the scheme and programme to resolve the challenges faced by girls to get education.

Equitable Education for women

Gender has never included neither part of planning strategies of any government. Various administrations are giving the priorities to the economical, environmental and



other planning however whenever the issue regarding planning and framing policies for gender issues no one gets formal training to address the same. A study conducted on the gender sensitize activists confirmed that they have knowledge however they don't know how to exactly practice it. Feminist production thinking has always giving stress and believes that education sector has been restricted to limited class and gender. Feminist believes that even after various efforts and advocacy school system is dominated by specific section of the society. Gender issues must be understood in the context of social and cultural settings of the society.

Whenever we are talking about education for all in gender perspective, it is also fact that percentage of women participation in education is less and not any change in status of women. Due to inadequate provisions for women education many serious consequences have been occurred. Women have no access to the services, power and information. There is always need of policy framing and planning for gender sensitization in view of gender equality. The issue of gender budgeting is very significant in terms of the provision and assessment of budget in view of gender perspective. In all sector of departments including education, it is very essential that budgetary provisions. There are many international organizations like ACORD working in Europe and north America advocates the policy focus on enhancing women access and participation in decision making and education.

New policy not merely focusing upon the participation of women in education but the draft advocate creating environment for women to ensure fair and equal opportunity in the education system. The new policy is desperate to create leadership among women in all sectors like institutional heads, educators and sports. It will also ensure that for recruitment and training programme priority will be given to women. In the field of children education women teacher can play a important role, keeping this in mind women teacher will be recruited for this specific job which can be again important decision in terms of women employment. Women teachers will be encouraged to be skilled and trained by specific programme which will be run by government itself. It is well in knowledge that qualified and trained teachers are not available in rural areas; even they do not get the opportunities. New policy will ensure the basic facility to help the rural women to complete their education and further train them to become a professional teacher. This initiative is important as far as the employment and the development of rural women.

Social Awareness and gender sensitization

It is matter of fact that most of the parts of Indian society are male dominated and having a biased views about the women education. Women have been restricted to the house and related work. She has been denied access to the education. In the past effort has been made to make aware the society about women education and access to education. There are lot of independent movements was also spreading social awareness for women empowerment and women education. This will be encouraged further by the new policy. On various platforms efforts will be made to hold awareness programme,



campaign, and social awareness programme. People will encourage sending their girls to school and colleges. Special programme will be arranged for the rural sector. The new draft says, it is very important to create and inculcate social values to encourage new generation to promote women and give them access to education. It is now time to eradicate and destroy orthodox thoughts. Son preference and priority to men in education and employment is the critical factor in the upliftment of women. Education both men and women can change the scenario, because education is agent of social mobility. The new policy will ensure that with the help of awareness campaign and social message biased thoughts can be eradicated and a positive environment can be created. It also important uplift the women from various social groups and under privileged groups, the government will run special programme to reach these groups. Early marriage in various parts of the country is major obstacle in the progress of women. Government will take efforts to eradicate this tradition and will make aware the parents for their daughter future. The draft claims that financial assistance will be given to the poor section of the society to educate their girls instead of marrying them. Draft says that Gender sensitization programme will be run by the government to avoid women harassment on the various places in the society. New education system will ensure and insist on various laws made to prevent women harassment and giving them freedom as a human being.

Findings and conclusion

New education policy draft 2019 is a comprehensive document related the education policy and initiative. The drafts have presented new vision for Indian education system. New policy is planned to reshape and revive educational method, educational leadership, educational institute, educational research, teacher training and teacher recruitment, involvement of stakeholder and inclusion of new technology. Very first time this draft has admitted many lacunas in the Indian education system and show willingness to correct it. The draft says that it will ensure that new education system will be corruption free and will be based on high quality research and planning. The draft claims that new policy will make India competent to produce well trained, skilled and professional workforce. New policy will bring huge change in education system in many ways.

As far as women education is concern primarily it looks that government is very keen to bridge the gap in education. But it can't be happen overnight , UNESCO study says it is joint responsibility of institutions, teachers and parents also. New policy draft is focused on equitable education to bring women in education system. Draft claims that new education policy will increase women participation in school and higher education. It will also encourage women to take leadership in all sector of the education. Above all this draft shows the determination of the government to organize programs on gender sensitization programme to eradicate the biased views of men dominated society. The draft propose the special funds to organize the gender sensitization events especially for the under privileged community women. Funds will be also raised for the capacity



building and leadership development. Women should be in the centre of the education policy.

There are few observations and suggestions

- These drafts have many things to be implemented but still there lot of questions answered. The draft has failed to mention any specific programme for the women to be indulging in vocational training. In this competitive world women should also open to the skill development programme. So vocational training center for women should be started to address this issue.
- Various studies show that through only education any society can achieve gender equality so this draft and provisions made by it are opportunity to get equitable education.
- The draft also sounds very strong for the eradication of biased view of the society toward women education. However it is not clear what type of the programme are going to be organized and by whom it will be conducted. There are several programmes which are already underway now this announcement will not much impactful in this regard.
- The draft makers have met to all stakeholders still in reference with the gender issues few women organization could have consulted. The aim of the new policy of organizing programmes on gender sensitization is good but unless the involvement of few women organization and Non Governmental Organization it will be not effective.
- Providing facilities for women hostel, toilets, bicycles will not be so effective because these schemes are already exists. So some aggressive incentive for girl education must be announced like reimbursement o expenditure on girls education will or the same will be benefited as tax exemption for parents etc.
- Utilization of funds for women education and gender sensitization is left to the state policy however there is no specific guidelines given. So uniformity in the implementation will be not possible. So center must provide guidelines to the state for the effective and uniform implementation.
- The draft talks about the educational governance corruption but moreover it should talk about academic corruption to ensure quality education in Indian education system which can fairly deal with gender sensitization.

References:

- Edward and Stewart (2017) '*Pathways and process towards a gender equality policy*' , Social policy and gender ; Rethinking equality and efficiency, ANU press ,Canberra
- Jo Anne Dilabough (2003) '*Gender Education and Society ; The limits and possibilities of feminist theory* ', Sociology of Education, VOL 76, No 4 , American Sociological Association
- Joy Watson (1999), '*So what Does gender planning mean to policy makers*' , Empowering women for gender equality, Tylor and Francis, Ltd.
- Fiona Leach (1998), '*Gender, Education and Training ; An international training* ', Gender and Development , VOL 6, No 5, Tylor and Francis Ltd.



- Angela Hadjiatreas (1997), 'Implementing a gender policy in ACORD ; Strategies, constraints and challenges ' Gender and Development VOL 5, No 1, Tylor and Francis Ltd.
- NCERT (2006), '*National Focus Group on Gender issues in Education*', New Delhi
- UNESCO (2004), '*Gender Analysis of School Curriculum and textbooks*', Islamabad
- Sheila and Elaine(2007) '*Practicing Gender equality in Education*', Oxfam Publication UK
- The Commission of Gender Equality (2017) '*Gender in Curriculum*', South Africa
- Ministry of HRD GOVT of India, (2019), '*Draft for National Education Policy 2019* , New Delhi
- Agency for Development Evaluation (2010), '*Gender Equality In and Through Education*, Sweden.
- UNESCO (2015) '*A Guide for Gender Equality in Teacher Education Policy and Practices*, France
- Miriam E (2015), '*Women and Gender Equality in Higher Education*, Educ sci Publication
- Dipta Bhog , (2002) '*Gender and Curriculum*', Economic and Political Weekly .
- Rajshree (2016), '*Gender Sensitization- Equality of Opportunity in Indian Context* ' , Indian Journal of Research, Vol 5, Issue 10



RELATIONSHIP BETWEEN ACADEMIC ANXIETY AND FAMILY ENVIRONMENT AMONG SENIOR SECONDARY STUDENTS: A STUDY

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Abstract

The present study is an attempt to study the relationship between academic anxiety and family environment. Sample for the study consisted of 100 senior secondary students. Academic Anxiety Scale developed by S.K. Pal, K.S. Misra and Kalplata Pandey and Family Environment Inventory developed by K.S. Misra were used as tools for the study. Product moment coefficients of correlation were computed for the analysis of the data. The finding of the study revealed that academic anxiety is positively related to hindrance, compulsion, apathy, hostility, friction, tension and neglect dimension of family environment and negatively related to empathy and democratic-orientation dimensions of family environment among senior secondary school students.

Keywords: Academic Anxiety, Family Environment, Senior Secondary Student

Introduction:

The present era with rapid changes in environmental structure has been called a anxious, stressful, and pressured era. Therefore psychological imbalances have been increasing among people. Anxiety is the common prevalent psychiatric disorder; in the United States more than 23 million populations are suffering from anxiety in every year. It is pervasive and unpleasant, causing physical symptoms i.e. chest muscle spasm, gastrointestinal disease, agitation, sweating and palpitation, which are created as a result to internal and external stimulation and it tends toward emotional, physical, behavioral and cognitive symptoms. Academic anxiety during education is the major kind of anxiety in adolescents. It harms student psychological health and affects their efficiency, personality, aptitude and social identity. Academic anxiety is a common expression which refers to a social phobia in which the student falters in their function and can not confront conditions assessing themselves i.e. examinations. In fact, academic anxiety is a self-obsession which is characterized by feeling of self-inferiority, regarding their abilities and students often tend toward negative cognitive evaluation, lack of concentration, undesirable psychological reactions like increase of heart rate, drop in blood pressure, cold fingers and lower educational performance. Academic anxiety is therefore a situation-specific form of anxiety related to the educational contexts. Academic anxiety encompasses not only test anxiety, but also anxiety about certain education subjects in general. For instance, anxiety has been observed in students taking mathematics, science, language reading and foreign language classes (Cassady, 2010). Academic anxiety leads to academic difficulties through irrelevant thoughts, preoccupation and reduce concentration and attention (Eysenk, 2009). Academic



anxiety has four main components namely: emotionality - it is linked to biological signs, i.e. fast heartbeat, sweaty palms, nausea and tense muscles, study skills deficits - it results from inadequate study techniques that trigger anxiety, task-generated interference - it is an outcome of unproductive behaviors that impede academic performance i.e. spending too much time on questions you can not answer, worry - it undermines academic success by distracting students from focusing on what needs to be done to perform well. If academic anxiety is not properly addressed, it can have several serious and long lasting consequences such as causing a students to start hating a subject or a teacher, tell lies to family members, poor performance in schoolwork, absent in class and some other activities related to curriculum and withdraw from socializing with peer groups or friends and may drop school. Kumar (2013) reported that academic anxiety levels do not differ from adolescents on the basis of gender and location i.e. urban and rural. Also Mahajan (2015) found that male and female secondary school students do not differ from one another on academic anxiety. Adolescent's life is affected by the family environment in which he or she lives. The physical environment of the family and school also influence health through exposures to lead, mould and noise etc.

Family environment is the quality and quantity of the cognitive, social and emotional support that has been available to the child within the family and connotes the psychological environment of family. Bradley (1995) reported that home environment shows generally stronger relation to cognitive development. Parent's behavior is the important factor in creating the home environment. Matto and Nabi (2012) reported that home environment affects the level of academic anxiety of the adolescents. Control, protectiveness, punishment, reward, nurturance, rejection and permissiveness dimensions of home environment are significantly correlated with academic anxiety of adolescent's students, where as social, isolation and deprivation of privileges are some dimensions which are not significantly correlated with the academic anxiety of the adolescents (Kumar, 2013). In this study an attempt has been made to explore the relationship between academic anxiety and family environment among senior secondary students.

Objective:

The present study has been conducted to achieve the following objective.

- To study the relationship between academic anxiety and family environment¹ among senior secondary school students.

Hypothesis:

To achieve the above mentioned objective, the following hypothesis was formulated and tested.

- There is no significant relationship between academic anxiety and family environment² among senior secondary school students.

¹ This objectives will be achieved with reference to 20 dimensions of family environment viz., warmth, humanistic thrust, hindrance, control, empathy, cohesiveness, friction, democratic orientation, compulsion, spirit, insecurity, formality, apathy, tension, acculturation, conformity, competition hostility, reward and neglect

² This hypothesis will be tested with reference to each of the 20 dimensions of family environment



Methodology:

Descriptive method of research has been employed in the present study. Sample for the study consisted of 100 senior secondary students of Prayagraj city. Academic Anxiety Scale developed by S.K. Pal, K.S. Misra and Kalplata Pandey and Family Environment Inventory developed by K.S. Misra were used as tools for the study. Product moment coefficients of correlation have been computed for the analysis of the data.

Result and discussion:

Table-1
Values of Coefficient of correlation between academic anxiety and family environment among senior secondary students

S.No	Dimensions of Family Environment Inventory	r
1.	Warmth	- 0.007
2.	Humanistic thrust	- 0.025
3.	Hindrance	0.360**
4.	Control	- 0.003
5.	Empathy	- 0.238*
6.	Cohesiveness	- 0.150
7.	Friction	0.247*
8.	Democratic orientation	- 0.252*
9.	Compulsion	0.373**
10.	Spirit	- 0.133
11.	Insecurity	0.504**
12.	Formality	0.121
13.	Apathy	0.303**
14.	Tension	0.245*
15.	Acculturation	-0.102
16.	Conformity	0.194
17.	Competition	-0.085
18.	Hostility	0.308**
19.	Reward	-0.026
20.	Neglect	0.200*

* / ** Significant at .05/.01 level

Observation of table 1 reveals that the value of coefficient of correlation between academic anxiety and various dimensions of family environment i.e. hindrance (=0.360), compulsion (=0.373), apathy (=0.303) and hostility (=0.308) are significant at 0.01 level, so the corresponding null hypothesis are rejected and it can be inferred that academic anxiety is positively related to hindrance, compulsion, apathy and hostility dimensions of family environment among senior secondary students. This means that as



parent's efforts to obstruct children's activities; tendency of parents to force children to do as they desire; absence of interest in the welfare of children; parents tendency to be aggressive and use punishment increase the academic anxiety of children also increases. Table 1 also reveals that the value of coefficient of correlation between academic anxiety and various dimensions of family environment i.e. empathy ($=-0.238$), friction ($=0.247$), democratic orientation ($=-0.252$), tension ($=0.245$) and neglect ($=0.200$) dimension are significant at 0.05 level, so the corresponding null hypothesis is rejected and it can be inferred that academic anxiety is positively related to friction, tension and neglect dimensions of family environment while empathy and democratic-orientation dimensions of family environment is negatively related to academic anxiety among senior secondary school students. This means that as parents tendency of occurrence of difference of opinion leading to arguments and quarrelling; existence of uneasiness and parents behavior to ignore children, increases academic anxiety of students while parents tendency to lay aside their own way of experiencing and perceiving reality and preferring to sense and responding to the experiences and perception of children and parents view of a child as a unique orientation as individual with needs, desires and respect for his rights reduces to academic anxiety among senior secondary school students.

Table 1 also reveals that the value of coefficient of correlation between academic anxiety and various dimensions of family environment i.e. Warmth, humanistic thrust, Control, Cohesiveness, spirit, formality, acculturation, conformity, competition and reward are not significant at 0.05 level, so the corresponding null hypothesis can be accepted and it can be inferred that academic anxiety is not related to warmth, humanistic thrust, control, cohesiveness, spirit, formality, acculturation, conformity, competition and reward dimensions of family environment among senior secondary school students. This means that academic anxiety is not related to parents unconditional positive regard, elements of caring, non possessive love prizing and liking; parents passionate interest in child's behavior as human being; tendency of parents to impose restrictions on children in order to discipline them; tendency of the family members to remain friendly to one another; existence of courage, vigour, enthusiasm and liveliness; those conditions which demands attention to rules and conventions; demand of parents for cultural assimilation; work according to parents desires and expectations; parents encourage children to give better performance in various activities and use material as well as symbolic reinforces to strengthen or increase probability of occurrence of behaviors.

On the basis of the findings of the study it can be concluded that academic anxiety is positively related to hindrance, compulsion, apathy, hostility, friction, tension, neglect and negatively related to empathy and democratic-orientation dimensions of family environment among senior secondary students. Thus, the findings of the study implies that parents should not try to restrict children's activities, parents should avoid forcing their children to do as they desire, parents should be interested in the welfare of children and their tendency should not be aggressive and punishable.



References:

- Bradley, Robert, H.; Corwyn, Robert, F. (1995). In A. Kumar (2013). Relationship of academic anxiety among adolescents in relation to their home environment. *International Journal for Research in Education*, 2(7), 32-37.
- Cassady, J.C. (2010). In S.K. Das, U.K. Halder and B. Mishra (2014). A study of academic anxiety and academic achievement on secondary level school students. *Indian Stream Research Journal*, 4(6), 1-5.
- Eysenck (2009). In G. Mahajan (2015). Academic anxiety of secondary school students in relation to their parental encouragement. *International Journal of Research in Humanities and Social Sciences*, 3(4), 23-29.
- Kumar, A (2013), Relationship of Academic anxiety among adolescents in relation to their home environment. *International Journal for Research in Education*, 2(7), 32-37.
- Matto, N.H. and Nabi, R. (2012). A Study on academic anxiety among adolescents. *International Journal of Social Science Tomorrow*, 1(3), 2277-6168.
- Mahajan, G. (2015). Academic anxiety of secondary school students in relation to their parental encouragement. *International Journal of Research in Humanities and Social Sciences*, 3(4), 23-29.



EMPLOYEE TRAVEL EXPENSES USING SALESFORCE PLATFORM

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ABSTRACT

Employee expenses are charges incurred on behalf of the company. Employee want an easy platform to organize travel plans and submit expense report. In every organization a manager want a simple solution for approving travel plans and approving expenses. Both can be possible with Employee Expenses App.

Employee Expenses App allow us to organize our data and monitor our travel plans and expense and across all the organization. Customize Reports and Dashboards provide complete view of reports for our team in Salesforce. When time make all the difference in closing and winning deals, this system provide us the perfect solution as a supervisor to timely approve and monitor travel plans and expenses for our team, making them more effectively. Get a clear view of estimated travel expenses for each travel request and expenses.

The need of the employee expenses app is to simplify the way organisations manage and justify business travel. Employees save time by searching and expensing trips in the same platform, increasing productivity and eliminating end user frustration. Managers get complete visibility of expenses. Managing pre-book Travel Requests, Multilevel Approvals, & Expense Reporting got easier & efficient in Salesforce. Get automated email, chatter, & mobile notifications. Manage travel authorization & expenses from any device anywhere. Pre-built Reports and Dashboards provides complete view of travel requests and expenses.

Keywords- Salesforce ,Employee Expenses App, Employee Travel Request, Employee Travel Expense, Expense Request, Expense Items, Salesforce 1, Gantt Chart, CRM, Sales Cloud.

1.INTRODUCTION

Traveling is a hassle these days, no matter why you're going, or where & the necessity to track your expenses along the way just adds to the irritation.[1] A good app can make things a lot easier for you not only during the trip, but afterwards as well, when you have to report it all to your accountant. Any business expenses incurred towards a fixed business goal completion are known to be employee travel expenses.

But does these business profitable manage these expenses? Here we look into the key element that constitute employee travel management and understood the protocol behind qualifying these business expenses.[2]



“Employee Expenses App” provide us different services and benefits, which help us to ensure that departments and employees spend sensibly. while away for business travel, whether to attend meetings, conferences or visit other corporate office. Travel costs and expenses often make up a sizeable portion of a organization annual year budget, so having a good policy is important to protecting the bottom line. Though travel is sometimes necessary, there are ways to secure lower prices to make it as economical as possible. Employee travel management is the process of securing the lowest possible rates for corporate travel, as well as following employee expenses. The employee expenses can include, Travel and Transportation, Food and Beverages, Accommodation, Fuel and Mileage etc.

Employee Expenses App is capable of providing employee travel & expenses management tool within salesforce to customer. Users can create accurate ,in policy expenses report from a web or from the smartphones. And user don't have to use spreadsheets or paper receipts, and don't have to pay cash in advance.

2. METHODOLOGY

2.1 Supported Technology –salesforce: Salesforce is a cloud computing service as a software (SaaS) company that specialized in customer relationship management (CRM). Salesforce services allow businesses to use cloud technology to better connect with customer partner and potential customer.[3] It is one integrated CRM platform that provides your departments different services including marketing, sales cloud commerce, and service — a single shared view of every customer. It provide companies with an interface for different case management and task management.

2.2 HOW DOES IT WORKS?

The company is a service as a software (SaaS). It uses a cloud-computing to distribution software model online making it purchaseable for companies to buy a CRM system for their business..Salesforce hosts numerous different cloud platforms ,make it an all in one platform for CRM application like sales, services marketing and more that allow companies to interact with different data and service their customers in various capacities.

Salesforce's sales cloud gives companies the ability to track contacts, opportunities and manage a team to increase sales. The best part is salesforce service cloud allows companies to connect with customers and deliver premium customer service through showing customer activity and resolving issues. With their marketing cloud, Salesforce helps companies track customer journeys while providing multichannel marketing campaigns, while their community cloud allows companies to directly interact with their customers and allows their customers to interact with each other. Salesforce CRM has helped make manual data entry a thing of the history with automate solution. Still, Salesforce's entire model supports customer relationship management (CRM).[4]



2.3 customer relationship management (CRM) : A CRM is a tool that companies use for enhancing their relationships with customers. A Customer Relationship Management like Salesforce supports businesses sequentially acquiring new customers and creating customers. Salesforce also assists firms in analyzing the data that they collect. All small businesses should use CRM system it can significantly improve your business process.

A CRM solution helps you focus on your organisation's relationships with individual people, a good CRM solution offers you this and much more including customers, service users, colleagues or suppliers throughout your lifecycle with them.[1] It also helps in finding new customers, winning their business, and providing support and additional services throughout the relationship.

3.LITERATURE REVIEW

3.1 Background History Related to Project

Managing business trip has become a complicated process with lots of overhead before, during, and after the trip. The real problem is keeping track of these expenses. There are sundry expenses that you do not remember or expenses that you incurred but misplaced the receipts.[4] Communication gets lost in emails and leads to lack of compliance with corporate policies and employee dissatisfaction. So to reduce these overheads we added some features. These features are:

Integration of all records, Manage information of travel, It generates the report on booking for train, car, bus, To increase efficiency of managing the customer, It deals with monitoring the information and transaction of payment, Shows information and description of booking.

Automate Pre-Book Approval Process and integrate with SF1. Travel request to account, contact, lead, opportunity, or events. Notifications via Workflow, Chatter, and Email. Effectively Manage Your Team Travel Schedule & Estimated Expenses via any device while on the road. Multilevel Approvals and Travel Assistance Notification Team Travel Schedule - 360 degree view of your team's travel plans and approvals (Pre-built Reports and Dashboards) provides complete view of travel requests and expenses.

4. RESULT & DISCUSSION

4.1 Our Approach

It is a module in the Salesforce CRM that helps the different sales team majorly to efficient access of data over the cloud. Need different Lightning App. Creating various objects in database as needed and different fields and records. We need Approval Process which sends the email alert to the approver which can approve or reject the request. We need to associate multiple objects with different relationships. It assists the

managers, leader, team and the sales team of that organisation to connect with the customers and provide direction toward more sales.

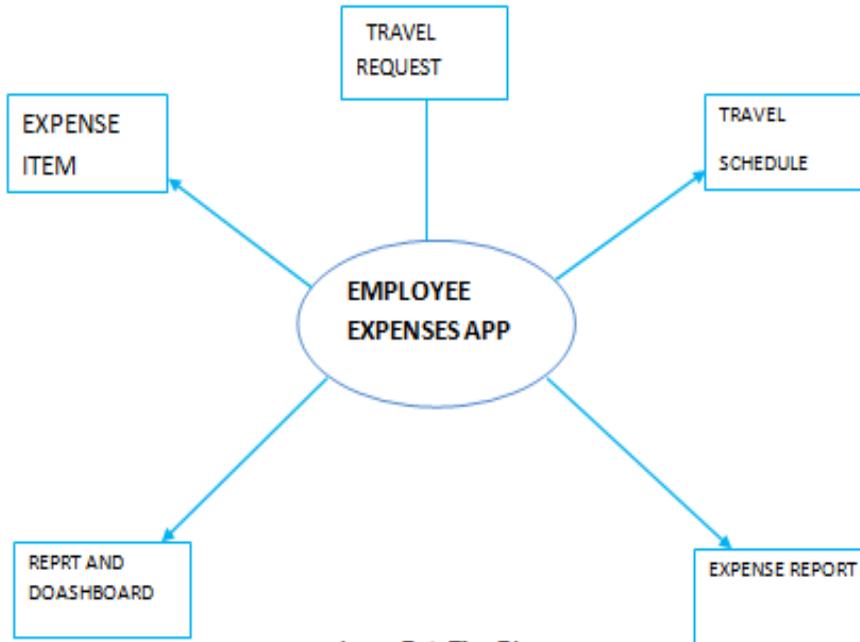


Fig.1 Data Flow Diagram

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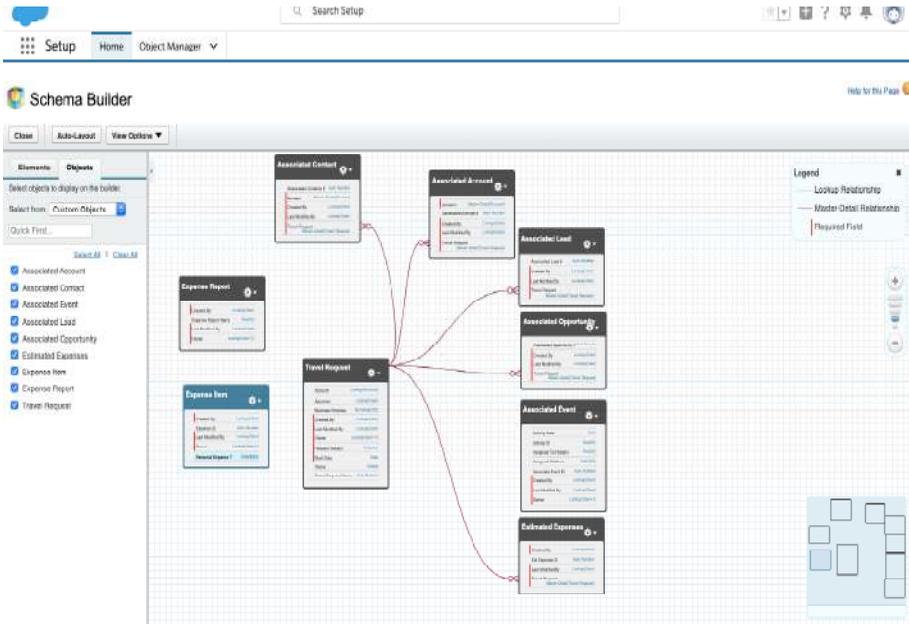


Fig.2 SCHEMA DIAGRAM

4.2 Salesforce Sales Cloud:- Sales Cloud is a custom relationship management (CRM) which is focused on enhancing the effectiveness of the team working with sales of organization and hence increase the amount of sales[1]. The platform is provided as Software as a Service (SaaS) for browser-based access; and a mobile app is also available.

Salesforce Sales Cloud is a (CRM) platform which is designed to support sales, marketing and customer support in both business-to-business (B2B) and business-to-customer (B2C) contexts.[2]

It give complete information of the customers and users including communication, discussion, contact phone number and email. Give alerts on active leads and helps to create reports and dashboards which can be used for further information. This leads can take faster decisions. It helps simplifying the approval process for the user and automate any business process by using simple drag and drop facilities.



Fig .3 Sales Cloud Diagram



Fig.4 CLOUD ARCHITECTUR

4.3 Reason to use salesforce for your business:

There are many ways in which CRM can help accelerate your business growth. Salesforce CRM is easily customizable and scalable. It can be tweaked as per



organization need and is future ready. It can lead to faster and seamless adoption by all in the organization. Reason to use Salesforce for your business are:

Helps automate Everyday Tasks: It helps you to effectively automate repetitive tasks. Boost efficiency and minimize the risk of error, helps to reduce workload. The every day task that can be automated are emails, call logging scheduling appointments etc.

Make Tracking Customer Data Easier: It made tracking of customer life cycle easy as all the organization's data is stored in single centralized unit. We can use this data for personalization, which will help improve customer satisfaction. It can also help in re-engaging with inactive subscribers, increase customer retention.

Efficient Reporting: Salesforce made analyzing of data easy which leads to better and efficient reporting. It has in-built tool which allow you to generate report – be it lead status report, total sale report etc. It gives you accurate image of revenue earned and also highlight area that need improvement.

Enhance Customer Service: Result of all above-automation, customer data, easy tracking and improve internal collaboration leads to enhance customer service. With Salesforce CRM platform your customer can find resolution to any customer problem. This, in turn, helps increase brand loyalty.

Improve Internal Collaboration & Communication: When customer data is easily available, it helps boost internal collaboration between the team. As all the information is available it leads to quick response in time. One can easily identify opportunities, follow sales activities in real time and track timeline. This helps to boost productivity, leading to growth in revenue.

4.4 Following are the key feature of Employee Expenses App

1. Pre book Travel Approval
2. Add estimated Expenses
3. Email, chat, workflow Notification
4. Expenses Receipt & Expense Report
5. Multi-level Approval
6. Salesforce & Lightning Experience

5. Conclusion

Being a traveler don't you feel managing expenses and tracking everything on notes is a mere headache, so why not to use an app. Yes, an app that make things a lot easier during trips which can manage our budget.

Here I have presented the design of a Employee expenses system on Sales force Platform. The "Employee Expenses App" simplifies the expenses reporting process for your entire organization. It provide fast processing and immediate result with high security. Minimizing human effort and cost efficient database. Navigation through the app is easy. which can provide the users with the required travel assistant and also for



the higher authorities to take care of the expenses at any point of time through multilevel approvals of the employee expense request. Here the user can upload the bills to cloud any time which is more efficient and productive. Employee Expenses App allow us to organise and monitor travel plans and expense reports for our organization using Sales force Platform. This app make the manager's of the organization more efficient by timely approving the request and monitor travel plans and expenses for their organization When it makes all the difference in closing and winning of any deal .It helps to get a clear view of estimated travel expenses for each travel request and across all the organization. Pre-built Reports and Dashboards provide complete view of travel requests and expenses. We also have approval process for the approval and rejection of our request.

REFERENCES

- [1] GOOGLE. TRAILHEAD,Salesforce.com, APP EXCHANGE.
<http://trailhead.salesforce.com>
- [2] <https://success.salesforce.com/>
- [3]<https://www.salesforce.com/in/>.
- [4] Salesforce.com,. (2014e). About us - Salesforce.com. [Online]. Available at:
<http://www.Salesforce.com/company/> [Accessed: 30 August 2014].
- [5] Salesforce.com,. *Expedia Corporate Travel Selects Salesforce.com for State-of-the ArtCRM* - Salesforce.com. [Online]. Available at:[http://w ww.Sales force.co m/co mpany/news-press/press-releases/2004/01/040126.jsp](http://www.Sales force.co m/company/news-press/press-releases/2004/01/040126.jsp)[Accessed: 30 August 2014].



A GUIDE TO INFECTION CONTROL FOR CT RADIOGRAPHERS AGAINST COVID-19

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Abstract

The use of medical imaging is inevitable in the medical diagnostic field. Computed Tomography is the suitable modality for the cross section imaging. As the infection of COVID-19 affects the respiratory system the lung imaging is essential and hence CT lungs plays a vital role. While performing the lung Computed Tomography it is necessary to protect the health care worker like CT Radiographer, physician against the infection. This article guide how to perform the CT for COVID-19 infected or suspected without infection to the health care providers.

Key words: Infection control, CT Radiographers, COVID-19

1. Introduction

According to World Health Organization Coronavirus disease (COVID-19) is considered as an infectious disease caused by a novel coronavirus. On 30 January, 2020, WHO declared the outbreak as a Public Health Emergency of International Concern (PHEIC). On 11 March, 2020, WHO classified COVID-19 as a pandemic. The COVID-19 virus spreads mainly through droplets of saliva or nasal discharge when an infected person sneezes or coughs.

Computed Tomographic Imaging plays an important role in diagnosis and monitoring the recovery of clinical features of COVID-19 positive patients. The Sensitivity of CT thorax (lungs) for COVID-19 are reported to range between 80%-90% and specificity is reported between of 60%-70% [6, 7]. Thus, imaging is reserved for those cases where it will impact patient management and is clinically indicated or to evaluate for unrelated urgent/emergent indications.

2. Discussion

There are different opinions regarding the use of Computed Tomography modality in COVID-19 positive or suspected patients, to rule out other diagnoses. But the study reveals if there is a necessity to perform Computed Tomography, how the radiographers can be well protected from the infection.

According to a Fleischner Society consensus statement published on 7 April 2020 [8]

- Computed Tomography imaging is indicated in a patient with COVID-19 and worsening respiratory status
- In a resource-constrained environment, imaging is indicated for medical triage of patients with suspected COVID-19 who present with moderate to severe clinical features and a high pretest probability of disease.

The hospitals do not routinely use imaging for COVID-19 screening, but Computed Tomography Imaging is performed in COVID-19 positive or suspected patients, to rule out other diagnoses, including pulmonary embolism that can be treated.

While doing Computed Tomography Radiographers are the first line health worker who might be exposed to infection of novel COVID-19. So it is essential for the diagnostic imaging facilities to have guidelines to manage and to protect them from the possible viral infection. This article is to place the steps to be followed while taking Computed Tomography for the COVID-19 positive or suspected patients.

Two radiographers/ CT Technologist/ Radiologic technologists (RTs) are desirable for the Computed Tomography scanning of patients for the assessment of COVID-19 pneumonia. One Radiographer uses Personal Protective Equipment (PPE) to set up the patient on the CT imaging table.

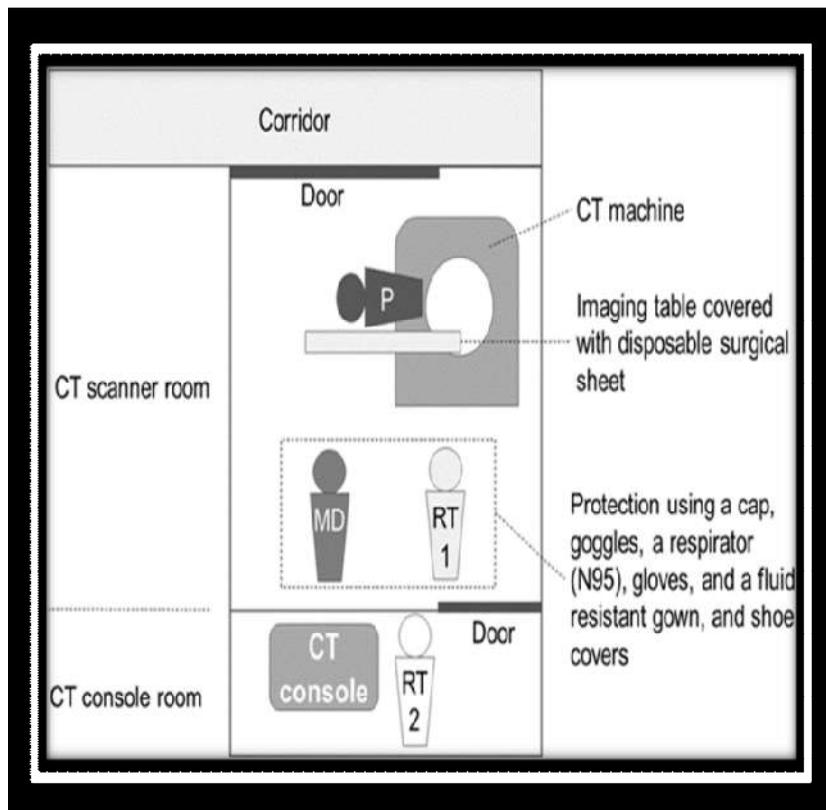


Fig. 1 :Schematic of CT suite in the setting of the patient infected with COVID-19
The other Radiographer operates the CT console. The Personal Protective Equipment (PPE) includes eye protection (goggles), a filtering facepiece respirator (N95), a surgical cap, gloves, a fluid-resistant gown, and shoe covers.
The CT examination is performed as follows (Fig. 2):

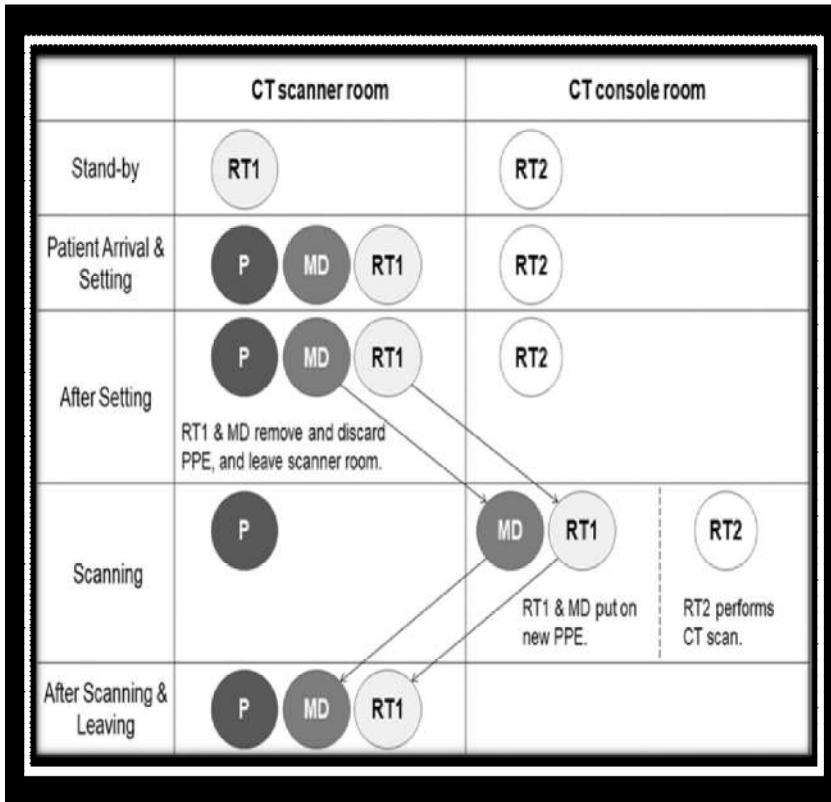


Fig. 2 :Process and staff distribution in the CT scanner and console rooms during CT examination of the patient infected with COVID-19 .

RT- Radiologic Technologist / CT Technologist, P- Patient, MD-Physician/ Medical Doctor, CT - Computed Tomography

The following steps have to be followed

- (1) Radiographer-1/ CT Technologist-1 with PPE is on stand-by;
- (2) The patient and the attending physician/medical doctor (MD) arrive inside the CT scanner room;
- (3) CT Technologist-1 and physician set up the patient on the CT imaging table;
- (4) CT Technologist-1 and physician remove and discard their contaminated PPE inside the CT suite and perform hand hygiene;
- (5) CT Technologist-1 and physician leave the CT scanner room;
- (6) CT Technologist-2 performs non-contrast chest CT scanning, while CT Technologist-1 and physician put on new PPE outside the CT scanner room;
- (7) After the CT scanning, CT Technologist-1 and physician transfer the patient from the CT imaging table;
- (8) The patient and physician leave the CT scanner room;
- (9) The CT scanner and console rooms are sanitized.



(10) After leaving the CT suite, the high-frequency contact surfaces (i.e., operating consoles, switches, handles, and door knobs) are wiped with a cloth soaked with alcohol-based disinfectants.

(11) The CT suite is tightly closed for 1 hour to thoroughly ventilate and exchange the room air.

Conclusion

Imaging modalities like computed Tomography is essential to rule out the diagnosis. The radiographers protection against the infection is equally important. So the guidelines in place is necessary for the protection. If properly followed the protocols radiographers/ CT Technologist can be protected against the infection COVID-19 . It is also essential take measures to manage the impact of COVID-19 outbreak on the department and staff.

Reference

1. Kento Nakajima, Hideaki Kato, Tsuneo Yamashiro, Toshiharu Izumi, Ichiro Takeuchi, Hideaki Nakajima & Daisuke Utsunomiya, et al. COVID-19 pneumonia: infection control protocol inside computed tomography suites. Japanese Journal of Radiology (2020)
2. Wang D, Hu B, Hu C, Zhu F, Liu X, Zhang J, et al. Clinical characteristics of 138 hospitalized patients with 2019 novel coronavirus-infected pneumonia in Wuhan, China. JAMA. 2020.
3. Pan Y, Guan H, Zhou S, Wang Y, Li Q, Zhu T, et al. Initial CT findings and temporal changes in patients with the novel coronavirus pneumonia (2019-nCoV): a study of 63 patients in Wuhan, China. EurRadiol. 2020.
4. Pan F, Ye T, Sun P, Gui S, Liang B, Li L, et al. Time course of lung changes on chest CT during recovery from 2019 novel coronavirus (COVID-19) pneumonia. Radiology. 2020.
5. Japanese College of Radiology. Introduction of infection protection in CT scanning in case with novel coronavirus pneumonia.
6. Ai T, Yang Z, Hou H, Zhan C, Chen C, Lv W, Tao Q, Sun Z, Xia L. Correlation of Chest CT and RTPCR Testing in Coronavirus Disease 2019 (COVID-19) in China: A Report of 1014 Cases. Radiology 2020:200642.
7. Bai HX, Hsieh B, Xiong Z, Halsey K, Choi JW, Tran TML, Pan I, Shi LB, Wang DC, Mei J, Jiang XL, Zeng QH, Egglin TK, Hu PF, Agarwal S, Xie F, Li S, Healey T, Atalay MK, Liao WH. Performance of radiologists in differentiating COVID-19 from viral pneumonia on chest CT. Radiology 2020:200823.
8. Rubin Geoffrey D., Linda B. Haramati and Jeffrey P. Kanne et al. "The Role of Chest Imaging in Patient Management during the COVID-19 Pandemic: A Multinational Consensus Statement from the Fleischner Society". Radiology (2020): 201365



**CONCEPT OF MYTH IN *MIDNIGHT CHILDREN* BY
SALMAN RUSHDIE**

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ABSTRACT

The study of Indian English writing has always thrown different challenges for the readers and the researchers. It is seen in the literary creations of great authors can be explored to the deepest possible levels only if we take into consideration the local ethos, mythology and references depicted in the works. The post-colonial references, the so-called deep rooted Indian cultural contexts influence the writing as well as the study of it. This paper has been divided into three parts. The first part highlights brief history of Indian English Literature and development of Indian English Novel. It throws light on the biographical survey of the novelist, Salman Rushdie and his works in brief. The second part of the paper deals with myth as a major concept and later it throws light on India and myth as a general observation. It also highlights on the definitions and characteristics of the concept 'myth'. It also deals with the use of myth in Indian English Novel. The third part investigates the concept of myth vividly used in *Midnight's Children*. It also throws light on various mythological reference used by the author. Later, the part concludes with the findings of the paper.

Key words: Influence, Pragmatism Colonialism, Supernatural Beings, Myths

Narration of Indian English Literature:

Indian English literature has earned its own place at the approach of the twenty first century. Indian English Literature has not only become a part of Commonwealth Literature, but also shows a "huge proposition in the writings in English worldwide. Indian English Literature has been the face of the mirror of the nation. It has projected nation's personality- political, historical, cultural and emotional aspects in general. Naturally, it has projected and given an outlet to the miseries, matter of grief, frustrations and so on and so forth.

It has also grown to the extent to literature that represents the regional side. It has definitely surpassed the limitations of region, variety of languages and rustic issues. It could be noted the great work done by stalwarts such as, Mulk Raj Anand, R. K. Narayan and Raja Rao has been the benchmark for next generations. It has been the matter of discussion and a lot of research has been done on their works respectively. The later phase of authors in 19th century has been dominated by authors such as, Salman Rushdie, Arundhati Ray, Shobha de, Amitav Ghosh, Shashi Deshpande, Vikram Seth etc. This was definitely a new set of writing which influenced the novelists of contemporary time. This was a slight different writing than the past and has left a new **Salman Rushdie and his most significant works.**



The recent development in the Indian writing has accomplished good representation of thoughts, advertising, marketing, performance. It has also got a good hold on the Indian philosophy. The writing of Indian English authors have established the wide reputation and have proven their universal acceptability with themes and representation of fiction.

Amongst all, Salman Rushdie has claimed central leading position in modern time. He could be called as a post-modernist author. He is one of the most influential authors of the time. His novels are highly acclaimed and read. They have been criticized for various reasons too. However, the kind of reputation his writing has gained is significant. It is seen that his themes are vivid.

It is also seen that the writing of Salman Rushdie is muddled with metaphors, syntactic usages, references to history, myth, fiction, non-fiction and so on. He is known for his magic realism. Rushdie uses the narrative style of magical realism in which myth and fantasy are combined with actual life. *Midnight's Children* and *Shame* are examples of magical practicality. Magic realism is mainly concerned with imagination of the author. It is obvious that the author uses paranormal activities and superficial appearances. It is a mythical style of writing and it adds onto narrative that is muddled with farfetched images. The focus of magic realism is undoubtedly beyond the real world and does oppose the surrealist point of view.

Midnight's Children A concise story

Rushdie's *Midnight's Children* is a story on an unfortunate child born on the midnight of 14th august, 1947. This was the time when India and Pakistan were divided into two nations. It is tale of Saleem Sinai, the protagonist of the novel. This leads to a painful story which drags events such as, Hindu-Muslim riot India-Pakistan war. Thus, the plot projects the person who belongs to 'everywhere' or 'nowhere.' The novel depicts the events and experiences in the lives of three generations of the Sinai family. The day that begins in Srinagar where they follow the passage through Amritsar, Agra and Bombay to Karachi is relevant to Saleem and his return. The novel could be interpreted in three aspects roughly. (i) the amalgamation of autobiography and narrative, (ii) the constant violation of chronology and (iii) the search for identity and the meaning of life.

Notion of Myth

Myth has been the element and parcel of the literature and an operating issue in nearly all the forms of literature since the beginning of time. It consists of people of all ages and has played a major role in parable, folk-tales, fancy, lampoon, gothic fiction and science fiction. The word 'Myth' comes from Greek word 'Mythos'. It means a conventional story of familiar to the member of an ethnic group, country or race. Generally, it engages the mystical aspects to clarify various normal experiences in courageously creative terms. Mythology is an instinctive variety of capturing as well as articulating widespread reality. M.H. Abrams has clearly defined all of these in A



Glossary of Literary Terms. He says: “If the protagonist is a man rather than a supernatural being, the story is usually not called myth but legend; if the story concerns supernatural beings, but is not part of a systematic mythology, it is usually classified as a folktale.” As mentioned earlier, a myth is characterized by the supernatural elements. It is *Cambridge International Dictionary of English* which has defined the concept of myth as “an ancient story or set of stories, esp. explaining in a literary way the early history or set of stories of a group people or about natural events as well as facts.”

Carl Jung talked about ‘collective unconsciousness. ‘He explained that the content of one’s collective unconsciousness consists of archetypes, which are basic and fundamental pre-existing images, or forms. Archetypes are indispensable in explaining this idea. One could get acquainted with the archetypes through studying them. A good example of a nature archetype is fire.

Myths in India

Myths are the part as well as package of Indian way of life. The nation has some or the other myth to follow and which is unending. The myths are discussed and followed each day and are a part of public life as well. The Vedic mythology, spiritual legends, mythologies of immense kings, soldiers, saints, donors, rishies, rulers, etc. are part of life for people. The generations have passed on the several myths to the next generation and have been the part and parcel of life. The best examples would be *Panchatantra* and *Jatak-tales* defining stories from the ancient scripts such as, *Bhagavad-Gita*, the *Ramayana*, and the *Mahabharata*.

Myths in Salman Rushdie’s *Midnight’s Children*:

- Myths have been used by Rushdie to bring out the human myth condition and to mark out realities which broaden the scope of the English fiction. This has become the text of benchmark in the English literature as it is experimented with myths in it. Mythical references are from worlds, the eastern as well as western.
- The novel depicts that Saleem undergoes a second birth of mythical dimensions with reference to his Aziz-Sinai family in Pakistan in 196. Later, it is mentioned that he is reborn in India after the Bangladesh war. It is said that it is due to the magician’s gifts of another midnight’s child, Parvati; the Witch. It is also understood that she inherits Saleem into Delhi from Bangladesh in her magician’s wicker basket. This phase of being “the holder of invisibility” is joined with Saleem’s rebellion against inescapability and a wish “to decide his personal, undesired opportunity.”
- The reference to the wicker basket refers to Moses being found in the Nile in a wicker-basket by pharaoh’s daughter, the princes of Egypt as a western myth and it also coincides to the ancient story of Krishna being carried away by away by Vasudev; his father from the prison to Gokul. Krishna was carried away in a basket to



save him from his cruel uncle Kansa. He was safely sent to Gokul to be with Nandraj, the king of Gokul.

Ganesh, in the novel, like his mythological namesake, is given as one in whom several contraries meet. Lord Ganesh, a perpetual bachelor and also the God of Fertility, one who is always depicted as a child and never as a completely grown-up adult. He is also the commander of the celestial army and the Lord of Beginnings. He does not have any identity that he could relate himself. His first utterance 'too abracadabra' denotes connection between reality and magic.

- It could be seen that the mythical characters from the epic Mahabharata are have been by Rushdie. The reference to Lord Brahma takes us to the ancient reference. Here, the
- 'dreamweb' of Brahma has been interpered and referred in Midnight's Children and it correlated to Saleem Sinai's mind.
- Rushdie has also used symbol and as well as a metaphor of the same reference. The, myth of Shakti has been used as a good example. The context of 'too much women' right from the reverend mother to the Prime Minister could be traced as a metaphor and mythical reference. Rushdie's consideration of India as a Kaliyug and myth of
- Shakti with a feminist perspective could be understood well.
- Another reference to Maya has been used as a metaphor for Saleem Sinai for his muddled life situation where he seems to be a part of two words and at the same time he is placed nowhere. The web of Maya (*Midnight's Children* 194) is the representation of imagination and myth.

Conclusion

Thus, this study surveyed the notion of myth in the selected novel. The study has revealed that Rushdie's writing is multi-dimensional and vivid. The novel has projected the human being as an alienated entity. The references to myths as a part of analysis have unfolded various aspects of human beings from Rushdie's point of view. The author has used myth as a major theme. He has brought out unnoticed aspects of characters passing on the vice and follies of existing Indian society. He has intensively used myths, ancient references and folktales for depicting miseries of life. His fictional narration draws out him as a critic of human society. Rushdie's writing is an incorporation of Eastern and Western values. His narrative of fiction, fantasy, myths and folk project deep rooted traditions and explore his contemporary voice.

REFERENCES

- Abrams, M.H. 2005, *A Glossary of Literary Terms*, Bangalore, Earl Mcpeek.
- Barthes, Roland 1957, *Mythologies*, Paris, Editions du Seuil.
- Camus, Albert 1951, *The Myth of Sisyphus*, London Farrar and Strauss.



- Crystal, David 2003, *A Dictionary of Linguistics and Phonetics*, Delhi, Atlantic Publishers and Distributors.
- Dey, Pradip Kumar 2008, *Salman Rushdie's Midnight's Children*, New Delhi, Atlantic Publishers and Distributors.
- Forster, E.M. 1962, *Aspects of the Novel*, Harmondsworth, Penguin Books.
- Freud, Sigmund 1961, *Civilization and Its Discontents*, New York, Norton and Co.
- Frye, Northrop and Knights, L.C. ed;1962, *Myth and Symbol: Critical Approaches and Applications*, Lincoln, University of Nebraska Press.
- Hornby, A.S. ed; 2005, *New Oxford Advanced Learners Dictionary*, Oxford, Oxford



AMBIENCE OF IRONY: ILLUSTRATING NISSIM EZEKIEL'S 'GURU' AND 'NIGHT OF THE SCORPION'

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The impact of English education on Indian society had surplus convulsions. In the meanwhile, a large number of new ideas lashed the space of literature too. The impact that penetrated the psyche of Indians is noteworthy. As the new generations get acquainted with the new modes of learning, they began to create new versions of literature. The University wits of new Indian renaissance are indeed the pro runners of new Indian literature in English. The Indian writing in English is a new genre that enhanced the Indian sensibility in English language. Though a whole lot of Indian flavor in this genre claim *Indianness*. it is an adulterated version of regional expression.

At the outset of new genres in Indian writing in English, fiction writing was most favored. Poetry, as it meant, the realm of sensibility, needed more creative impulses. The Indian response to new genre of poetry was not low. As the nineteenth century proceeded, new passion for poetry had been developed. Apart from the socio-economic impact, there was a passion for new sensibility. Novel movements in literature are the many novel ways to use the same language. The new generation of poets saw the convulsions of Indian poetic sensibility. The urge of modifications in the subject and expressions brought changes in the Indian poetry. It happened in both regional as well as Indian writing in English genres. The early versions of poetry ran on the rails of ancient modes of subject and structures. Thus, new poetry deliberately came out of the old versions of writing and began searching for new idioms and expressions.

The new poetry is thus poetry of protest. It marks a significant departure not only in respect of subject matter but also in the manner of expression which involves the choice of language and flows of rhythm—that's being adjusted and attended at the temper of new age. Hopkins, Yeats, Auden, Eloit and Dylon Thomas have taught our poet's the importance of taking their art seriously. They have realized that easy writing cannot make good poetry. Neither mere imitation nor want on angularity, neither frantic incoherence nor fabricated obscurity can make words live or sing themselves out. The profession of poetry is a consecrated Endeavour and exacting discipline. It is to the credit of 'new poets' that they are prepared to take their vocation seriously. The workshop of Calcutta which was organized by the writer's association set aims and objectives of contemporary Indian English poetry. Modern English poets followed the objectives of Calcutta workshop and dismissed the obscurity of poets like Toru Dutt, Sarojini Naidu and Sri Aurobindo. Each of the above-mentioned poets are trailblazers of original thought and are fearless in terms of their wordsmithing. They bring a great deal of clarity, intensity and in some sense panache to their work. These are elements of great poetry.



Nissim Ezekiel is the first major Indo-English poet of post-independence era and perhaps the most versatile poet in the country. He is of Bene-Israel origin and a permanent expatriate in the Indian scene. Ezekiel has six volumes of poetry to his credit as well as translations, reviews of literary and art works. He was also a playwright, teacher, and art critic. He taught English and published literary articles before the art critic of 'The Times of India' newspaper.

Ezekiel has strong sense of belonging, not only to India but to his city Bombay too. He is a poet having the Indian poetry both in form and content at his exposure. He is a skillful artist who uses apt and suggestive words for his purpose from a rich stock. He is economical in the use of language but never obscure. His poetic narration paints a picture as if it were based on real-life events in India. He even goes to the extent of using linguistic and scenic aspects of commonplace scenes in India. Further, it should not be forgotten that Ezekiel is a secular poet in the true sense of the word, and he is also a champion of the working-class Indian and the impoverished population.

Ezekiel's poetry makes gracious use of figures of speech, humor. One of the sharpest instruments in his writing prowess is irony which takes many shapes and forms. Even in the broadest sense, he portrays the irony in life. One of the greatest aspects of examining Ezekiel's work from the lens of Indianness is the way in which he brings the unique Indian narrative to irony and humor. There are unique ways in which Indian culture expresses this humor and irony in life which Ezekiel puts to great use which describing social problems using a modern framing. Indian English is different and there are aspects of the Indian way of life that can be described only by using Indian English and Ezekiel understands this perfectly well.

This paper makes an attempt to discuss the use of irony in 'Night of the scorpion' and 'Guru'. The Oxford English Dictionary (*OED*) describes *irony* as "a figure of speech in which the intended meaning is the opposite of that expressed by the words used; usually taking the form of sarcasm or ridicule in which laudatory expressions are used to imply condemnation or contempt."

'Night of the Scorpion', is one of the significant poems of Ezekiel which absorbs irony into its very structure. This poem reflects Ezekiel's interest in the mundane aspects of Indian life. Ezekiel craft is to place an actual narrator or a speaker within the poem, while we could believe that the poet himself is like a *fly on the wall*.

The narrator tells that his mother was bitten by a scorpion on a rainy night. All the members of her family, neighbors and the villagers try anxiously to bring her quick relief. They came in large numbers and pray for her. They "came like swarm of flies and buzz the name of god."

'The peasants came like swarms of flies and buzzed the name of God a hundred times to paralyze the Evil One.'



They believe in the efficacy of the prayer. They feel that they can paralyze the harm caused by the scorpion through their prayers. They search for the scorpion with lanterns and candles. They have a superstition—if the scorpion moves, it would somehow magically move the poison in blood of the mother. So, they are eager to kill the scorpion but in vain... They sit around the mother, muttering prayers and casting spells.

The world of superstition, irrationality and blind faith is now juxtaposed with the world of science and rationalism. This is represented by the father. He tries powder, mixture and herb. He even tries to pour paraffin on the toes and burns it to burn the poison out. The son watches the flame with interest. On one side we have father trying to tame the poison in his scientific way and on the other side we have superstitious villagers chanting their incantations.

The irony is that both methods fail to lessen or reduce the intense agony of the mother. She suffers the agony for twenty-four hours and later the agony ceases.

The last three lines of the poem form an ironic contrast to the entire poem.

‘My mother only said Thank God the scorpion picked on me

And spared my children.’

All the others are eager to bring relief to the suffering mother, but the mother is more concerned for her children without bothering about her own suffering. She is glad of the fact that she was targeted by the scorpion/ evil one, and not her children. Thus, the poem highlights the motherly love.

The mother’s reaction at the end ironically nullifies earlier responses. The two opposing / contradictory opinions are expressed in a detached way. Each villager has on his face an expression of serenity because they think themselves to be wise enough to have understood the divine purpose behind the scorpion’s act of stinging. The subtle irony is that there is no mystery in the scorpion stinging a human being.

The other poem ‘Guru’ portrays the modern “godman” who have immense material aspirations. The word ‘Guru’ loosely translates to saints who have respected place in the Indian society. The ironic backdrop of the practices of Gurus in the Indian context is portrayed in great detail. Saints should be dress simply, should not care about the taste of what he ate, should not speak unnecessarily, should not make an issue of other people’s shortcomings, should be humble and should not concern himself with income, expenditure and other such monetary matters. But Ezekiel’s ‘Guru’ is completely contrasted to these qualities. Ezekiel systematically strips them of the hallowed aura that they possess. He shows that saints are as human as everyone else.

The poet ironically tells that saint once lived a life of sin. The saint had to drop his follies in his journey towards sainthood. The saint who has shed his sinful past acquires a sacred place in the minds of the devotees.



Ezekiel paints the picture of a Guru in an Ashram

‘The saint is still a faithless friend,
Obstinate in argument,
Ungrateful for favors done,
Hard with servants and the poor,’

He continues to be ‘obstinate’, ‘faithless’, ‘ungrateful’ ‘discourteous’ to disciples especially men, ‘rude’ to visitors and a little too concerned about the accounts of the ashram. He has not overcome human frailties, greed and lust. He has no sparks of divinity. The introduction of the ‘account’ of the ashram is used to signify the materialistic nature of the modern saints. The essence of this is to convey to the audience/ readers that if saints and gurus themselves are behaving in this manner, what is the hope for all the regular people.

The irony here is used in a positive connotation unlike the description of it being an instrument to convey contempt. Irony is used to mediate between sober realization and outright ludicrous behavior. The writer comprehends reality in a larger perspective. He makes attempts to present things as they are. He does not risk sentimental moralizing. Throughout his work Ezekiel does not convey any of the very serious cultural commentaries in a piercing or a strong way. His method is that of subtleness, which is conveyed through scenery, narration, subtle instruments like figures of speech and an ample dose of irony. He is able to use irony as if it were able to be the face of language. As a poet, he is an idealist and wants his subject to pure and perfect; in this case, India being his subject.

Bibliography;

- 1.M.H. Abrams, A Glossary of Literary Terms, Macmilan, India-1998
2. M.K.Naik, Aspects of Indian writing in English, Macmillan publishers, 2013
3. Arvind Krishna Mehrotra, An Illustrated History Of Indian Literature In English, Permanent Black. 2013
4. K.R.Srinivasa Iyengar, Indian Writing in English. Sterling publishers, 2013



CUSTOMER SATISFACTION IN ONLINE SHOPPING-A COMPARITIVE STUDY BETWEEN AMAZON AND FLIPKART

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ABSTRACT

Online shopping is a type of electronic buying and selling which help online shopping users to purchase goods and services from the seller without any intermediary or middleman with the help of internet by the use of a web browser. The two main players of online shopping are Amazon and Flipkart. Amazon is a multinational technology focusing in e-commerce and it is the largest internet retailer in the world by revenue. Flipkart is a leading e-commerce market place offering variety of products. From this comparative study it is understood about the various factors that mainly influence or affect the online shopping. The objective of the study is to identify the customer satisfaction and respondents perception towards Amazon and Flipkart users in Pathanamthitta district. It helps to know the details about products available in e-commerce sites and also to investigate the major factors that impacts the customer satisfaction towards online shopping. The primary and secondary data were used to collect the data for this study. In this study the customers are more satisfied about the products and services offered by Amazon than Flipkart.

Key words: Customer Satisfaction, Online Shopping, E-Commerce

1. INTRODUCTION

E-commerce offers products and services through websites and they offer variety of products and services. Online shopping is a type of electronic buying and selling which helps online shopping users to purchase goods and services from the seller without any intermediary or middleman with the help of internet by the use of a web browser. Online shopping is easy to everyone to purchase goods and services with the help of internet. Today there are more than 100 popular e-commerce websites are providing various online services worldwide. This helps the customers by giving variety of options while buying a product or a service and the online searching and comparing applications helps them to select right product and or service. The buyer either pays for the good or service online with a credit or debit card or upon delivery. Nowadays the life style of the people is different. People feel uncomfortable and time consuming for going crowded markets so they use online shopping sites as their convenience. This online shopping sites helps the online shopping users to purchase variety of goods and services and can see the product specifications, features and prices.



From this comparative study of Amazon and Flipkart it is understood about the various factors that mainly influence the online shopping and the customer satisfaction towards this online shopping sites.

SCOPE OF STUDY

The scope of the present study is confirmed with two major players in online shopping, Amazon and Flipkart and collecting responses from users in Pathanamthitta. The topical scope focuses on the performance evaluation and customer satisfaction towards the Amazon and Flipkart. The analytical scope covers the fulfilment of the objectives set up for the study. The functional scope is confined to offering a set meaningful suggestion at improving performance and evaluation of both main players in online shopping.

STATEMENT OF PROBLEM

During 1990s customers have not any idea on relevance on online shopping. There are not educated on the application of online shopping sites so they prefer offline shopping only. Nowadays customers prefer online shopping because of their convenience and they are more aware on the operation and importance of online shopping.

OBJECTIVE OF STUDY

Following are the main objective of this study:

- To study the customer satisfaction between the online shopping sites Amazon and Flipkart.
- To identify the respondents perception towards Amazon and Flipkart.
- To know how customers are evaluating e-commerce sites for their purchase.
- To know the details about the products available in the e-commerce sites.

2. REVIEW OF LITERATURE

MARTIN DODGE. (1999), “he finds the various sources of Amazon.com by examining the hype of earth’s biggest retailer store”. And he concludes that Amazon.com is one of the biggest electronic buying and selling of goods and services company that is grown successfully worldwide.

ABHIJITH MITRA. (2013), e-commerce in India, International Journal of Marketing, Financial services and Management research. He concludes and says about the electronic buying and selling of goods and services in India.

D.K. GANGESHWAR.(2013), “e-commerce or online marketing: a business review”, international journal of e-service, management science and technology. He concludes and says that the electronic commerce business has a good scope and future in India and the customers will purchase the goods and service provided by the electronic commerce companies.

ASHISH PANT. (2014) “An online shopping that change the traditional path of consumer purchasing” and he concludes that the success of every e-commerce company in India depends upon the variety of products offered by them and its distinguishable features and its attitude and relations with the users.



MOHANA PRIYA S and ANUSHYA D. (2014) “A study on customer preferences and satisfaction towards online websites” and he states that online shopping has rapidly grown in popularity over many years because it helps the people to find goods and services, convenient from the comfort of their home or everywhere.

ADRITA GOSWAMI. (2013), “Customer satisfaction of online shopping users among to youth or teenage group”, this study concludes that the online shopping buyers satisfaction towards the products or services available in sites, their prices, quality and timely delivery and place of delivery of products. This study indicates that the online marketer should give more preference on the prime factor and the after sale factors.

SARAVANAN .S and BRINDHA DEVI . K(2015) “A study on online shopping buying behaviour of online shopping users with special references and problems on the various online shopping marketers” and it gives the awareness about the internet and also makes them better positioned in order to identify and take decisions for products and services.

MIYAZAKI and FERNANDEZ (2001) substantially that the result of the study said that the technology that is given to the electronic commerce should be used carefully and with full care. The ecommerce portals provide variety of categories of goods and services.

DHEVIKA V.P.T, LATASRI O.T.V, S KARMUGIL (2014), in his study “ The Factors affecting online shopping of customers” he reveals that the most important factors that influence the online shopping of various customers.

KANWAL GURLEEN (2012), “Customer satisfaction towards online shopping” , In his study he said that the different options available in the internet encouraged and helps the people to search and then purchase online, because in India more than 100 million users are present.

FRANCIS SUDHAKAR K, HABEEB SYED (2016), “A comparative study between the online shopping sites Amazon and Flipkart” and he conducted this study in order to evaluate the various business level strategies of two big e-commerce companies Amazon and Flipkart.

3. RESEARCH METHODOLOGY

Primary and Secondary data were used for this study. The primary data were collected through questionnaires to understand the customers experience and preference towards their loyal company. The secondary data were collected from different websites and published articles journal. A sample of 40 persons were selected under which 20 persons used Amazon for conducting online shopping and 20 persons used Flipkart for conducting online shopping. The period of study held from July 2018 to February 2019.

4. FINDINGS AND ANALYSIS

Major findings of this study are:

- Male respondents are showing more interest to do the online shopping than the female respondents.



- In both Amazon and Flipkart most of the respondents use cash on delivery as payment mode for conducting online shopping.
- 85% respondents in Amazon 75% respondents in Flipkart have the opinion that the online shopping is safe.
- Most of the products delivered by Flipkart have warranty facility.
- Availability of electronic products is more available in Amazon.
- Respondents on all age group buy books from Amazon.
- Respondents are highly satisfied on the feedback and replacement facility offered by Amazon and Flipkart.
- Respondents are satisfied on the advertising strategy offered by the Flipkart than Amazon.
- Amazon offers good quality cloth items to the customers.
- Refunding is provided to the products offered by Amazon.
- Fair prices are charged by the Amazon to the products like jewellery, cloth items, food items, books etc.

So I conclude that as per the overall goods and services offered by the online shopping sites to customers of Amazon are more satisfied than customers of Flipkart.

INTERPRETATION

TABLE. 4.1 Is Speed of Delivery is possible

Category	Number of Flipkart respondents	Percentage	Number of Amazon respondents	Percentage
Yes	19	95%	18	90%
No	1	5%	2	10%
Total	20	100%	20	100%

Table 4.1 shows that speed of delivery of products in Amazon and Flipkart. I here 95% respondents in Flipkart and 90% respondents in Amazon have the opinion Yes and 5% respondents in Flipkart and 10% respondents in Amazon have the opinion No.

TABLE. 4.2 Is the money transactions is secured

Category	Number of respondents in Flipkart	Percentage	Number of Respondents in Amazon	Percentage
Yes	18	90%	20	100%
No	2	10%	0	0%
Total	20	100%	20	100%

From Table 4.2, it is visible that 90% respondents in Flipkart and 100% respondents in Amazon have the opinion Yes and 10% respondents in Flipkart and 0% respondents in Amazon have the opinion No.



TABLE. 4.3 Place of Delivery

Flipkart	Amazon
3.95	4.1

From the Table 4.3 it is seen that the place of delivery of products offered by Flipkart and Amazon. Here the average score of Flipkart is 3.95 and Amazon is 4.1. This means that the place of delivery of products offered by the Amazon is acceptable to the customers.

TABLE. 4.4 Product Availability

Flipkart	Amazon
17.1	17.75

In the Table 4.4 it represents the availability of products to the customers. Here the total average score of Flipkart is 17.1 and Amazon is 17.75. Respondents are more satisfied with the products available in Amazon.

TABLE. 4.5 Offers and Discounts

Flipkart	Amazon
4.3	4.2

From the Table 4.5, it is visible that the offers and discounts available while online shopping. The average score of Amazon is 4.2 and Flipkart is 4.3. Here majority of respondents are satisfied with the offers and discounts provided in Flipkart.

TABLE. 4.6 Packing Security

Flipkart	Amazon
3.5	3.9

In the table 4.6 it is observed that the packing security of the products. The average score of Flipkart is 3.5 and Amazon is 3.9. The customers are highly satisfied on the packing security of the products offered by Amazon.

SUGGESTIONS

Some suggestions for the study are:

- In the case of timely delivery, place of delivery and speed of delivery of products in Flipkart should improve as compared to Amazon.
- In the case of money security and packing security of products, Flipkart need to be give sufficient care to customers in order to reduce the chance of fraud.
- In order to attract the customers Amazon want to use advertising strategies for their products.
- Flipkart tries to provide fair prices to the food items and jewelleryes.
- Amazon has to introduce new offers and discounts to their products.
- Amazon should want to improve the warranty facility to their products.



LIMITATIONS

- Analysis were done based upon opinions of individual respondents and not from any group or experts.
- Due to time limit and inhibitions respondents were not interested in answering, which affect the study and result.
- Limited and scarce source of information in the form of journals etc.
- The study is conducted within a limited time of 3 months was too short for deep study in this area.

5. CONCLUSION

The above study helps to know that the customer satisfaction towards Amazon and Flipkart. Some of the customers preferred Amazon for effective delivery, cheap prices and security from fraud and cheating on packing, product availability, and customer assistance after purchase etc. Some of them choose flipkart because of the offer and discount, replacement and refund facility, effectiveness in advertising etc. In this competitive world one has to lead the market and one has to be fall. Based upon the customer survey it is clear that the Amazon is the winner. Amazon is an international company it understood every Indians and their purchasing behaviour and habits. Flipkart is also a largest Indian e-commerce company and it gives tough competition to Amazon.

REFERENCE

- [1] Sharma and Mittal (2009), "Prospects and the review of e-commerce in India", Asian Journal of the Management and Research, 3(2), 396-408.
- [2] D.K. Gangeshwar (2013), "Ecommerce or online Marketing: An Indian Business Review", International Journal of e-Service, Management, Science and Technology, 2(4), 20-33.
- [3] De Priti Nigam (2015), Ecommerce challenges, "a case study of Flipkart versus Amazon", Vol 5(1)
- [4] Saravanan S and Brindha Devi K (2015), "A study on online buying behaviour and satisfaction of customers", International Journal of Commerce, Business and Management, 4(1), 2-8.
- [5] Ashish Pant (2014) "An online shopping changes in the traditional path of consumer purchasing habits", International Journal of Business and Management Inventions, 3(2), 39-42.
- [6] Abhijit Mitra (2013) "Ecommerce in Indian market", International Journal of Marketing, Financial Services and Management Research, 2, 4-7
- [7] Mohana Priya S and Anushya D (2014) "A study on customer preferences and satisfaction towards online shopping sites" Indian Journal of Research, 3(11), 11-20.
- [8] Adrita Goswami (2013) "The Customer satisfaction towards online shopping users among to youth or the Teenage group", Indian Journal of Research, 3(4), 239-241.
- [9] Francis Sudhakar K, Habeeb Syed (2016) "A comparative study between the online shopping sites Flipkart and Amazon", International Journal of Research in Regional Studies, Social Sciences, Journalism and Management Practices, 1(8), 3-11.
- [10] Dhevika V.P.T, Latasri O.T.V, S Karmugil (2014) "Factors affecting online shopping behaviour and satisfaction of customers", Research Journal's Journal of Marketing, 2(4), 220-235.
- [11] Kanwal Gurleen (2012), "Customer satisfaction towards online shopping", International Journal of management and Information Technology, 1, 115-112.



INTERNAL DIFFICULTIES OF SMALL SCALE ENTERPRISES AT THE REGION OF MADHYA PRADESH

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ABSTRACT

In India there is a large number of small scale industries are running. The small and medium industrial sector in India employs over 100 million people and more than 40% of country's export and account for 45% of manufacturing output also around 6.11% of manufacturing GDP and 24.63% of the GDP in service activities. Therefore the smooth running of small and medium sized manufacturing enterprises is very essential to face the challenges causes by development of modern technology and complexity of internal and external affairs in the enterprises.

There are many undesirable and unwanted activities in internal and external operations in enterprises that badly affect their business performance. These undesirable elements can be referred as "difficulties" in the development of Small and cottage industries. In this study we work only on internal difficulties of SMEs, which create risks for the enterprises which may lead:

- Decrease in the production of the firms.
- Increases cost of production.
- Lack of utilization of resources.
- Decreases profitability.
- Economic loss etc.

In this study we particularly find the relation between the factors of internal difficulties and result of these difficulties on the performance of the small and cottage industries for this we made the combination of questionnaire and pilot survey on employees to know the internal difficulties and risk cause by several factors. On this backdrop an attempt is made in this paper to analyze the causes, effect and impact of internal disturbances in the SME enterprises.

Keywords: Internal difficulties, SMEs, Internal Risks in industries.

INTRODUCTION

The Indian small, medium and cottage industries are the major contributor in the economic growth of the country they are considered as an important pillar of the Indian economy. The small scale industries are the lifeline of the economy hence they are mostly labour intensive they generate employment and also these industries offer vast opportunities to promote export. It contributes almost 40% of gross industrial value added in Indian economy. The number of SMEs units has increased from approximately 0.87 million units in a year 1980-81 to over 3 million in year 2000, at present 40-50% of Indian export(direct export 35%and with indirect export about 15%). After this these



sector has huge problems and obstacles in front of its growth and developments such as lack of capital, lack of marketing, improper management and malfunctioning of machines and tools some are internal problems like absenteeism, lack of motivation among workers, unskilled workers and many more. Beside it SMEs plays very significant role in the growth of our country.

Objectives of the study:

1. To analyze the present structure of small scale enterprises.
2. To understand the current problems in SME.
3. To know the various internal “difficulties” in SME.
4. To assess the impact of ‘internal risk’ in SME and finding out the suggestions to improve the conditions of SME’s in India.

LITERATURE REVIEW

There are many obstacles or difficulties face by SMEs which are studied and explained by many previous researches, thus it is an attempt to understand the problems in specifically related to internal affairs of the SMEs. As the SMEs has acquired important position in structure of the country, during 1998 -99 it has contributed about 40% of the value added to the manufacturing sector and its share in national export stand at over 34percent (Ministry of Statistics and Programme Implementation of govt. of India). Since then SMEs are playing a vital role in India but there are some difficulties in growth of SMEs lack of capital, improper credit facilities unavailability of raw material lack of skilled workers etc. which is affecting the growth of the industries(Mathai 2015).

I studied many research and some abstract regarding problems of SMEs to deal with many internal and external risk indicators SMEs need a systematic method of identify and treat their potential with set of effective tools. (Ariful Islam and Des Tedford 2012) a study in New Zealand about risk determinants of SMEs it is an effort to do research in our local level in MP India.

RESEARCH PROBLEM

To understand the difficulties of internal matters of the small and medium industries and what are the factors affecting the internal operation of the SMEs In this we will also find the how this internal difficulties will affect the growth of SMEs and to bring up the solutions of these difficulties.

HYPOTHESIS

Ho: Internal difficulties do not create risk and do not affect performance of SMEs.

H1: Internal difficulties create risk and affect performance of SMEs.

In the terms of statistics:

Significance level = 0.05

Then,

If $p \text{ value} > 0.05$, we accept Null hypothesis and reject Alternative hypothesis.

If $p \text{ value} < 0.05$, we reject Null hypothesis and accept Alternative hypothesis.



RESEARCH METHODOLOGY

I have done multi method approach of investigation as it need special emphasis on research of the internal problems or difficulties in SMEs on the aspect of operational, financial and organizational activities. The empirical investigation applied multi method approach with the combination of case study and survey through questionnaire to understand the relationship between INTERNAL DIFFICULTIES AND RISK INVOVELED IN It. Along with that a pilot study on employees of the SMEs are done. Thus the use of multi method in research increases the credibility of the research results.

DATA COLLECTION METHOD AND SAMPLE

For this investigation, the questionnaires were developed. The questionnaires were designed to know the risk and internal problems of business performance of SMEs. The focus points of questionnaires are: 1) production related activities;2) quality, quantity and safety measures; 3) Problem associated with workers; 4) tools etc.

The questionnaires were sent to 80 SMEsand about 50 questionnaires are filled by me and some of my friends by going to firms situated at near localities of M.P. As guided by DR NupurDeshkar mam a Commerce Assistant professor at Govt. MKB college Jabalpur, she help in data collection process and also suggested that this type of study has low response rate.

Some of them are manufacturer of textile, electronics and paper and small tools etc. about 55 SME return the filled questionnaires but some of them are not completely filled, it take more then 4 month to complete the questionnaires .from all this questionnaires 32 of them are included in our research because the response rate of mail survey often low in business population (according to survey of Dennis wj 2003)

The focus point of this study were 1) activities related with production. 2) accidents and machine default. 3) health and safety measures taken by organization etc. Along with this there is a pilot survey on 12 employees working on the same small and cottage industries near region of MP in which this study were conducted.

DATA ANALYSIS

There are some data are collected with the help of questionnaire there are data of 32 firm in M.P at the local level the characteristics of SMEs are as given by the answers of the questionnaires are some of manufacturing of textile,electronics, handloom and services SMEs maximum of this having sales under 20 lakh annually but there are some SMEs having sales up to 5 lakh every year athere is with under 50 employees working at miserable conditions.

Table 1 Nature of the 32 small and cottage firms studied by us with the help of questionnaires.

NATURE OF BUSINESS	MANUFACTURING	SERVICES
NO. OF FIRMS	23	9
PERCENTAGES	71.875%	28.125%

For the knowledge of the internal conditions of SMEs the data are collected by representatives of the different SMEs with questionnaires there are some internal conditions which may cause risk in the smooth functioning of the small industries are as given the common questions of this study were: number of absenteeism, number of accidents took over in a year and health and safety measures, machine malfunctioning etc.

Table 2 the risk arises from internal difficulties of the SMEs are described on the basis of answers of questionnaire.

INDICATORS (percent)	NO	1 TO 5	5 TO 10	15 TO 25	25 AND MORE
Average absenteeism	6.25	37.5	28.125	15.625	12.5
Accidents and injuries	-	33.33	25	25	16.7
Machine breakdown	-	50	25	16.7	8.3
INDICATORS	NO	SMALL QTY	MEDIUM QTY	LARGE QTY	VERY LARGE
Equipment shortage	3.125	40.625	28.125	15.625	12.5
Material shortage	33.33	16.7	41.7	8.3	-

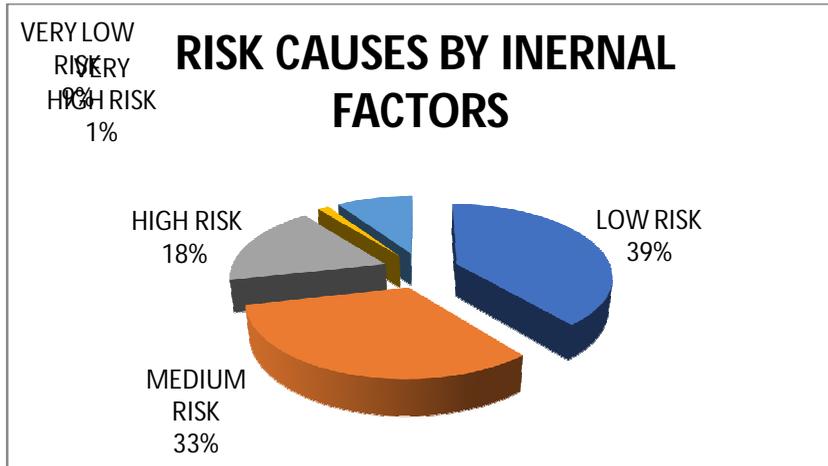
There are some internal risk indicators which has yes or no types answers about defects in products and tools used in production process maximum of them has unexpected fault or defect in production process which may result of low productivity and ignorance of performance of the worker or mismanagement by organization.

INDICATORS	YES	NO
Unexpected defect in product	58.3%	41.7%
Outdated tools	53.125%	46.875%

According to the study of these factors the following data were analysis out of the information available by the detail study of questionnaire and case study of the SMEs that 19% (18%+1%) having high and very high risk due to internal difficulties of concern about 9percent which is about 3 or 4 from 32 firms have very low risk because there internal position is strong and there is less internal difficulties such as absenteeism, machine malfunctioning, material shortages etc. although it is a great sign of growth but maximum firms have difficulties .39 percent firm which I studied having low risk that is about 12 to 13 out of 32 firms, about 9 to 10 firms having medium range of risk due to internal difficulties and problems. So we can not ignore these factors as they are causing risk in the growth of firms which will reduce the productivity and profitability of the SMEs therefore we should consider this factors before creating plan and strategies form small and cottage industries.



Chart 1 shows the INTERNAL RISK involve in the SMEs due to internal factors.



COMPARISON OF DATA COLLECTED BY QUESTIONNAIER AND PILOT STUDY

As the data are collected by many sources to make this study reliable we should make a compare between the data of 32firms collected by questionnaires and data collected by pilot survey on 12 employees of the small scale industries who are working at the same firms in which this study is conducted to know the problems from shop floor because both the source are important for this study.

Table 3 state the relationship and comparison between data taken from firms through questionnaire with data given by workers of the firms.

Absenteeism (%)	Data 1 (By firms)	Data 2 (By workers)	Accidents and injuries (%) (In a year)	Data 1 (By firms)	Data 2 (By workers)
0	6.25	-	0	-	-
1 to 5	37.5	41.7	1 to 5	33.33	50
5 to 15	28.125	25	5 to 15	25	25
15 to 25	15.625	16.7	15 to 25	25	8.3
<25	12.5	16.7	<25	16.7	16.7

According to this investigation and study we can summarize that the internal difficulties of SMEs are the causes of internal risks in the firms that are also affected by external environment of the business (K. Ashwathappa.2014 Essentials

of business environment). It can be state that we can classify the internal risk in three categories:

It includes risk related to internal activities and other financial activities of business organization. The risk indicators of for small scale industries are classified in three categories that are:



1) Operational risk:

It include risk involve in daily operation of business such as equipment shortage, material shortage, machines breakdown, lack of tools etc.

2) Occupational risk:

It include risk involve in occupational or job activities such as lack of motivation, absenteeism of employees, lack of trained workers and brain drain, supervision problems, accidents etc.

3) Financial risk:

It includes risk of improper management of finance, lack of source of finance and lack of coordination of finance with operational activities etc.

Test Results:

After getting the data, it is mandatory to check whether the internal difficulties of small and cottages industries are affecting the performance of the small and cottage industries or not .for this the correlation and probability testing model have been used and have been presented in table 4.

Internal factors affecting performance of SMEs	Correlation (r)	Coefficient of determination (r ²)	P – value
Absenteeism	0.92	0.84	0.026
Accidents and injuries	0.73	0.53	0.158
Machine breakdown	0.88	0.77	0.045



Material shortage	0.43	0.18	0.467
Equipment shortage	0.89	0.79	0.039

The test results indicate that all the factors of internal difficulties having positive correlation with performance of the firms in which three factors have strong positive correlation with p value less than 0.05 significance level here we can state that Absenteeism (p value= 0.026), accident and injuries (p value= 0.158) and Equipment shortage (p value= 0.039) affect the performance of the small and cottage industries.

Decision: As three out of five factors of internal difficulties having p value <0.05 so we can reject Null hypothesis and fail to reject Alternative hypothesis therefore it is conclude that internal difficulties of SMEs affect the performance adversely.

CONCLUSION

This study examines the impact of internal difficulties of small and cottage industries on the performance of small and cottage industries and small industries are very important for employment generation, GDP and national income of the country. Small and medium industries share in GDP is approximately 37.54% in year 2012-13(PIB Govt. of India). However the small and cottage industries faces internal difficulties beside the competition from large industries and lack of up to date technologies. There is an urgent need for the implementation of proper internal and external management and modern technology which not only improve productivity but also develops skills of the labourers to meet the challenges and competition of the business environment.

FURTHER SCOPE OF STUDY

This is an effort to know that how factors are affecting the SMEs which create hindrance in the growth of small and cottage industries of India. This study was conducted only in some region of MP. There is further scope to study with bigger trends and data also in this study only internal factor are analysis one can goes beyond it at more diversified area with better statistical tools.

REFERENCES

[1] Agrawal, V.,Agrawal, U., Khan, S. (2019) (PDF).A study on challenge faced by SMEs in India.

[2] Saini, A. (2014) (PDF). Problem and prospect of SMEs in India. Available from:https://www.researchgate.net/publication/280318887_Problems_and_Prospects_of_SMEs_in_India

[3] Al- Maskari, A., Al- Maskari , M., Kunjumammed , S. (2019). Internal and external obstacles facing medium and large industries enterprises in Rusayl Industrial Estates in the Siltanate of Oman. Available from:<https://link.springer.com/article/10.1186/s40497-018-0125-3>

[4] Press Information Bureau (PIB) Govt. of India Ministry of Commerce & Industry.



- [5] BizEncyclopedia (online) for basic knowledge of small and cottage industries.
- [6] G.P. Mathai (2015) —Challenges and Issues in Micro, Small and Medium Enterprises (SMESs) in India: A Current Scenario of Economic Growthl, Vol 4, Issue 7, PP 162-163
- [7] Islam, A., Tedford, D. (2012). Risk determinants of small and medium- sized manufacturing enterprises (SMEs) – an exploratory study in New Zealand. Available from:
https://www.researchgate.net/publication/257885841_Risk_determinants_of_small_and_medium-sized_manufacturing_enterprises_SMEs_-_an_exploratory_study_in_New_Zealand



COMPARATIVE STUDY OF PHYSICAL FITNESS LEVEL OF BATSMEN AND BOWLERS IN CRICKET

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ABSTRACT

The American Alliance of Health, Physical Education, Recreation and Dance (AAHPER) defines physical fitness as “A physical state of well-being that allows people to perform daily activities with vigor, reduce their risk of health problems related to lack of exercise, and to establish a fitness base for participation in a variety of physical Activities.” The present study seeks to investigate the comparison of professional bowlers and batsmen in case of their bio-motor abilities in the present scenario of cricket. For the meaningful comparison, total twenty [N = 20] national level male cricket players (10 – batsmen and 10 – bowlers) were randomly selected as a subjects. Speed, cardio-respiratory endurance, muscular strength, flexibility and agility were the selected variables to assess their physical fitness level at ground level. Getting data were statistically analyzed by using two sample t-tests for the independent variables at 0.05. level of significance. After analyzing the data it was found that there were no significant differences in muscular strength as well as the speed between batsman and bowler whereas bowlers were better in cardio-respiratory endurance [$t_{(18)} = 3.304, p = .004$] and batsmen showed better fitness level in case of flexibility [$t_{(18)} = 2.875, p = .014$] and agility [$t_{(18)} = 7.764, p = .000$] both in cricket.

Keywords: Cricket, Physical Fitness, Speed, Cardio-Respiratory Endurance, Muscular Strength, Flexibility And Agility.

INTRODUCTION

Cricket is a game of grace and beauty which is based on technical skill, which require years of practice for being mastered in particular skill, which requires more and more concentration and patience with higher degree of fitness. There is an increasing amount of evidence indicating that developing better fitness levels improves cricketing performance. Many young cricketers involved with league or state sides now undergo regular fitness programs and testing to see if they're as fit as they should be. At the elite level, sides like Australia and England are now extremely fit utilizing various fitness techniques to enhance the athletic abilities of their squads.

Even though cricket is one of the oldest organized sports, there are very few studies on the physical demands of the game. Batting and bowling are intermittent in nature with the demands placed on the players being dictated by the type of match being played. Batting is the most glamorous part of the game. At the highest level of the game, scoring runs and not being dismissed will bring fame and glory of a kind that is possibly unique in the world of sport. In the 1930s, the cricketing world regarded Sir Donald Bradman with the kind of awe reserved for monarchs and film stars; and Brian



Laras 375 against England in 1994 earned him the same status. At the summit of batting achievement lies immense prestige. But batting is the skill that will also take the most time to learn and perfect. This process begins with understanding the how and why of the art. Unfortunately, too many coaching manuals still focus on the how without explaining the why. Batting is difficult, and anyone who walks out to the crease to bat will discover three immediate problems: judging line and being able to move properly; or, more specifically, getting balance to deal with that line.

The modern day fast bowler, junior or senior, needs to pay even more attention to fitness than great fast bowlers of an earlier era. As our lifestyle becomes more sedentary, the specific fitness requirements for fast bowling become even more important. For the young fast bowler in particular, graduated fitness training is of vital importance. Most young fast bowlers commence bowling during the time the body is maturing rapidly, and this must be considered when developing a programme. A progressive physical build-up will help to reduce the problems associated with over-use injuries in this developmental phase. (Woolmer and Noakes ,2008)

There are 2 things that matter in cricket – ability & fitness. If you haven't got the first, then I guess the second does not matter all that much. But if you have got two sides of equal ability, then obviously the fitter one is going to have the edge.” (Greg Chappell, 1978). There are lots of reviews and researches were done on the comparison between these three groups (batsmen, pace-bowlers and spinners) in cricket. Few parameters were found to be significant, that shows the groups differ from one another. As the modern sports is being become more advance and particular to the specific position so, on the basis of available knowledge from several reviews and researches; the researcher is interested to compare the bowler and batsman in terms of their level of physical fitness.

METHODOLOGY

The procedure of this study consist of selection of subjects, selection of variables, criterion measures, testing procedure and the statistical technique employed for analysis of data.

Selection of the Subject: for the purpose of the study, total twenty male [N = 20] cricket players of L.N.I.P.E., Gwalior with age range from 18 to 24 year having match experience and was the part of university team was been randomly selected as subjects. There mean and standard deviation of age was 20.95 ± 1.98 . Later they were divided in to two separate groups i.e. batsmen [N = 10] and bowlers [N = 10] for further assessment. All the subjects selected for the study were free from any diseases.

Procedure: For the purpose of the present study, the selected subjects [N = 20] (Batsman and Bowler) were assembled and the instructions was delivered by the researcher regarding procedure and administration of test. To identified the physical fitness of the subjects, the selected parameters i.e. speed assessed by 50 meters dash (in seconds), cardio-respiratory endurance assessed by 12 minutes run/walk test (in meters), muscular strength assessed by push-ups test (in numbers), flexibility assessed by sit and reach test (in cm.) and agility assessed by 10x4 meters shuttle run (in seconds) test were selected as a variables for the present study. Proper warming up was given to the subjects to procure them from the injury. Testers were assigned for each test station with required

equipments. The total two trials were given to the subjects (except 12 minutes run/walk and push-ups test) for the tests and best trial was considered as final performance for the present study. Motivation factor was considered while administer the test to create interest among the subject.

At the end of the administration of test, the proper explanation of the nature and the objective of the study was given to the cricketers who had a curiosity to know for their acknowledgement and invited to ask questions if they wished.

Statistical technique: Statistical analysis was done with SPSS (Statistical Package for the Social Sciences, 20.0, USA). Mean and standard deviation was calculated as a descriptive statistics and two sample independent t-test was used to find out the difference in each selected motor fitness components between bowlers and batsmen in cricket and if the mean change in scores was significant, the obtained “t” value was tested at 0.05 level of significance. The assumptions for applying independent t-test were also taken into consideration. Effect size of each variable was calculated to find out the total magnitude of the mean differences along with its significance level.

RESULTS

The results of the descriptive (mean \pm standard deviation) as well as the comparative statistics (t value) which were obtained in order to ascertain the group characteristics and the between group mean difference of selected bio-motor abilities have presented below in table 1:

Table 1: Descriptive and Comparative Statistics of Selected Bio Motor Components

Variables	Batsmen M \pm SD	Bowlers M \pm SD	t - Value	Sig.
Speed (50 Meters Dash)	6.93 \pm .16	7.07 \pm .17	1.940	.068
Cardio-respiratory endurance (12 Min. Run/Walk)	2096.5 \pm 156.9	2327.0 \pm 155.0	3.304	.004*
Muscular strength (Push-ups test)	36.90 \pm 5.56	31.90 \pm 6.95	1.775	.093
Flexibility (Sit & Reach Test)	9.40 \pm 4.92	4.60 \pm 1.89	2.875	.014*
Agility (10x4 mt. Shuttle run)	9.68 \pm .098	9.97 \pm .063	7.764	.000*

* p value < 0.05 is significant.

In Table 1, the collective information of descriptive (mean and standard deviation) as well as the comparative statistics (t value) of all selected physical fitness components of both the groups is presented, in which the comparative result showed the significant difference in case of cardio respiratory endurance ($p < .05$) [$t_{(18)} = 3.304$, $p = .004$] as the descriptive statistics clearly indicated that the bowlers performed good by covering more average distance with less standard deviation (2327.0 \pm 155.0) in given time of periods. Where as in case of flexibility and agility, the batsman indicated the better performance with descriptive statistics (9.40 \pm 4.92 cm. and 9.68 \pm .098 seconds



respectively and showed the significant difference in both the components with statistics [$t_{(18)} = 2.875, p = .014$] in case of flexibility and [$t_{(18)} = 7.764, p = .000$] in case of agility respectively.

On the other hand, the performance of speed and muscular strength did not showed any significant difference as the p value of test statistics was more than the alpha level ($p > 0.05$) as decided earlier in the beginning of the study.

DISCUSSION OF FINDING

In case of speed the result revealed that there was no significant difference between batsman and bowler may be because of the condition that both the batsman and bowler have to run with their optimum speed for running between the wickets for taking the runs and for maximum acceleration for delivering the ball while bowling respectively.

On the other hand the study of endurance revealed that there was a significant difference between batsman and bowler may be because of In case of batsman they have to take runs frequently while doing running between the wickets for playing a long innings, whereas in case of bowler, they have to go for run up before delivering the ball as well as they have to be attentive towards the ball for the fielding throughout the whole innings it can be conclude that bowlers have better endurance than batsman.

The result of strength endurance revealed that there was no significant difference between batsman and bowler may be because of in case of batsman they have to go for a long hitting strokes in order to make or chase a good score, whereas in case of bowling a good delivery includes a great acceleration with optimum bounce in the line of wicket to beat the batsman in cricket and to achieve this quality of ball delivery the bowler needs to generate same amount of force from the arms group of muscles ,so the strength is dominate for both the group so, the researcher come up with the conclusion on the bases of coming result that the strength variable plays a important role for both the group.

The study implied that the batsmen have better agility components as compared to bowlers. It may be due to the medium body structure of majority of batsman as compare to their counterpart bowlers. They can move their body very fast and very easily but bowlers can't perform that much easily and effectively due to their long height and stiff physique in most of the cases. Batsmen have better agility also because of their turning movements while doing running between the wickets.

The research of flexibility revealed that there was a significant difference between batsman and bowlers. In comparison to bowler batsman have better flexibility, the reason could be while doing batting batsman have greater range of motion because of the vertical as well as horizontal shots he performs which requires great deal of spine flexibility.

Small sample size, level of performance of cricketers and unavailability of sophisticated equipments may also be one of the reasons of indicating insignificant difference of selected bio-motor abilities in the present study.

CONCLUSION



Within the limitation of the present study, the following conclusions were drawn:

1. There was no significant difference in speed between batsman and bowler in cricket.
2. There was significant differences in cardio respiratory endurance between batsman and bowler in cricket.
3. There was no significant difference in muscular strength between batsman and bowler in cricket.
4. There was a significant differences in agility, batsman have better agility than bowler.
5. There was a significant differences in flexibility, batsman have better flexibility than bowler.

REFERENCES

- Kaur, A., Akwinder And Singh, C. (2016). Comparative Study of Physical Fitness Between Rural And Urban Cricketers of Patiala. *International Journal of Physical Education, Sports and Health*, 1-5.
- Kumar, K. and . Venkatesh ,C. (2014). Relationship between anthropometric and motor abilities with performance of select cricket players. *International Journal of Engineering Research and Sports Science*, 1 (6) , 1 – 4.
- Kumar, M. and Gladkyirubakar, S. (2013). Comparative Analysis on Anthropometrical Variables between Batsmen and Medium Pace Bowlers in Cricket. *Star Physical Education Journal*, 1 (4), 19 – 24.
- Mirzaei, B., Curby, D.G., Barbas, J. and Lotfi, N. (2013). Differences in Some Physical Fitness and Anthropometric Measures between Greco-Roman and Freestyle Wrestlers. *International Journal of Wrestling Scien* J.A. Johnstone, & P.A. Ford. (2010). Physiologic profile of professional cricketers. *Journal of Strength Conditioning Research*, 24(11), 2900 – 2907.
- Gopinath, R. (1983). Relationship of Grip Strength, Leg Power, Agility And Hand And Foot Reaction Time To Performance In Cricket. Jiwaji University Gwalior.
- Sisodiya , A. and Singh, R. (2010).A comparative Study Of Selected Motor Abilities Of Team And Individual Player. *A Journal Of Physical Education And Fitness*, 1(2), 65-68.
- Singh, Dhananjay. (2014). Study of Specific Physical Fitness Ability of C.S.J.M. University Cricket Players. *Asian Resonance* ,3 (4).
- Zhang,Y. (2010). An investigation on the anthropometry profile and its relationship with physical performance of elite Chinese women volleyball players (Msc). Southern Cross University. *journal of Strength and Conditioning Research*, 1-10.



**AN EFFICIENT WAY TO REDUCE FRAUD DETECTIONS IN BANKING SECTOR
BY USING MULTI COMBINATION OF PASSWORD TECHNIQUE**

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ABSTRACT:

The significant growth of online banking frauds, fueled by the underground economy of malware, raised the need for effective fraud analysis systems. Unfortunately, almost all of the existing approaches adopt black box models and mechanisms that do not give any justifications to analysts. Also, the development of such methods is stifled by limited Internet banking data availability for the scientific community. In this paper we describe, a decision support system for online banking fraud analysis and investigation. Banking fraud analysis and decision support system is an effective semi-supervised approach to financial fraud and anomaly detection, using this decision support system is developed. This approach is split into two stages of development including the training phase and the runtime. During the training phase, it creates a profile for each user on the basis of its prior transactions. The training phase takes as input a series of transactions. It differentiates each user using a local, global and temporal profile. Local profiling aims at generating histograms by considering the list of transactions performed by each user. The global profiling aims at forming clusters for each user based on its prior transactions with correlated spending patterns. Temporal profiling is based on the prior transactions and it calculates the anomaly score for each user transaction. During runtime, it sorts the unlooked transactions that differ from the learned profiles. Moreover, it helps the analyst with a reason for analyzing the outcomes by aiding in his/her decision making activities.

With the improvement of changed correspondence systems, online payment exchanges and in addition web based business is spreading step by step. Additionally, the money related cheats related with these exchanges are likewise expanding which in this manner brings about significant budgetary misfortunes consistently comprehensively. Credit card extortion is drilled most every now and again among the changed money related cheats because of its acknowledgment and across the board use as it offers more accommodation to its clients. Monetary foundations, for example, banks require more advanced methods for recognizing misrepresentation. Budgetary fakes are frequently difficult to distinguish and break down as the deceitful conduct is changing, scattered in unmistakable client profiles, and spread crosswise over gigantic imbalanced genuine datasets (e.g. client spending profiles, web logs, exchange logs). Moreover, clients once in a while audit their web based keeping money history and thus are not ready to uncover the false exchanges at the ideal time. Likewise, because of the wide use of credit cards as a method of payment for acquiring merchandise and enterprises, there comes a need to decide if the exchanges made using a credit card is a substantial exchange done via card holder or it is a deceitful exchange done by the fraudster. To stay away from or control the online extortion this review presents another method Multi Combination of Password Technique (MCOP).

KEYWORDS:

Internet Banking, Bank Fraud, Fraud Detection, User profiling, Anomaly Detection, MCOP.



1. INTRODUCTION:

The development of varied communication techniques, online payment transactions as well as e-commerce is spreading day by day. Moreover, the financial frauds associated with these transactions are also increasing which subsequently results in substantial financial losses every year globally. Credit card fraud is practiced most frequently amongst the varied financial frauds due to its acceptance and widespread usage as it offers more convenience to its users. Financial institutions such as banks require more sophisticated techniques for detecting fraud. Financial frauds are often very hard to detect and analyze as the fraudulent behavior is changing, dispersed in distinct user profiles, and spread across huge imbalanced real world datasets (e.g. customer spending profiles, web logs, transaction logs).

Furthermore, customers rarely review their online banking history and hence are not able to disclose the fraudulent transactions at the right time. Accordingly, due to the wide usage of credit cards as a mode of payment for procuring goods and services, there comes a need to determine whether the transactions made through the use of a credit card is a valid transaction done by card holder or it is a fraudulent transaction done by the fraudster.

In traditional approaches, it can be figured out whether the transaction carried out is a valid transaction or a fraudulent transaction once the billing has been done. This leads to substantial financial losses. Thus, it is necessary to determine the fraudulent transactions prior to performing the billing actions.

2. LITERATURE REVIEW

Given the scarcity of labeled datasets, such a system must be able to work in an unsupervised or semi-supervised fashion (we can assume that no fraud exists in this dataset, as indicated by our collaborators). This conflicts with the

requirement of the system being able to provide "readable" evidence to corroborate each alert. These peculiarities have remarkable implications for the typical statistical and data mining methods used in the outlier detection field. Although fraud detection has a very long history, not much research has happened in this area. The cause is that the real world data is very hard to obtain since the financial institutions are not ready to disclose their sensitive customer transaction data due to the privacy restrictions implied by most of the financial institutions which also restricts the researchers to perform the experiments and get the outcomes. Moreover, the authorities of the financial institutions change the field names so that the researchers don't get to know about the actual fields. Due to these confidential aspects of the real world dataset, fraud detection models have not been developed and described in the academic literature and very fewer models are implemented in the actual detection systems. Still there exist some of the successful applications that use different data mining techniques including self-organized maps, neural networks, artificial immune system, hidden markov models, fuzzy logic systems, conditional weighted transaction aggregation, frequent item-set mining, cryptographic algorithms, and outlier detection techniques in fraud detection.

3. Data Mining Techniques

John Akhilomen (**John Akhilomen, 2013**) presents an application in view of information mining that has been planned as a subsystem and can be pertinent to the vast majority of the money related organizations to identify credit card fraud. This application acknowledges input designed on a specific example and testifies it with the credit card holder's example and afterward it characterizes a constant exchange as either being a honest to goodness, suspicious or an ill-conceived exchange. This approach makes utilization of an "oddity recognition algorithm" in view of "neural systems" to find

misrepresentation in the exchanges occurring progressively and it doesn't acquaints any imperfections due with its prepared classifier which allocates every continuous exchange as either being a true bhte, suspicious or a deceitful exchange (Twinkle Patel, Ms.Ompriya Kale, 2014). Fraud manages cases that occur because of criminal reason which are hard to distinguish. Misrepresentation can be for the most part separated into two sorts:

Offline Fraud: Most of the offline extortion occurrences happen because of the take of wallet that contains essential archives. Records, for example, Driving License, ID card and so on contains significant data, for example, name, date of birth, exchange slips and so on (Deepak Pawar, 2016).

Online Fraud: Online misrepresentation happens when impostor display their site as a certifiable site with a specific end goal to acquire essential individual information of a client and perform illicit exchanges on such client account (Deepak Pawar, 2016).

Credit card is also one of the most illegal types of fraud. Credit Card is a plastic card i.e. issued to customers of a bank as one of the mode of payment. It allows cardholders to purchase goods and services from the shopping websites or from the market.

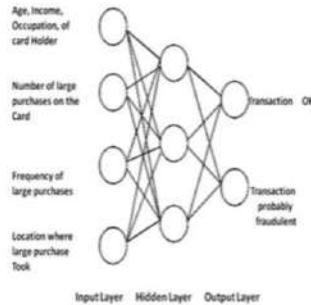


Figure 1: Layer of Neural Network in Credit Card [3]

Credit Card Fraud is defined as, when an individual uses another individual credit card for personal use while the owner of the card as well as the card issuer are not aware of the thing that the card is being used.(PrarthanaAdiga, 2017)

Fig1.1(a) shows, If credential information of a customer has stolen and uses for online shopping, the card holder acknowledges transaction details after the fraud has been committed and then customer inquire the bank for transaction. There is no such process that can prevent fraudulent transaction at the time of happening. So there is a need of such interface that prevents from online transactions.

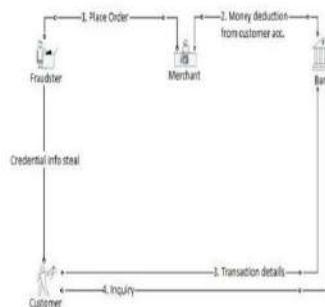


Fig 1.1: Example of Credit Card Fraud

4. Security Mechanism to Prevent from Fraud

These are the existing security mechanism that helps to prevent from fraudulent transactions:

•**Address Verification Service (AVS):** In this technique it matches the cardholder billing address and shipping address and identifies whether the cardholder has purchased product on this address. However, this technique contains some weaknesses i.e. the address information is available online; the banker feels boring to check record of every customer to prevent from fraudulent transaction; it cannot check the entire informational card.(Parvinder Singh,2015)

•**Fraud Rates:** This technology checks for recognized patterns i.e. used by the fraudster to commit the fraud. The advantage that it is easy to configure and understand, but the disadvantage fraudster changes their pattern changes at regular interval. (Parvinder Singh,2015)

•**Relocation:** This technology identifies the customer geographic location by identifying its IP addresses.

•**Chip & Pin:** A PIN is a 4 digit unique and secret number that customer has to

enter before doing transaction by ATM/Debit Card/Credit Card. The 4 digit pin is used to identify whether the customer is genuine or not. (Raghavendra Patidar, 2015)

•**3D-Secure:** This technology works on the principle of authenticating the user password with the password i.e. stored in the database. The main advantage of this system is that fraudster needs a user's password to perform the transaction. (Raghavendra Patidar, 2015)

•**Biotechnology:** The unique characteristic of each customer such as fingerprints, voice, signature, iris, and other similar biological components is stored in a computer so that a computer can read it. Then the computer compares the stored patterns to the person who is performing the transaction to identify whether the customer is genuine. The main disadvantage of this technology is that is that it requires additional hardware cost.(Mandeep Singh,2015)

•**One Time Password:** The random number is generated at server side and is send to the customer's mobile phone through the help of the web services to ensure that the correct user is performing the transaction at that instant of time. The user has to enter the same password for getting the authorization from the bank side.

How does a credit or debit card transaction actually work behind the scenes?

1. Card is swiped or keyed at merchant.
2. Merchant sends data to their processor, which is usually an acquiring bank.
3. Acquiring bank routes transaction through appropriate card network, e.g., VisaNet
4. Transaction reaches card holder's issuing bank.
5. Issuing bank approves or declines transaction.

6. Approve/decline sent back through network to merchant to complete purchase.
7. Acquiring bank settles with issuing bank.
8. Acquiring bank settles with merchant.

Next-Gen Payment Processing Technologies

The numerous threats that have preyed on the traditional credit card payment system, coupled with new technology, has led to the development of different payment processing technologies that not only allow for more convenient transactions, but also ones that are more secured. Click on the links below to read about the new technologies, how they work, and their

advantages and disadvantages (Neha Sethi, 2015). The various dangers that have gone after the conventional credit card payment framework, combined with new innovation, has prompted the improvement of various payment handling advances that take into account more advantageous exchanges, as well as ones that are more secured. Tap on the connections beneath to peruse about the new innovations, how they work, and their focal points and weaknesses.

EMV Credit Cards: Also called Chip-and-PIN cards, these cards include a chip that stores a cryptogram that distinguishes changed exchanges. It additionally requires a PIN for additional verification.

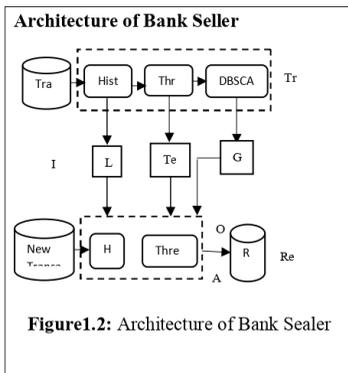


Figure1.2: Architecture of Bank Sealer

Contactless RFID Credit Cards: This payment innovation utilizes detached Radio Frequency Identification that enables cardholders to wave the cards before RF terminals to finish exchanges.

Mobile Wallets: First propelled in Japan in 2004, this innovation deals with NFC empowered cell phones, and has since been actualized by Google and Apple through their versatile stages.

Apple Pay: First presented in 2014, Apple Pay is an payment application elite to specific emphases of Apple's cell phone biological system, in particular the iPhone 6 (and later), iPad 2 (and later), iPad Mini 3 (and later) and the Apple Watch. It includes the utilization of a different Secure Element (a chip much the same as chip-and-stick Visas) to store the client's credit card data in the gadget which is separate from the principle processor where applications execute. It likewise works with the inherent Touch ID Fingerprint Reader include, at the time one of the most recent components to be planned into that specific era of Apple gadgets (Ali MA, 2017).

Apple Pay utilizes two techniques: a cryptogram, like EMV exchanges, and tokenization. At the point when the client initially inputs their Credit Card into the Apple Pay application, the Credit Card brands (Visa, MasterCard, or American Express) will send a token and a cryptogram to the Apple gadget. The token is a 16-digit number that replaces the real Credit Card number. The token and the cryptogram is then put away in the Secure Element chip, and is sent to the card



brand's system for check each time the client approves an exchange (by method for the unique finger impression scanner, the main approving component expected to do as such).

The card mark organize gets both components, decodes the cryptogram and after that checks it for validness. On the off chance that the cryptogram is observed to be valid, the system then passes the token to the backer bank of the Credit Card. The backer decodes the token, and after a last check for credibility, finishes the exchange. A few exchanges in this line additionally require the client to include their postal code, for included security and check

Google Wallet, which was prevailing by Android Pay in September 2015, is the versatile payment application for Android clients. Bolstered by Android KitKat and more up to date, Android Pay underpins tap-and-pay exchanges utilizing the gadget's close field interchanges (NFC) highlight. To make it work, clients need to introduce the application and info the card number and different points of interest essential for payment confirmation, for example, name and address. Clients who have accounts with significant credit or check cards in the US can simply take a depiction of the card utilizing their cell phones camera and it consequently inputs the date of lapse.

Google Wallet/Android Pay works in two ways card imitating with secure element (SE) and host-based card copying. In card imitating with secure component, the gadget is put on the NFC terminal and every one of the information read will be directed in SE, which is in charge of the correspondences with the NFC terminal. Once the exchange is done, the application can question the SE with respect to the status and tell the client (ShipraRathore, 2016).

With host-based card copying, the Android OS and the application is specifically required in the handling of paymentexchange. Once the client conveys the gadget up to the NFC terminal, the application plays out the card imitating and handles correspondence with the terminal. All information is facilitated in a cloud situation, which does the real exchange preparing before it conveys back the status to the application (Sonawne V.D, Prashant Gupta, 2016).

Advantages: Aside from the convenience it offers, given that it cooperates with real credit and debit organizations and is bolstered by a ton of US retailers, Google Wallet/Android Pay has the information transmitted amid exchanges in a safe cloud condition. It doesn't store any of the client information on the gadget itself, which implies that if the Android gadget is contaminated with data taking malware, the client data and qualifications utilized by this application won't really be stolen by the cyber criminals.

Disadvantages: It's a well known fact that the open source Android stage has experienced a not insignificant rundown of vulnerabilities and endeavours. And keeping in mind that Google pushes refreshes for these vulnerabilities, not all gadgets of various makers can get those patches because of portable fracture. This can make those gadgets powerless against assaults.

Single point crossover in Genetic algorithm

It is a hybrid procedure which includes choosing one crosspoint arbitrarily from the populace. That is the hybrid point is picked in both of the parent arrangements. The parent arrangements are being acquired from the choice. Utilizing the arbitrarily chose crosspoint and the parent arrangements the hybrid system is connected. The information past that

hybrid point is intermixed which yields a solitary child.

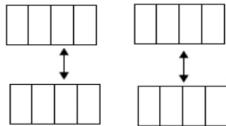


Figure 1.3: Crossover

The pseudocode of the crossover technique is as shown below

Crossover()

```

For each intermediate transactions
  For Crosspoint from 0 to father.length do
  for I from 0 to father.Length do
  if I < Cross point
  Child [i] = father [i]
  else
  Child [i] = mother [i]
  
```

Mutation: It is likewise a genetic administrator in the genetic calculation. The change is primarily used to keep up heterogeneity in the populace. It modifies a portion of the qualities in view of which the whole solution. Subsequently forward utilizing mutation in genetic calculation we can acquire the better solutions from the chose dataset.

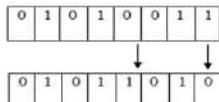


Figure 1.4: Mutation

The pseudocode of the cross over technique is as shown below

Mutation ()

```

For each intermediate transaction
data do
i <- random (0, 1)
j <- random (0, N)
k <- random (0, 3)
if k <- 1 then
  
```

```

pop [I][j] <- pop[I][j] + I
else
pop [I][j] <- pop[I][j] - I
  
```

5. Multi Combination of Password Technique (MCOP)

Usually when performing a Credit Card transaction user needs to enter the following details.

- Credit Card Number
- Card Holder Name
- CVV
- Card Type
- OTP/3D Number

While analysing the above information except OTP or 3D number all other credentials can be easily stolen. Fraudster usually calls the user and identified him as he is from bank and asking for OTP. Once he got the OTP he can easily probe the money of the card holder. The below diagram shows the high percentage of misuse of OTP. To avoid this new technique called MCOP can be used. An MCOP contains below information.

- Four favourites letters of user (x1)
- Online Transaction Code (x2)
- OTP (x3)
- A Numeric Symbol (x4)

Four favourite letters of user (x1): This letter can be the user's choice when customizing the MCOP. For example when a user customizing the MCOP he can choose letters like Good, Hura, Made, Cate and so on.

Online Transaction Code (x2): It is like PIN number. User can choose his own OTC like 5568, 8754, 6336, etc.

OTP (x3): Sent by banker.

A Numeric Symbol (x4): This is also user's choice, example &, *, #, etc.

Now a user can choose which comes first, second, third and fourth. For example a user can choose like below MCOP format. Online Transaction Code (x2) + four favourite letters of user (x1) + OTP (x3) + A Numeric Symbol (x4).

A sample MCOP will be like:

4586Good1789&

By giving multiple choices to the user for customization of MCOP anytime an online transaction can be highly secured.

Algorithmic approach

Let universe of discourse $X = \{x_1, x_2, \dots, x_n\}$ be the object to detect. Every object has m indexes, namely $x_i = \{x_{i1}, x_{i2}, \dots, x_{im}\}$, $i = (1, 2, \dots, n)$. The following data matrix shows it in the following way:

$$X = \begin{bmatrix} X_{11} & X_{12} & \dots & X_{1m} \\ X_{21} & X_{22} & \dots & X_{2m} \\ \vdots & \vdots & \ddots & \vdots \\ X_{n1} & X_{n2} & \dots & X_{nm} \end{bmatrix} \quad (1)$$

Now required to figure out the outlier sets of n objects. To judge the diffusion degree of every object in X , we comprise the d_{ij} which denotes the distance between any two objects and composes distance matrix R , described as follows,

$$R = \begin{bmatrix} d_{11} & d_{12} & \dots & d_{1m} \\ d_{21} & d_{22} & \dots & d_{2m} \\ \vdots & \vdots & \ddots & \vdots \\ d_{n1} & d_{n2} & \dots & d_{nm} \end{bmatrix} \quad (2)$$

It is very important to select any distance function. This paper selects the Euclidean distance.

$$DIS(U, F) = \sqrt{\sum_{i=1}^n (O_i - f_i)^2} \quad (3)$$

$$Let \ p_i = \sum_{j=1}^n d_{ij} \quad (4)$$

Where P_i is the sum of i^{th} row in matrix R . The bigger P_i is, the longer the distance between i object and other object is. Then P_i is said to be the candidate item of outlier set.

$$\lambda_i = \frac{P_i - P_{min}}{P_{min}} \times 100\% \quad (5)$$

where, λ denotes threshold and the objects with $\lambda_i \geq \lambda$ are taken to be the outlier set.

Advantages of MCOP Model:

- It manages nonlinear information for extortion recognition.
- It is competent to distinguish the extortion when fake exchange is in
- It can deal with nonlinear and intuitive impacts of information factors.
- It has complex calculation. Indeed, even a little change in watched information may change the structure of a tree.
- It does not require building up any prescient model before grouping.

The major threats when analysing the data set.

Stealing OTP – This is normally happening by call the user over phone and claimed he is from bank authority and asking the OTP for security purpose. Interfering the mobile network or hacking the mobile is happening in a very lower percentage.

Stealing Credit Card information – This is normally takes place when we use card in public places. Mainly a chip will be attached in the swipe machine and it observes the card information.

Stealing PIN– Camera in the ATM centres or in the malls is a main loop hole to steal the PIN number. Moreover hacking the user network also leads to stealing the PIN.

Stealing 3-D secure number – This is also happens by calling the user and asks for 3-D secure number as he claims from bank or authority. Moreover hacking the user network also leads to stealing the 3-D secure number.

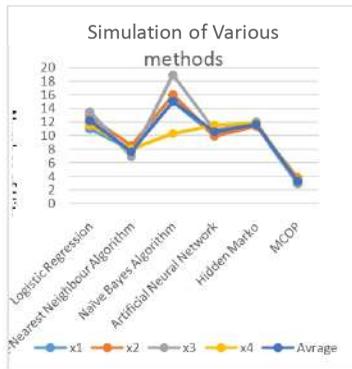


Table 1.6: Results of probability of hacking online transactions

Methods	OTP	Cloning	3-D secure	PIN	Over
AES (Advanced Encryption Standard)	12	5	3.75	16.8	9.3
Triple DES (Data Encryption Standard)	11.2	3	2.25	15.68	8.0
HMM	15	7.1	5.325	21	12.1
Blowfish	10	4	3	14	7.7
Twofish	12.6	6.1	4.575	17.64	10.2
Advanced RSA	9.8	3.4	2.55	13.72	7.3
Hidden Markko	14.1	8.5	6.45	19.74	12.2
MCOP	7.2	1.8	1.35	10.08	5.1

Figure 1.5: Simulation result of various algorithmic approach Method

Conclusion

In this paper we have brief discussion on credit card fraud detection using MCOP Model. Here we have shown how the MCOP can detect whether an incoming transaction is fraud or genuine also we have given a new approach to customize passwords with the combination using MCOP algorithm. MCOP used to generate 9 digit unique security code. In MCOP model we have proved that it gives more security and to reduce the fraud. The results using OLTP tool shows that the MCOP has very less probability of hacking and adds more security to online transactions.

References

- 1.Ali MA, Arief B, Emms M, van MoorselA Does The Online Card Payment Landscape Unwittingly Facilitate Fraud? IEEE Security & Privacy 2017.
- 2.Avanti H. Vaidyal , S. W. Mohod Internet Banking Fraud Detection using HMM and BLAST-SSAHA Hybridization International Journal of Science and Research (IJSR) 2014.
- 3.Deepak Pawar, SwapnilRabse, Sameer Paradkar, NainaKaushik DETECTION OF FRAUD IN ONLINE CREDITCARD TRANSACTIONS International Journal of Technical Research and Applications e-ISSN: 2320-8163, www.ijtra.com Volume 4, Issue 2 (March-April, 2016), PP. 321-323.
- 4.Ernad Abu-Shanab, Security and Fraud Issues of E-banking, International Journal of Computer Networks and Applications (IJCNA) Volume 2, Issue 4, July – August (2015)
- 5.Michele Carminati a, Roberto Caron a , Federico Maggi a , IleniaEpifani b , Stefano Zanero a BANKSEALER: A decision support system for online banking fraud analysis and investigation ELSEVIER 2015.
- 6.N.Sivakumar, Dr.R.Balasubramanian, Fraud Detection in Credit Card Transactions: Classification, Risks and



- Prevention Techniques international Journal of Computer Science and Information Technologies, Vol. 6 (2), 2015.
- 7.NehaSethil ,Anju Gera² A Revised Survey of Various Credit Card Fraud Detection Techniques , International Journal of Computer Science and Mobile Computing, Vol.3 Issue.4, April- 2014, pg. 780-791.
- 8.Parvinder Singh Fraud Detection by Monitoring Customer Behavior and Activities International Journal of Computer Applications (0975 – 8887) Volume 111 – No 11, February 2015.
- 9.PrarthanaAdiga., Samvida V Bhat., Sanjana R Javagal., Lavanya B S and Chandrika JCREREDIT CARD FRAUD DETECTION-A HYBRID APPROACH USING SIMPLE GENETIC AND APRIORI ALGORITHMS International Journal of Recent Scientific Research Research Vol. 8, Issue, 4, pp. 16308-16313, April, 2017.
- 10.RaghavendraPatidar, Lokesh Sharma Credit Card Fraud Detection Using Neural Network International Journal of Soft Computing and Engineering (IJSCE) ISSN: 2231-2307, Volume-1, Issue-NCAI2011, June 2011.
- 11.Rajni Jain A Hybrid Approach for Credit Card Fraud Detection using Rough Set and Decision Tree Technique International Journal of Computer Applications (0975 – 8887) Volume 139 – No.10, April 2016.
- 12.ShipraRathore, Megha Jain A Hybrid Technique for Credit Card Fraud Detection Communications on Applied Electronics (CAE) – ISSN : 2394-4714 Foundation of Computer Science FCS, New York, USA Volume 5 – No.5, July 2016.
- 13.Sitaram patel^{#1}, SunitaGond^{*2} , Supervised Machine (SVM) Learning for Credit Card Fraud Detection International Journal of Engineering Trends and Technology (IJETT) – Volume 8 Number 3- Feb 2014.
- 14.Sonawne V.D, Prashant Gupta, AfsariRaut ,FarhanSaudagar ATM Card Fraud Detection Using Hidden Markov Model International Journal of Innovative Research in Computer and Communication Engineering Vol. 4, Issue 5, May 2016.
- 15.Twinkle Patel, Ms.Ompriya Kale, A Secured Approach to Credit Card Fraud Detection Using Hidden Markov Model,International Journal of Advanced Research in Computer Engineering & Technology (IJARCET) Volume 3 Issue 5, May 2014.
- 16.Vikrant Agaskar¹ , Megha Babariya², Shruthi Chandran³ , Namrata Giri⁴ Unsupervised Learning for Credit Card fraud detection International Research Journal of Engineering and Technology (IRJET).



WAR PORTRAYALS: THE POLITICS OF SELECTIVE MEMORIES

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Abstract:

In recent decades, there has been an increasing curiosity in the field of social sciences with the subject matter of memory, truth and suffering that can be attributed to the intensification of genocidal nationalism and its impact on our notions of the world around us. Nationalism and its theories have always focused on the nexus between nation, violence and memory but now it appears that these relationships need to be re-examined in today's new world, where we have newer problems, as to how engineered war portrayals give shape to the perceptions people hold about people residing outside their state boundaries.

The principle idea of this paper is to sketch the critical function of memory and forgetting in war portrayals that are featured in debates on the selective maintenance and remembrance of some conflicts, wars and periods of political tyranny while completely erasing or attributing less importance to others. Essentially, recollection and celebration of memory are integral peace-making strategies. Memories of conflicts very conspicuously would be a hindering agent is smooth and successful post-violence adjustments between warring nations. Thus, memory has to be considered as an object of public policy after rounds of violence of any form.

Keywords: Forgetting, History, Memory, Remembering, Selective Memory, War Portrayal.

Introduction

“All wars are fought twice, the first time on the battlefield, the second time in memory”

- Nguyen

In recent decades, there has been an increasing curiosity in the field of social sciences with the subject matter of memory, truth and suffering that can be attributed to the intensification of genocidal nationalism and its impact on our notions of the world around us. Nationalism and its theories have always focused on the nexus between nation, violence and memory but now it appears that these relationships need to be re-examined in today's new world, where we have newer problems, as to how engineered war portrayals give shape to the perceptions people hold about people residing outside their state boundaries.

In delving deeper into our understanding of history, one will realize that most people are averse to many intricate little events in the past. These said events are deliberately excluded from mainstream literature or understanding. Some war acts are glorified



while some are curtailed and relegated to the garbage-can of history. What ensues is then the development of biased perception and understanding by the common people, towards the ‘the other’ – the perceived enemy. This selective understanding of the past and historical events has torn apart relations in today’s world beyond any repair. And this selective understanding comes from selective memory building. The world could have been an entirely different place had there been free flow of public information. Instead, it is free flow of selective information and hence it builds selective memory.

The principle idea of this paper is to sketch the critical function of memory and forgetting in war portrayals that are featured in debates on the selective maintenance and remembrance of some conflicts, wars and periods of political tyranny while completely erasing or attributing less importance to others. In a bid to do so, this paper will seek to analyze the following questions-

- i. What are the factors underlying the selective preservation of some wars?
- ii. Has there been any significant academic discourse on the same?
- iii. Can such selective memory pattern be effective weapons in the hands of the State to continue with the similar war policies in the future?

Recollection and celebration of memory are integral peace-making strategies. Memories of conflicts very conspicuously would be a hindering agent is smooth and successful post-violence adjustments between warring nations. Thus, memory has to be considered as an object of public policy after rounds of violence of any form. Before we look at how memory is implicated in war and peace, it is worthwhile drawing attention to the particular way that memory is conceptualized as a sociological process in these arguments.

Past Explorations

There has indeed been many works related to the subject-matter, attempting to illustrate how the process of selective memory building functions. This expounding of politics of selective memory has indeed shed light on how biased war portrayals and enemy-image formation go hand in hand.

Jan-Werner Muller argues that ‘memory, both individual and collective, lies at the intersection of so many of our current concerns’ (Muller, 2002).ⁱ It is important that we acknowledge, as opined by Ian Hacking, that memory has become ‘a powerful tool in quests for understanding, justice and knowledge’ (Hacking, 1998).ⁱⁱ Memory indeed matters, in various ways. It matters especially politically as we do not understand fully yet as to how it functions, its relations with power.

The occurrence war and its affects are so strong that it itself promotes a kind of amnesia, a ‘numbing’ of psychological aspects of mankind. Michael Geyer’s example of Germany’s population emerging from an ‘extended death zone’ during the Third Reich seems like an apt example. The state of mind of Germany was such that there was indeed a ‘permanent numbing of body and soul’ and what ensued was that an effort was put to focus on reconstruction with all energy. Thus, there were no reactions such as sorrow and mourning to mass death but there were indeed huge degrees of exclusion, quarantining the death and also the experience of death amongst the survivors. Consequently, it was not merely forgetting or silencing, but ‘a convulsive closing of



injuries as a result of the experience of mass death' (Geyer, 1997).ⁱⁱⁱ Most scholars of post-war Germany have suggested that it was not simply repression of memory but actually of selective memory and survival stories. In these memories individual agency became central and broader historical developments – and the Holocaust in particular – as well as the constitutive roles of individuals in them, vanished from the picture of the recent past (Schildt, 1998b).^{iv} Mythmaking and what one might call a radical 'individualization' or 'disaggregation' of history went hand in hand.

Maurice Halbwachs, a French philosopher, was one of the pioneers of work on collective memory (Halbwachs, 1992).^v It is only after his work came to light the concept of collective memory is better understood today. Middleton and Edwards in 1990 point out that now collective memory is recognized to be a much more intricate occurrence than a meager aggregation of individual memoirs. Moreover, now, modern approaches with the subject matter believe power dynamics in a society to be the driving and engendering agents of social or collective memory.

In addition, Paul Connerton, very persuasively, points out that state apparatus has a chief hand in shaping the memory of a social group 'in a systematic way to deprive its citizens of their memory'. What it entails is that those with possession of political power in a social order seek to promote 'official memory'. It is collective in nature, and more importantly selective in its assertions. Only certain memories and events are then retained, which tend to be convenient (Jovi, 2004). The ones not convenient are simply disposed off into the historical dustbin, made to forget. Official social memory is a 'political process without an end' which needs the art of forgetting, as much as the art of remembering, in order to function successfully (Connerton, 1989).^{vi} Paul Ricoeur also emphasizes on the argument that history is not easily forgotten and its erasure from memory means that it is simply put aside to be used again when the need arises, that is when new political regimes try to promote a truth convenient to their regime (Ricoeur, 2004).^{vii}

Thus, the politics of selective memory determines the course of our historical reflections. When the war is over, history is written from the perspective of the triumphant and the political elites. They control the narratives of the past, and determines what should and what should not be remembered from the past often relegating into oblivion the ghastly side of victory, the unspoken voices.

This has proved to be a substantially valuable tool at the disposal of the state to invent an enemy image- the 'other' (which paradoxically begins with the invention of the self). Selected features of the 'other' are portrayed to the public, building stereotypes. Banal categories emerge for people to judge and place others in categories, mostly negative in nature. A vicious circle is formed in this manner, whereby negative presuppositions are reinforced again and again and then they become prominent images in the minds of people through this selective information, historical accounts and other forms of popular portrayal associating the enemy- or the other- with a sense of misgiving. This easily leads to granting of legitimacy by the people to exterminate the enemy, who seems to be essentially evil. Such a decision is appears to be rational and even honourable.

Ernest Renan, the French essayist, also hints at this selective memory making in his essay "What is a Nation?" where he states that 'memories of certain events, or lack thereof, are crucial to the development of a successful and powerful nation'. He writes:



“To forget and – I will venture to say – to get one’s history wrong, are essential factors in the making of a nation”, which is essential in the process of enemy image formation one can say (Renan, 1996).^{viii}

Thus, portrayals of wars in the past often assume the role of causative factor for present and future wars between nations. Both mass media and official state organs justify this by broadcasting selective propaganda. Internationally, these supposedly negative images are happily consumed by nations and are smoothly and freely circulated between allies. It mobilises internal public opinion in favour of the nation-state, and deepens the need for protection amongst its citizens from such enemies. Ironically, the nation-state by ensuring the dependence of its populace on it for security, seeks to increase its own security and legitimacy. Moreover, such selective memories of wars and subsequent the hatred for the ‘other’ is a manoeuvre to engage people in the actual act of fighting wars. It is worth noting here that the selective enemy images are not only used to justify war against other nations, but they are also used to justify oppression of people within countries.

We can draw an example from the Gulf War in Iraq from 1991. The Gulf War in Iraq, in 1991, involved a lot of public relations (PR) work. Use of technical phrases such as ‘truth projection’ actually meant propaganda. PR was turned onto its own citizens to convince them to support a war or make it look more glorious and right, than could otherwise have been. It was Saddam Hussein’s reign, who used the media to internalize the legitimacy of war in the minds of the Iraqi population. Citizens who were not in favour of the war were made to change their mindsets through propaganda. Iraq was projected as the defender of the Arab world when fighting Iran earlier. In such a way, one can see how selective memory and conscience is promoted to benefit the state and portray war as legitimate and even as something necessary.

Mediums Facilitating Selective Memory:

Selective memory building has many instruments by the means of which it is popularized. Over time more and more alternate paths have emerged to facilitate this indoctrination. This section shall attempt to explore few of the mediums through which selective memory is given shape to – to people of all ages in a society, both the young and the old:

Textbooks in School

One of the key ways by which the process of selective memory operates is through children’s textbooks which are often replete with stories interlinking war and abstract ideals like nationalism. This can be seen as a selective and distorted attempt to justify wars and the untold personal miseries it brings along with it by counter-posing the latter with high placed ideals which are deemed more important than anything else. Moreover, many wars which have been controversial or unjustifiable are either grossly manipulated to suit the interests of those in power or obliterated altogether.

In citing a specific example from South Asia itself, Raza Rumi from Pakistan has brought out very lucidly of how elementary history taught to children in Pakistan shapes



India as the enemy. In his essay in *The Hindu*, “Erasing Memory to Deal with Loss”, he points out that in Pakistan, a child grows up learning that it was an Indian conspiracy, engendered by the Hindu teachers of ‘East Pakistan’ that led to the separatism of the Bangladeshis. He shows us an example with a passage from a secondary school textbook: “There were a large number of Hindus in East Pakistan. They had never really accepted Pakistan. A large number of them were teachers in schools and colleges. They continued creating a negative impression among the students. No importance was attached to explaining the ideology of Pakistan to the younger generation. The Hindus sent a substantial part of their earnings to Bharat, thus adversely affecting the economy of the province” (Rumi, 2011).^{ix}

It is a sad reality that a large number of young Pakistanis are still unaware of how things panned out in 1971. And these young Pakistanis happen to be the dominant demographic group in Pakistan. Thus, an important part of the population still lives believing in an inaccurate history. “For them — as a grade 5 book sets it out — the plot was simple: After the 1965 war, India, with the help of the Hindus living in East Pakistan, instigated the people living there against the people of West Pakistan, and at last in December 1971 herself invaded East Pakistan” (Rumi, 2011). In addition, ensuing the debacle of 1971, the worst fallout was that Pakistan felt a deep insecurity within herself and the result of this was the emergence of excessive militarism. Zulfikar Ali Bhutto continued his anti-Indian nationalist rhetoric, tainting India’s image and accusing India of engaging in conspiracy to separate East Pakistan from us. This rhetoric acquired a deeper dimension by Zia-ul-Haq’s reign. “One social studies’ textbook line summed it all up thus: ‘All of us should receive military training and be prepared to fight the enemy.’ The enemy was India” (Rumi, 2011).

In his concluding paragraph, Rumi writes that we must engage with history in a more square and honest approach. Such an approach will definitely contribute to putting the past behind all three entangled neighbours in South Asia – India, Pakistan and Bangladesh.

History

History’s role and the way it is perceived is a major factor in shaping narratives in people’s minds. The unfamiliar, unfolding future constantly challenges the familiar past and present and fogs the mind. Years ago, in 1967, Regis Debray warned us of this in “Revolution in the Revolution?” that we are never contemporaneous with our present.^x He wrote:

“History advances in disguise; it appears on stage wearing the mask of the preceding scene, and we tend to lose the meaning of the play. Every time the curtain rises, continuity has to be re-established. The blame, of course, is not history’s but lies in our vision, encumbered with memory and images learned in the past. We see the past superimposed on the present, even when the present is a revolution” (Debray, 1967).^{xi}

To explicate further on the role of history, Romila Thapar, renowned Indian historian, in her book “The Past as Present”, in discussing the intricacies involved in distilling the past reveals that she has attempted to touch on two kinds of pasts. One is the past that has passed into the historical landscape and which has been drawn upon in highly selective ways, to validate the present. The other is the recent past, the almost-present,



which has done the selecting from the earlier past and positioned it in the present. Both processes have been attempts at forging new identities associated with contemporary times. The ongoing changes in the present are moving us through a transition (Thapar, 2014).^{xii} These arguments show us just how the history of the powerful prevails while the rest remains concealed. Selective memory is thus easily engendered through such a process. The disguised portrayal of wars and the subsequent memory building is very clearly unconsciously doctored.

In this light, Eric Hobsbawm's statement that "history is to nationalism what the poppy is to the opium addict" also seems apt.

Literature

Literature, both in the form of prose and poetry, too contributes substantially to our biased remembrance by failing to focus on marginal wars and conflicts, and those which have the potential to bring powerful nations, mostly western countries, under the ambit of severe criticism. For instance, most of the famous war accounts and poems, regardless of whether it glorified or condemned wars, are set against the background of what has been depicted by the mainstream academic discourse as significant and thus, worth remembering wars. One example that comes to mind is the Wilfred Owen's "Dulce et Decorum Est" which is popularly known for its horrific imagery and blatant condemnation of the First World War (in which Owen fought and lost his life in 1918). Similarly, other prominent literary account like Erich Maria Remarque's "All Quiet on the Western Front" too deals with the First World War and the difficulties faced by the enlisted soldiers in reverting back to their old civilian lives after the war.

Despite their literary excellence, these literatures are a stark reminder of the politics of remembrance and forgetting. The Great Wars have been ingrained into the memories of the common people, while memories of conflict-torn places off the radar have been suppressed. In this context, one of the most apt examples would be East Timor. It is since the Indonesian invasion of December 1975 that East Timor has been the site of some of the worst atrocities of the modern era — and these atrocities seem to be mounting again now. Interestingly, there have been almost no literary accounts of the conflict and unjustified US interventions in East Timor. It is an appalling fact that the misery of East Timor has been relegated to the garbage can of international history. Very few have pointed out about the said problem, and very few have been exposed to it. To cite an exceptional example, Barry Grey in an online article in *World Socialist Web Site* in 1999 has written that US press reports on the atrocities in East Timor were subdued and cautious. There was none of the war-mongering and demonizing of the offending government that characterized the coverage of events in Kosovo. As the *New York Times* pointed out sympathetically on September 9, Washington was reluctant to threaten a cutoff of aid to Indonesia because, among other things, 'it could also harm American corporations that have large investments in Indonesia.'

Only after public denunciations of the US silence by political leaders in Australia and other countries, and growing protests at home...did Clinton make a statement condemning the massacres and calling on Jakarta to put a halt to the bloodbath (Grey, 1999).^{xiii}



Fictionalized portrayals

Fictionalized portrayals are another medium of spawning selective memory. Fictionalized portrayals lend artistic legitimacy to promote the convenient truth. And the important thing to note here is that it even kind of acquires the license for it, as the populace while enjoying it, unknowingly consumes what is being sold to them. Graphically depicting on screen of the inhumane acts carried out by the supposed enemy builds a strong anti-enemy image in the minds of the people. Many movies are apt examples of the said argument. “The Deer Hunter” of 1978 clearly shows the Vietnamese as barbaric villains as almost all evil acts in the film are committed through the hands of the Vietnamese. Another movie, “The Green Berets”, portrays the American soldiers in angel light as help and care for orphans while on the other hand, the Vietnamese guerilla leader is shown to engage in atrocities, reaping off corruption living a king’s life in a big mansion with all sorts of luxuries. This involves very easy enemy-image formation. The proper judgment of the way the USA conducted itself during the event of the Vietnam War still awaits. Public forums are yet to debate this matter out, and indeed, ‘there is a lot to be remembered’. Robert McNamara’s autobiography, who was the Secretary of Defense at the time, clearly shows admittance of the mistakes made by the USA and is yet to be judged properly. Without a doubt, incidents of usage of napalm, toxic gases and bombing on a massive scale on the Vietnamese civilians have been attempted to be repressed. This massacre should be left buried in history. ‘The moral blindness that still prevails today over Vietnam may be associated with the continuity of the power of the United States in international affairs’ (Psychologists for Social Responsibility, 1989).^{xiv}

Enemy images in films are contributing to widespread misconceptions. Although one must understand that these enemy portrayals by filmmakers are not deliberate attempts to show the others in bad light. They do not mean to encourage such negative portrayals. In reality, it is just that these images are etched into the minds of people; they are ensconced in such imagery. Thus, they are widely accepted and rarely challenged.

The politics of memory has also played a noteworthy role in the way women have been perceived in wars over the years. The selective portrayal of women as victims of war gave leverage to the popular perception that connotes man as central, women as peripheral and physically inferior to men and hence, relegated to the world of victimization and other unimportant activities. It overlooks the possibility of women having actively engaged in war. Similarly, in portraying terrorism, a stereotype in the form of male terrorists is evident in almost all mainstream accounts that seek to deal with this issue. However, in stark contrast to such selective remembrance of women, scholars like Mia Bloom points out that women have actually been engaged well in crucial roles in many violent radical organizations since as far back as the Nineteenth Century. “The very first person ever to be tried for terrorism, Vera Zasulich, was a woman and an anarchist for the Narodnaya Volya (People’s Will) in Tsarist Russia” (Bloom, 2016).^{xv}

Thus, the selective remembrance of women can be attributed to the fact that women were, despite the seminal and symbolic role they played, nevertheless, given secondary roles to men in wars, revolutions and terrorist activities, and there was in the past, and to some extent even in the present, a strong reservation against writing from the



perspective of women who were conveniently overlooked by the predominant patriarchal hegemony.

Propaganda

With all of the mediums discussed earlier, we must recognize propaganda as an official tool used by countries to promote official memory. “Post-World War I necessitated the use of propaganda in the forms of mass media to recruit soldiers to the war effort; it became linked with misinformation and censorship, and soon after, it became associated with totalitarian regimes like those of the Soviets, and, during World War II, the fascist regimes of Germany and Italy. These one-party states developed ministries of propaganda that would produce posters, paintings, sculptures, and audio-visual creations in order to form and control the opinions of the populace” (Mitra, 2003).^{xvi}

Such propaganda was not used just by the fascist regimes but also in democratic countries like the USA and UK. The Office of War Information (OWI) was established by the US in 1942 with the sole purpose of controlling images and content in war messages. To influence people’s view of the war, all forms of visual art were used to influence people.

In today’s time, MIT professor and essayist Noam Chomsky has castigated the USA and its use of propaganda mercilessly. From him, it is clear that the public relations in USA is what is controlling the mind. It is the powerful and the ones in control that are trying to impose the ‘right values’ of a democratic society. Chomsky looks at American democracy through the harshest critical lens arguing that the said democracy aims to keep people unorganized and even scared. This impedes them from thinking for themselves. In such a case then, it is the propaganda that ‘does the thinking for them, echoing Ernest Renan’s thesis from more than a century earlier’ (Mitra, 2003).

Thus, in reference to the second question of this paper, we do see some academic discourse trying to expound the underlying intricacies of selective memory. The effect has been limited and mostly within the academic community. Even so, one can recognize this as a novel trend and may go on to pervade the milieu of regular citizens.

Reason for Selective Memory:

In listing and explaining the mediums through which selective memory facilitated and bred, it has become clear that it is done by the influential, to remain influential. In a world of power politics, where one moves forward only through enthroning or dethroning one or the another, information at hundred per cent cannot be allowed to swim through the public discourse. It is undeniable that, here, a notion of hegemony runs deep. There is an unconscious control over people at all times, and people unknowingly give consent to it. Such subtle dissemination of selective information is essential to maintain ‘historical power’. Desired public memory acts as the most powerful legitimizing agent – with it, legitimate enemy image is formed and subsequently it allows for legitimate action to be taken against the enemy which leads to legitimate annihilation of the enemy. Through selective memories in war portrayals, the perceived enemy is made to remain an enemy for the lifetime. This mostly takes form of a collective national memory.



In understanding the mediums of diffusing selective memory and the reasons behind it, the answer to the first question of this research can be brought to light. In war, the image of the enemy needs to be firmly ensconced in the minds of the soldiers as well as the citizens back home, so that the nation is made to look legitimate in taking action against 'the enemy'. More importantly, after gaining all the legitimacy from the public, the victors of war impose their version of the events of war. After the wars, it is the victor's justice which prevails. The victors legitimize themselves as 'the good' while denigrating the image of the losing sides in front of the public eye. The world itself begins to believe that the losing side to be 'the evil' ones.

Impact

The consequences of such politics of selective memory can now be well understood. This selective memory and the ensuing selective attention given to selective details involve affirming previous conclusions of the individuals (Broadbent, 1958). The already existing negative images take a hardened form in the minds of individuals. Schooler's study in 1995 attempts to examine the effects of hearing positive information about an enemy nation on individuals. The results showed that the participants did not change their negative perceptions about an enemy nation even after being provided with information based on positive aspects of the supposedly enemy nation. The negative stereotypes continued.

Conflicts in the present world are often inflamed or aggravated by a selective memory of the past, a memory that suits the political regime in power and its agenda of nationalism. In this light, in search for an answer to the third question of this research paper, one can see how this agenda of selective memory, very conspicuously and in a subtle manner, be used as an instrument for propaganda and indoctrination of the highest degree. The entire understanding of generations can be, and has been, doctored to give shape to 'the other', the enemy beyond the boundaries of one's country. The legitimizing forces of warping history lie very much within the domestic boundaries of states. We must realize that if we have extrapolated literature that focuses on uncovering the underlying ploys in keeping memory selective, there are also texts and authors, probably an agent of the historically powerful, that engender selective memory very lucidly.

As mentioned earlier, with selective memories of war portrayals then, the people easily give legitimacy to the winning side of wars. Wars are then remembered in such a way that the victors mostly are mostly depicted as the just ones, delivering justice to the people and the world.

Conclusion:

In all of this analysis, it has come to light that truth has no stability and there are no master narratives. In such a situation, any attempt to fully reconcile with the past seems to be impossible. In this light, the only solution is to engage in constructions of alternatives of the past. Even so, we must not have a defeatist attitude and must carry on an unceasing quest for the search of the true past. Romila Thapar argues that it is essential that the past is meticulously and cautiously explained, because if the legitimacy of our present becomes questionable when the past itself is questionable. Thus, accurate



portrayal of the past is essential. She admits that “it is especially relevant given the attempts by unscrupulous politicians, religious fundamentalists and their ilk to try and misrepresent and willfully manipulate the past in order to serve their present-day agendas” (Thapar, 2014). Thus through ideas such as this, we ought to repudiate false constructions, especially this ‘bogus’ nationalism.

Quintessentially, it seems that it is true that memory is twisted, marred, erased, re-erased, created, re-created, warped, played with and even held captive to be used in future. The literatures exposing these facts are undermined and do not reach the mainstream citizenry. And one can also see how such information is used to build a perfect enemy imagery in warfare and its portrayals. We must, and must, strive to break out of this vicious loop. ‘The truth is no one’s monopoly – not the elite, not the learned, not the illiterate, not the poor, not even science itself’ (McDermott, 2008).^{xvii}

References:

- ⁱ Muller, Jan-Werner (2002): “Introduction: The power of memory, the memory of power and the power over memory”, in J. Müller (Ed.), *Memory and Power in Post-War Europe: Studies in the Presence of the Past* (pp. 1-36), UK: Cambridge University Press. doi:10.1017/CBO9780511491580.001
- ⁱⁱ Hacking, Ian (1998): *Rewriting the Soul: Multiple Personality and the Sciences of Memory*, Princeton: Princeton University Press.
- ⁱⁱⁱ Geyer, Michael (1997): “The Place of the Second World War in German Memory and History”, *New German Critique*.
- ^{iv} Schildt, Axel (1998 b): “Dealing with the Nazi past in public after the war”, in: *Wilfried Loth / Bernd-A. Rusinek* (ed.): *Transformation zone. Nazi elites in the Federal Republic*. Frankfurt aM / New York, 19-54.
- ^v Halbwachs, Maurice (1992): *On Collective Memory*, University Of Chicago Press; 1 edition.
- ^{vi} Connerton, Paul (1989): *How Societies Remember*, UK: Cambridge University Press.
- ^{vii} Ricoeur, Paul (2004): *Memory, History, Forgetting*, University of Chicago Press.
- ^{viii} Renan, Ernest (1996): *What is a Nation?*, Toronto, Ont.: Tapir Press.
- ^{ix} Rumi, R. (2011): “Erasing memory to deal with loss”, *The Hindu*. Retrieved 21 March 2020, from <https://www.thehindu.com/opinion/op-ed/erasing-memory-to-deal-with-loss/article2721164.ece>.
- ^x Debray, Régis (1967): *Revolution in the revolution? Armed struggle and political struggle in Latin America*, New York: Grove Press, Inc.
- ^{xi} Vergese, B.G (2008): “Rage, Reconciliation, and Security: Managing India's Diversities”, Penguin India.
- ^{xii} Thapar, Romila (2014): *The Past as Present: Forging Contemporary Identities through History*, Aleph Book Company.
- ^{xiii} Grey, B. (1999): “East Timor and Kosovo: Indonesian atrocities expose US hypocrisy on “human rights”, *World Socialist Web Site*, 13th September 1999. Retrieved 27 March 2020, from <https://www.wsws.org/en/articles/1999/09/tim1-s13.html>.
- ^{xiv} Psychologists for Social Responsibility (1989): *Dismantling the Mask of Enmity; An Educational Resource Manual on the Psychology of Enemy Images*, Washington, DC.
- ^{xv} Bloom, M. (2016): “The changing nature of women in extremism and political violence”, *Freedom from Fear Magazine*, Issue 11. Retrieved 27 March 2020, from <http://f3magazine.unicri.it/?p=1093>.
- ^{xvi} Keykha, Mitra: “Questioning the Official History: War Memorials as Propaganda Art and the Development of a Nation’s Collective Memory”, CACPS Undergradutae Thesis #5, Spring 2003.
- ^{xvii} McDermott, David (2008): “Analytical Political Philosophy” in *Political Theory: Methods and Approaches*, ed. by David Leopold and Marc Stears, 2008.
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REVIEW : THE ROLE OF SIMULATION IN TEACHING PEDIATRIC RESUSCITATION: CURRENT PERSPECTIVES

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ABSTRACT

Dealing with acute pediatric emergencies can be challenging. Compared to adults, children have anatomical and physiological differences that place additional demands on health care providers when caring for critically ill children. Pediatric health care providers require training opportunities to acquire the knowledge and skills to appropriately manage children with critical illness and cardiac arrest. Pediatric resuscitation events are relatively rare, and trainees often have few opportunities to master procedures on real patients. Many pediatric trainees finish their training lacking sufficient procedural proficiency and resuscitation expertise in the care of critically ill children.¹

In the past decade, simulation has been integrated into the fabric of health care education across various specialties. The use of simulation as an educational tool provides a risk-free environment for both patients and pediatric trainees to address pertinent issues related to resuscitation training. There is a growing body of simulation literature related to pediatric resuscitation. This article describes the application of simulation for teaching pediatric resuscitation and discusses instructional design issues related to enhancing simulation-based education (SBE) for pediatric resuscitation.

Keywords:- Assessment, Pediatrics, Procedures, Resuscitation, Simulation, Airway Management, Future Direction, Crisis Resources Management.

LITERATURE SEARCH AND STUDY SECTION

1.SIMULATION

Simulation has been widely adopted as a training and assessment tool in medical education. Conventional teaching methods may be inadequate to properly train healthcare providers for rare but potentially lethal events in pediatrics such as trauma and respiratory arrest. Recent studies suggest pediatric acute care providers have limited exposure to critically ill patients and also lack the skills to manage them. Simulation has the potential to fill this educational void. This review will highlight the role of simulation as an educational and assessment tool, with a particular emphasis on retention of knowledge and skills.

RECENT FINDINGS:

Simulation is currently used as an assessment tool to provide ongoing feedback during training (formative assessment) and is gaining popularity as an adjunctive method for demonstrating competency (summative assessment). Recent literature demonstrates increased retention of knowledge and skills after simulation-based training in the areas



of resuscitation, trauma, airway management, procedural training, team training, and disaster management.

2.RESUSCITATION

Historically, pediatric residents, during their training, have acquired most of their experience in resuscitation and procedural skills through direct patient contact in the emergency department, intensive care unit, and inpatient wards (3). It is reported that pediatric cardiopulmonary resuscitations are more infrequent than similar events in adults with potentially good outcomes if patients are successfully resuscitated (4). Resuscitation training programs, such as Advance Pediatric Life Support (APLS), Pediatric Advanced Life Support (PALS), Neonatal Resuscitation Program (NRP), and other equivalent resuscitation program, have become a bench mark for CPR training and are mandatory training programs for pediatric acute care providers, and require re-certification every 2–3 years (4). Regardless of current educational practices, studies have shown that majority of pediatric residents complete their training with insufficient knowledge and experience in the care of critically ill children . A survey done by Hunt et al. reported that a large number of postgraduate year 3 (PGY 3) residents had never led a resuscitation event (5). Furthermore, resuscitation courses are insufficient in ensuring that pediatric residents have prolonged mastery of resuscitation skills, as retained knowledge, skills, and confidence have been shown to decline within a few weeks to several months after completion of a resuscitation program (6,7).

Multiple studies have shown that simulation can improve pediatric resident performance during resuscitations. In a recent study, McKittrick et al. looked at the role of simulated training in resuscitation by providing two cycles of real time simulated training episodes to health care professionals in the pediatric critical care unit. They reported enhanced preparedness for participation in pediatric resuscitation after the training (8). Following a somewhat similar footstep, with the common goal of enhancing residents' skills at handling emergent pediatric conditions, the concept of a “mock code” as put forward by Andreatta et al. was instituted as an element of residency training. Prior to any indication, these drills were conducted at a few random time periods within a month which formed a subsection of a longer, 4-year cycle. A substantial 17% increase in the cardiopulmonary arrest survival rates was observed within a space of 12 months, which was simply a smaller cross-section of the general positive trend observed in the hospital over 4 years (9).

In addition to resuscitation, pediatric trauma has been identified as an uncommon event that requires practice in managing (10). A multicenter study conducted in 35 pediatric emergency departments in the US identified deficiencies in the stabilization of children presenting to the emergency department with trauma. They found errors throughout all sites and concluded that there is potential to improve trauma stabilization performance using simulation technology (11). Hunt et al. conducted a pediatric trauma simulation in 18 emergency departments across North Carolina. A 6-month follow-up trauma scenario was performed to look at the retention of skills and knowledge. This study demonstrated markedly improved performance by pediatric emergency care providers (12). Other studies have organized trauma simulation training for multidisciplinary pediatric trauma



teams and found significant improvement in overall performance after the simulation training (13). There is substantial evidence to suggest that simulation improves performance and team management in resuscitation and trauma situations.

3.AIRWAY MANAGEMENT

Several studies have examined the use of SBE for teaching airway management skills in pediatrics. In a simulation-based randomized trial,(14)airway management and teamwork training with HFS resulted in improved global competency scores and a reduction in harmful behaviors. Nishisaki et al(15) demonstrated that “just-in-time” simulated intubation training did not improve the residents’ first attempt or overall success with tracheal intubation on real pediatric patients. However, a later prospective observational study¹⁵conducted by the same research group revealed the clinical performance of a team with more than two simulation-trained members was significantly better than a team with less than two simulation-trained members. Lastly, Finan et al¹⁶.reported that improved neonatal intubation skills following a simulation-based training session did not effectively transfer to the clinical environment. Most of the simulation-based studies for airway management were limited with nonrandomized designs or small sample sizes. The inconsistency in results suggest that simulation training might lead to improved educational outcomes, but there is a gap when it comes to transferring skills from simulated scenarios to the real clinical world. This may be related to inadequate realism of simulators for airway training,¹⁷ the instructional design of the simulation-based educational intervention, or other variables that influence clinical outcomes (eg, institutional protocols). Future work should identify the best way to teach airway skills using SBE that promote transfer of acquired skills to the real clinical environment.

4.CRISIS RESOURCES MANAGEMENT

CRM is team training that focuses on behavioral skills, resource utilization, communication, leadership, and teamwork. A recent review article by Cheng et al described how simulation training can be used to teach CRM principles in the pediatric acute care context, including simulation scenario design, effective debriefing, and assessment of CRM performance during simulation-based training. A growing body of evidence has supported the use of simulation in CRM teaching.¹⁸

For example, Thomas et al¹⁸.added a simulation-based team training module to the NRP course and compared it with standard NRP. Trainees receiving extra team training demonstrated more frequent team behaviors such as information sharing, inquiry, assertion, vigilance, and workload management in simulated neonatal resuscitation. In another cohort study, Gilfoyle et al¹⁹. developed a workshop to teach leadership skills in simulated pediatric resuscitation scenarios. Pediatric residents acquired leadership skills following the simulation-based educational intervention as measured by an observational checklist and self-reported survey. In a simulation-based training course, These studies suggest that simulation-based CRM training is effective in promoting the acquisition of key CRM behaviors that impact outcomes from pediatric



resuscitation. Future research could consider assessing CRM in different team structures and testing team performance in the actual workplace (in situ simulation).

5.CARDIOPULMONARY RESUSCITATION

Cardiopulmonary resuscitation (CPR) is the most important treatment for cardiac arrest. High quality CPR has a positive impact on outcomes from cardiac arrest.⁽¹⁹⁾As such, improved CPR training has the potential to have a significant positive impact on survival from pediatric cardiac arrest.²⁰Simulation is a key tool for teaching CPR skills.²¹In North America, American Heart Association Life support training courses, such as Basic Life Support (BLS) and PALS have become gold standard for CPR training. However, despite these courses, health care providers still struggled to provide high quality CPR.²²Research exploring the use of SBE for teaching CPR skills has shifted from “whether or not to use simulation” to “how to use simulation”.

Several promising educational innovations that could assist in improving the quality of CPR have recently been identified. First, the implementation of distributed practice, or CPR training conducted at intermittent and regular points in time, improves acquisition and retention of CPR skills in pediatric health care providers.Second, the implementation of real-time automated CPR feedback devices during training has been shown to improve CPR quality and compliance with guidelines.²²Lastly, structured performance debriefings have been shown to improve the quality of CPR and patient outcomes.²³ These studies provide compelling evidence to support the use of SBE for teaching CPR skills. Resuscitation councils should provide guidance to support the implementation of simulation-based CPR training with real-time feedback that is provided in a distributed fashion to health care providers most likely to care for patient suffering from cardiac arrest.

6.PROCEDURE SKILLS

Procedural skills training is an important component of general pediatrics training (24). The Accreditation Council for Graduate Medical Education (ACGME) in the US recommends that pediatric residents gain broad procedural competence during pediatrics training (25). Proficient and appropriate use of procedural skills is an accreditation requirement for pediatric training programs in Canada and Australia (26, 27). In 2007, the Residency Review Committee (RRC) for Pediatrics in US published a list of procedures and skills in which all residents must have “sufficient” training (25). Based on these requirements and additional recommended procedures, Gaies et al. surveyed the opinions of pediatric residency program directors regarding the importance of these procedures and residents’ perceived competency. Notably, a large percentage of program directors did not assign the same level of importance as the RRC did for its’ recommended procedures. They also found that numerous residents failed to achieve procedural skills competence at the end of their training, and the program directors’ assessments of their own residents’ competencies were lower than the RRC goal .

The lack of competency in these skills can be justified by several potential reasons. The chief among these reasons are the enhanced skillset of non-physician clinicians and the advancement of ancillary services such as intravenous access teams. These



teams/personnel take away from the procedures that were habitually conducted by residents. This was strengthened by Gaies et al. who reported that 12 and 13% of respondents identified residents as the people who perform the majority of venipunctures and intravenous catheter placements, respectively, in the hospitals they rotate . The limited opportunities presented to trainees to grasp and apply a procedure to build competence does not astonish due to the time consuming nature of paperwork and other documentation.

7.FUTURE RESEARCH

Recent changes in medical education have highlighted the importance of simulation as a form of experiential learning. The utility of simulation in the field of medicine has been suggested for conditions that are rare and critical in nature and require the maintenance of specialized skill and preparedness. However, the interval between initial training and actual use of skills is critical for maintaining the knowledge and skills essential for improving patient outcomes.

There is paucity of literature addressing such strategies that could help in retaining knowledge, skills, and confidence in managing pediatric emergencies. One intervention postulated to be helpful is the spacing effect. This refers to educational encounters, which are spaced and repeated over time (spaced distribution), resulting in more efficient and improved retention of learning, compared with more concentrated educational encounters (28). Ojha et al. designed a pediatric critical care scenario management program using spaced education model to look at the impact of repeated observation of routinely scheduled demonstrations of critical pediatric illness scenarios. These demonstrations were observed by pediatric medical and nursing staff every other week for 3 months, and then the same scenarios were repeated over the next 3-month period. The study found that the implementation of repeated, time-spaced demonstrations provided an effective method for improving knowledge and increasing confidence among pediatric health care professional managing critically ill children (29). Further research is needed to consolidate this approach, determine the appropriate amount of time between sessions and assess the long-term effects of this intervention.

More research is needed on the use of simulation for assessment. Many hospitals and medical schools have begun using high-fidelity simulation medicine in their educational curriculum. Several studies have used simulation-based assessment tools and have found that the simulation-based assessments are valid and reliable measures of clinical performance and resident competency (30,31). The reliability and validity of a scoring instrument aimed to evaluate clinical performance during simulated resuscitations were examined by Donoghue et al. The parameters used to measure performance in this study, in which the residents engaged, were based on timing, sequence, and quality and were judged and scored individually. The instrument's ability to measure clinical performance during simulated scenarios was reinforced through the reliable and valid scores (32). In an attempt to ascertain whether resident scores could be utilized to authenticate the reliability and validity of a multiple-scenario assessment, McBride et al. developed a bank of 20 simulated pediatric crisis scenarios. Every resident was engaged in 10 scenarios that were scored using an action-item checklist and a global score by 2



individual assessors. The results revealed that the resident scores were legitimate tools for the measure of performance using simulation (33).

The clinical significance of measured performance in a simulated setting, however, remains uncertain. Additional evidence is needed, including studies to determine if this type of training improves physicians' management of real-life critical events. This ties into a third area requiring future research: demonstrating an improvement in patient safety and/or outcomes with simulation training. The study by Andreatta et al., which showed an increase in cardiopulmonary arrest survival rates after the institution of a simulated mock code program, is a rarity. A study by Knight et al. did show an increase in survival to hospital discharge after the introduction of simulation-based composite team training (34). While there is rapidly growing interest and enthusiasm for simulation as a method of optimizing training and patient safety, evidence clearly documenting a positive effect on patient safety and improved patient outcomes remains elusive (35), and it is an area where significantly more research is required.

CONCLUSION

SBE is widely used in teaching neonatal resuscitation, pediatric resuscitation, CRM, airway management, CPR skills, and other resuscitation-related procedural skills. When using simulation to teach resuscitation-related knowledge, skills, and behaviors, health care educators should consider the use of HFS, distributed practice, deliberate practice, and feedback to help achieve optimal learning outcomes. Debriefing is a vital component of simulation-based resuscitation education, particularly when paired with structured facilitation and objective data to help learners with the acquisition of knowledge, skills, and behaviors.

References

1. Nadel F, Lavelle J, Fein J, et al. Assessing pediatric senior residents' training in resuscitation: fund of knowledge, technical skills, and perception of confidence. *Pediatr Emerg Care*. 2000;16:73–76. [PubMed] [Google Scholar]
2. <https://www.ncbi.nlm.nih.gov/pubmed/19381090>
3. Trainor JL, Krug SE. The training of paediatric residents in the care of acutely ill and injured children. *Arch Pediatr Adolesc Med* (2000) 154:1154–9. doi:10.1001/archpedi.154.11.1154
4. Donoghue AJ, Nadkarni VM, Elliott M, Durbin D. Effect of hospital characteristics on outcomes from paediatric cardiopulmonary resuscitation: a report from the national registry of cardiopulmonary resuscitation. *Paediatrics* (2006) 118(3):995–1001. doi:10.1542/peds.2006-0453
CrossRef Full Text | Google Scholar
5. Jewkes F, Phillips B. Resuscitation training of paediatricians. *Arch Dis Child* (2003) 88(2):118–21. doi:10.1136/adc.88.2.118
PubMed Abstract | CrossRef Full Text | Google Scholar
6. Buss PW, McCabe M, Evans RJ, Davies A, Jenkins H. A survey of basic resuscitation knowledge among resident paediatricians. *Arch Dis Child* (1993) 68(1):75–8. doi:10.1136/adc.68.1.75
PubMed Abstract | CrossRef Full Text | Google Scholar
7. Hunt EA, Patel S, Vera K, Shaffner DH, Pronovost PJ. Survey of paediatric resident experiences with resuscitation training and attendance at actual cardiopulmonary arrests. *Pediatr Crit Care Med* (2009) 10(1):96–105. doi:10.1097/PCC.0b013e3181937170
CrossRef Full Text | Google Scholar



8. Grant EC, Marczynski CA, Menon K. Using paediatric advanced life support in paediatric residency training: does the curriculum need resuscitation? *Pediatr Crit Care Med* (2007) 8(5):433–9. doi:10.1097/01.PCC.0000282044.78432.0B
CrossRef Full Text | Google Scholar
 9. Hunt EA, Hohenhaus SM, Luo X, Frush KS. Simulation of paediatric trauma stabilization in 35 North Carolina emergency departments: identification of targets for performance improvement. *Paediatrics* (2006) 117(3):641–8. doi:10.1542/peds.2004-2702
CrossRef Full Text | Google Scholar
 10. McKittrick J, Allen M, Kinney S, Lima S. The first 3 minutes: effective team paediatric resuscitation training. *Pediatr Crit Care Med* (2014) 15(4 Suppl):16. doi:10.1097/01.pcc.0000448781.66934.3d
CrossRef Full Text | Google Scholar
 11. Andreatta P, Saxton E, Thompson M, Annich G. Simulation-based mock codes significantly correlate with improved paediatric patient cardiopulmonary arrest survival rates. *Pediatr Crit Care Med* (2011) 12(1):33–8. doi:10.1097/PCC.0b013e3181e89270
CrossRef Full Text | Google Scholar
 12. Krug SE, Tuggle DW. Management of paediatric trauma. *Paediatrics* (2008) 121(4):849–54. doi:10.1542/peds.2008-0094
CrossRef Full Text | Google Scholar
 13. Hunt EA, Heine M, Hohenhaus SM, Luo X, Frush KS. Simulated paediatric trauma team management: assessment of an educational intervention. *Pediatr Emerg Care* (2007) 23(11):796–804. doi:10.1097/PEC.0b013e31815a0653
CrossRef Full Text | Google Scholar
 14. Falcone RA, Daugherty M, Schweer L, Patterson M, Brown RL, Garcia VF. Multidisciplinary paediatric trauma team training using high-fidelity trauma simulation. *J Pediatr Surg* (2008) 43:1065–71. doi:10.1016/j.jpedsurg.2008.02.033
CrossRef Full Text | Google Scholar
 15. Auerbach M, Roney L, Aysseh A, Gawel M, Koziel J, Barre K, et al. In situ paediatric trauma simulation assessing the impact and feasibility of an interdisciplinary paediatric in situ trauma care quality improvement simulation program. *Pediatr Emerg Care* (2014) 30(12):884–91. doi:10.1097/PEC.0000000000000297
 16. Sudikoff SN, Overly FL, Shapiro MJ. High-fidelity medical simulation as a technique to improve pediatric residents' emergency airway management and teamwork. *Pediatr Emerg Care*. 2009;25(10):651–656. [PubMed] [Google Scholar]
 17. Nishisaki A, Donoghue A, Colborn S, et al. Effect of Just-in-time simulation training on tracheal intubation procedure safety in the pediatric intensive care unit. *Anesthesiology*. 2010;113:214–223. [PubMed] [Google Scholar]
 18. Nishisaki A, Nguyen J, Colborn S, et al. Evaluation of multidisciplinary simulation training on clinical performance and team behavior during tracheal intubation procedures in a pediatric intensive care unit. *Pediatr Crit Care Med*. 2011;12(4):406–414. [PubMed] [Google Scholar]
 19. Cheng A, Donoghue A, Gilfoyle E, Eppich W. Simulation-based crisis resource management training for pediatric critical care medicine. *Pediatr Crit Care Med*. 2012;13(2):197–203. [PubMed] [Google Scholar]
 18. Thomas E, Taggart B, Crandell S, et al. Teaching teamwork during the Neonatal Resuscitation Program: a randomized trial. *J Perinatol*. 2007;27:409–414. [PubMed] [Google Scholar]
 19. Herlitz J, Svensson L, Holmberg S, et al. Efficacy of bystander CPR: intervention by lay people and by health care professionals. *Resuscitation*. 2005;66(3):291–295. [PubMed] [Google Scholar]
 20. Meaney PA, Bobrow BJ, Mancini ME, et al. Cardiopulmonary resuscitation quality: improving cardiac resuscitation outcomes both inside and outside the hospital: a consensus statement from the American Heart Association. *Circulation*. 2013;128(4):417–
 21. Winchell SW, Safar P. Resuscitation, teaching and testing lay and paramedical personnel in cardiopulmonary. *Anesth Analg*. 1966;45:441–449. [Google Scholar]
 22. Cheng A, Brown L, Duff J, et al. Improving CardioPulmonary Resuscitation with a CPR Feedback Device And Refresher Simulations (CPRCARES Study): a multicenter, randomized trial. *JAMA Pediatr*. 2015;169(2):137–144. [PubMed] [Google Scholar]
 23. Niles D, Sutton R, Donoghue A, et al. Rolling refreshers: a novel approach to maintain CPR psychomotor skill competence. *Resuscitation*. 2009;80:909–912. [PubMed] [Google Scholar]
-



24. Finan E, Bismilla Z, Campbell C, Leblanc V, Jefferies A, Whyte HE. Improved procedural performance following a simulation training session may not be transferable to the clinical environment. *J Perinatol.* 2012;32(7):539–544. [PubMed] [Google Scholar]
25. Schebesta K, Hupfl M, Ringl H, et al. A comparison of paediatric airway anatomy with the SimBaby high-fidelity patient simulator. *Resuscitation.* 2011;82(4):468–472. [PubMed] [Google Scholar]
26. Herlitz J, Svensson L, Holmberg S, et al. Efficacy of bystander CPR: intervention by lay people and by health care professionals. *Resuscitation.* 2005;66(3):291–295. [PubMed] [Google Scholar]
27. Vadeboncoeur T, Stolz U, Panchal A, et al. Chest compression depth and survival in out-of-hospital cardiac arrest. *Resuscitation.* 2014;85(2):182–188. [PubMed] [Google Scholar]
28. Sutton RM, Niles D, Meaney PA, et al. Low-dose, high-frequency CPR training improves skill retention of in-hospital pediatric providers. *Pediatrics.* 2011;128(1):e145–e151. [PMC free article] [PubMed] [Google Scholar]
29. Yeung J, Meeks R, Edelson D, Gao F, Soar J, Perkins GD. The use of CPR feedback/prompt devices during training and CPR performance: a systematic review. *Resuscitation.* 2009;80(7):743–751. [PubMed] [Google Scholar]
30. Kerfoot BP. Adaptive spaced education improves learning efficiency: a randomized controlled trial. *J Urol* (2010) 183(2):678–81. doi:10.1016/j.juro.2009.10.005
PubMed Abstract | CrossRef Full Text | Google Scholar
31. Toppino TC, Fearnow-Kenney MD, Kiepert MH, Teremula AC. The spacing effect in intentional and incidental free recall by children and adults: limits on the automaticity hypothesis. *Mem Cognit* (2009) 37(3):316–25. doi:10.3758/MC.37.3.316
PubMed Abstract | CrossRef Full Text | Google Scholar
32. Ojha R, Liu A, Champion BL, Hibbert E, Nanan RKH. Spaced scenario demonstrations improve knowledge and confidence in paediatric acute illness management. *Front Pediatr* (2014) 2:133. doi:10.3389/fped.2014.00133
CrossRef Full Text | Google Scholar
33. Adler MD, Trainor JL, Siddall VJ, McGaghie WC. Development and evaluation of high-fidelity simulation case scenarios for paediatric resident education. *Ambul Pediatr* (2007) 7(2):182–6. doi:10.1016/j.ambp.2006.12.005
CrossRef Full Text | Google Scholar
34. Brett-Fleegler MB, Vinci RJ, Weiner DL, Harris SK, Shih M-C, Kleinman ME. A simulator-based tool that assesses paediatric resident resuscitation competency. *Paediatrics* (2008) 121(3):e597–603. doi:10.1542/peds.2005-1259
CrossRef Full Text | Google Scholar
35. Donoghue A, Nishisaki A, Sutton R, Hales R, Boulet J. Reliability and validity of a scoring instrument for clinical performance during paediatric advanced life support simulation scenarios. *Resuscitation* (2010) 81(3):331–6. doi:10.1016/j.resuscitation.2009.11.011
CrossRef Full Text | Google Scholar
41. McBride ME, Waldrop WB, Fehr JJ, Boulet JR, Murray DJ. Simulation in paediatrics: the reliability and validity of a multisenario assessment. *Paediatrics* (2011) 128(2):335–43. doi:10.1542/peds.2010-3278
CrossRef Full Text | Google Scholar
36. Knight LJ, Gabhart JM, Earnest KS, Leong KM, Anglemeyer A, Franzon D. Improving code team performance and survival outcomes. *Crit Care Med* (2014) 42:243–51. doi:10.1097/CCM.0b013e3182a6439d
CrossRef Full Text | Google Scholar
37. <https://www.frontiersin.org/articles/10.3389/fped.2015.00106/full>



A REVIEW PAPER ON HUMAN ACTIVITY RECOGNITION USING FEATURES BASED APPROACHES

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Abstract

The human activity recognition (HAR) is the popular topic of research in the present day. In this work, we are reflected the various study of HAR tested on the publically available datasets. Activity recognition is a difficult task for the researcher. Some hybrid approaches are represented for human activity recognition. The feature-based approach are very popular for the HAR. Features descriptor recognize the motion activity from the image or video. Many researchers use Spatio-temporal based features descriptors like Histogram of Gradient (HOG) and Histogram of optimal flow (HOF). The final features representation is performed by the SIFT, SURF and Bag o words or bag of visual words. Classifiers are used to classify the activity from the available dataset. We studied lots of features based approaches in this paper and got an idea of using a two-level classifier for the HAR of the UT interaction dataset.

Keywords: HAR, Features Based Approach, Classifiers, Etc.

I.Introduction

In the present day scenario, human activity recognition is an active research topic in the field of computer vision and interaction. The HAR methods are facing issues like motion recognition, cluttered background, and variation in the activity, which makes it a challenging task. In this study total, 30 approaches of human activity recognition are reviewed. The latest approach of HAR is based on the computational model and classification algorithm.

Human activity recognition is an ability to monitor motion by the sensor and classified the performed activity [1]. The sequence videos dataset is analyzed by the SURF and Bag of visual word (BoVW) approach in [1, 2, 14, and 18, etc.]. The Spatio-temporal based approach studied in [5]. The motions are recognized by the features based approaches like HOG and HOF [3, 9]. Scale-invariant features transform (SIFT) approach is also used in the [13, 18] for the HAR. The SVM and Neural network-based classifier are used in most of the approach for action classification purpose. Further, in this paper section II reflect the related work or literature review, followed by analysis and discussion section III. Final section IV represents the concludes arguments.



II. Literature Review

Aslan et al. (2019) - proposed hyperparameter optimization for the classification of human activities of different datasets. The KTH and Weizmann datasets were used for the activity recognition of humans. The features were extracted by speed up robust features (SURF) method and reinforced by the Bag of Visual Words (BoVW). The SURF method extracts the features from the binary color image as well as from a grayscale image. Four different machine learning schemes perform the BoVW features classification. The hyperparameters optimization algorithm tunes the ML methods k-nearest neighbors, decision tree, support vector machine and naive Bayes parameters. The four ML methods compared with each other based on their performance. The SURF method was provided better results for the binary color image than the grey image [1].

Akam et al. (2018)- presented Bag of Features methods for the human action recognitions from the three-dimensional video frames RGB and depth data. The features are extracted by two schemes from the 3D datasets. SURF method extracts the features from the 3D frame image with Motion History Image and Optical Flow. The Histogram of Orientation Gradient descriptor is used to compute the features vector from the RGB and depth channel. The activity classification task was performed by the K-mean clustering and MCSVM (multi-class support vector machine). The proposed method was easily implemented in the publically available database. It was invariant to scale and rotation [2].

Paulus et al. (2018)- presented a similar work, as discussed in [2]. A Bag of features techniques was proposed to identify the human action from the given dataset image. This method extracts the local temporal features and shapes invariant features from the captured image. The features extraction task was performed in four different manners. First, SURF extracts the motion features from the RGB image, then Histogram oriented gradient (HOG) computed the features vector of the same video frames. In the third category, the Hu-moment shape features were extracted from the RGBD channel and HOG features vector combined with the Hu-moment in the fourth case of feature extraction. The K-nearest neighbor approach performed the human action classification. The proposed method can be implemented on any dataset and improved the performance of action with low movement [3].

Matsufuji et al. (2018) - presented a system for integrating a neural network inference with context and relation for difficult task identification. In this study, human action recognition was performed for the ego-centric videos. The context inference performed the difficult action recognition of ego-centric video. The proposed system consists of the rule-based architecture of bidirectional associative memory. It uses the context of object-hand relation for the inference. The developed work was tested on the benchmark first-person video dataset and improved the efficiency of action recognition [4].

Nazir et al. (2019) – proposed a D-STBoE (Dynamic Spatio-Temporal Bag of Expressions) model for HAR. In this model, the compression of Bag of Visual words approach strength was not necessary for HAR. The Spatio-temporal cube of a visual word was used for the expression generation. The class specific visual word representation achieved visual expression. The proposed model was robust to occlusion and minimized the challenges present in the realistic scenario. The classification of Bag



of Expression into different activities was performed by training of multi-class support vector machine. The proposed model was tested on the various publically available datasets like KTH, UCF sports and provided better accuracy than the existing approach [5].

Mishra et al. (2019)- presented a modified Bag of Visual Words approach for the HAR. The classical BoVW approach does not retain the geometrical structure, so a modified approach of a bag of visual words was used for HAR. The proposed approach retains the geometrical structure information of the cluster-based distance calculation. In this scheme, the contextual distance was calculated by the error among the contribution points present in the geometrical structure. In the existing approach, the contextual distance is calculated by the Euclidean measures between the points present in the clusters. The cluster represents the directed graphs which described the Laplacian. The features vector represents in the Laplacian manner and fed to the RBF-SVM (Radial basis function-based support vector machine) classifier [6].

Najar et al. (2019)- presented a finite multivariate generalized Gaussian mixture model for the HAR. A new learning model was developed based on the fixed point covariance matrix calculator with the expectation-maximization algorithm. The minimum message length criteria were followed for the model selection. The proposed method was tested on the synthetic dataset and human activity recognition from the image and video. The proposed method shows better capabilities with a full covariance matrix when correlated with processing information [7].

Saleh et al. (2019)- presented Zernike moments (ZM) features extraction methods for human activity recognition. In this study, various ZM parts like magnitude, real, imaginary and phase information were combined to improve the accuracy of the recognition. The Zernike Moments is one of the simple and efficient approaches to feature extraction. The developed algorithm contains five main stages; motion energy image (MEI), ZM, whitening transform, Bag of feature and SVM. The proposed method was tested on the Weizmann dataset and provided efficient results than the existing approach [8].

Naved et al. (2019)- presented a combined features based approach for human activity recognition. The images or videos contain three categorized features flow-based, temporal based and interest-based. In this study, we developed a fusion-based features vector by combining LBG, HOG, SIFT, velocity, and displacement. The SVM was trained by the time efficiency and optimal SMO features. The proposed model was tested for a single person and multi-action classification with improved accuracy. A generalized hierarchy of activities was also presented in this study. The KTH and Weizmann datasets were tested with the developed algorithm. The recognition accuracy was improved for both single person and multi-class datasets by the proposed method [9].

Cortes et al. (2018)- proposed a new Bag of Visual Words encoding method for human activity recognition. The encoding of BoVW engaged the interest points and improved the representation of an image. The interest points were detected in the encoding process of BoVW. The interest point identified in the picture was a map with the encoding process. The classification ration was improved by implementing the encoding



of BoVW. The encoding method proposed for video action recognition. The proposed method provided better action recognition accuracy [10].

Avola et al. (2018)- proposed an RGB-D HAR system with the fusion-based schemes of features extraction. The proposed system contains the concept of Joint Directors of Laboratories (JDL) data fusion model and recognizes human action separately for both depth and color channels. The BoVW approach modeled the features of the actions. The multiclass SVM performed the action classification task. The extracted features of BoVW schemes were fed to the classifier and outcomes were fused by the Naïve Bayes combination model. The effectiveness of the proposed method was analyzed by three publically available datasets UTKinect-Action3D, CAD-60, and LIRIS Human Activities. The classification accuracy was improved by the proposed method [11].

Kabbai et al. (2018)- presented a new approach concatenation of local and global color features (CLGC) of features extraction from the color image. The local section features were extracted by the SURF method and global concatenation features by fusing the wavelet transform features with the modified LTP (EUL_{LTP}). It contains the basic information of the three color planes (RGB, HSV). The modified LTP minimized the size of the features vector. For example, if the features vector is 512-bit size, then the modified LTP reduced its size by 64 bit only. The proposed method was tested on the six different datasets New-BarkTex, Outex-TC13, MIT scene, UIUC sports event, Caltech 101 and MIT indoor scene datasets. Among all the datasets, the classification accuracy was improved, and efficiency gets higher [12].

Sun et al. (2017)- proposed an improved Scale-Invariant Features Transform (SIFT) method for powerful infringement retrieval. The proposed method divided into two different stages, known as coarse and fine retrieval. During the coarse phase, the geographical statistics (GeoStat) were used to describe the global relationship of the key points in the orientation of the image and produced 144 features vector to reflect an image. In fine retrieval, only partial images represent similar to the query image output of coarse retrieval to be taken. The judgment process integrated into the proposed algorithm to improve the matching process and minimizes the error rate in matching. The proposed algorithm improves the retrieval speed and accuracy than the actual SIFT algorithm [13].

Liu et al. (2018)- presented a smart waste sorting system to clean the environment. The system contains two major portions Hardware and Software. A hardware portion consists of a trash bin framework, and software carries the image classification algorithm based on the SURF-BoVW approach — the images which were tested by the proposed method taken by the webcam and used as a training process. The image of waste material was recognized by the proposed method, and their classification accuracy is more than the existing approach [14].

Guan et al. (2018)- presented a survey of deep learning methods for human activity recognition in mobile computing. Various methods like LSTM, CNN and autoencoders can be used for information extraction from the images and videos. CNN recognized the irrelevant and time series information. The sequential approach applied for the HAR in mobile computing. Some pattern recognition approaches were also useful for human activity recognition in mobile computing. The multiple layers can be used in the LSTM



approach which used for the HAR. The feature learning and sequential phase were covered by LSTM [15].

Salimani et al. (2014)- presented an automated recognition of high-level activities. In this work, the visual word was used to represents the interaction between several persons. The bag of words method was used for the activity recognition of multi-object images and videos. Some set of visual words extracted from the spatio temporal features using a 3-D XYT pattern of an image. These words reflect the activities of the human being. The interaction of the persons was represented by the frequency spectrum of the visual words. The proposed method was tested on the UT interaction datasets in which several human-human interactions present [16].

Liu et al. (2016)- proposed a sequential Bag of Words Approach for the improvement of classification accuracy. All the actions were divided into the sub action using a sequential temporal structure — the entire action classified through the sub action separately for the real-time images. The final classification of human action was obtained by sub action classification. The proposed method was implemented on the various challenging datasets and real-time images. This method was robust and outperformed then the existing BoVW approach methods [17].

Jiang et al. (2011)- proposed a hybrid method by combining SURF and the BoVW approach for human activity recognition. In this study, the SURF approach was extended which can easily extract the spatial information from the videos for the HAR. In the BOVW approach, the soft weighting scheme is presented. The proposed method tested on the KTH action recognition dataset. The performance of the proposed method was evaluated based on the computation speed and accuracy of classification. Both parameters were improved by the implemented scheme [18].

Xu et al. (2015)- presented a point selection method based on the HOG human detector and contour detector. Both HOG and counter human detect the point on the human pose edges. The pose points carry the information locally and globally. In this study, the 3D-SIFT scale selected, body scale, and motion intensity features were also discussed. These moving intensity features selection method was used for the classification of HAR through SVM. The KTH and Weizmann datasets were analyzed by the proposed method which achieved improved accuracy than the existing approach [19].

Megrhi et al. (2016)- presented an interests points trajectories for the human activity identification and recognition process of large datasets. The moving human detection was performed with the spatial-temporal optimal flow and SURF. A video description method was proposed by combining motions, trajectories, and visual features. The BoVW approach extracted the bounding box features. The SVM classifier performed the classification task. The proposed method analyzed large datasets like KTH and UCF101 and provided efficient outcomes [20].

Sabri et al. (2013)- proposed Spatio-temporal concurrence among the label of videos-words for human activity recognition. The mutual information-based clustering algorithm reduced the size of vocabulary created by the local descriptor. The features of the human action of a video were extracted by the correlograms which further used for the classification purpose. It contains the two haralick texture vector and highly discriminative co-occurrence vector. SVM was used as a classifier for the classification



of human activity. The large datasets KTH and UCF sports were tested by the proposed method and provided improved accuracy than the previous algorithms [21].

Megrhi et al. (2014)- presented an interest point-based approach for the human activity recognition process. The SURF algorithm is applied to the video segment to convert into the frame volume which contains minor activities. The optimal flow extract for detected SURF of each frame volume. A parameterization of optimal flow leads to the displacement segments. All these features describe the trajectories of IP on FV. The movement of the camera is controlled by the motion boundary histogram algorithm (MBH). A robust and discriminative codebook is generated with the K-mean clustering algorithm by developing feature fusion based action recognition. In the learning and testing phase, the BoVW and SVM classifiers are used to analyze the UCF sports datasets. The proposed algorithm was provided with the 83.5% classification accuracy [22].

Zhang et al. (2014)- presented a SIFT flow method for the human action recognition purpose. It provided an efficient way to detect invariant scale key points. The SIFT approach also analyzes the behavior of the key points. In this study, a dense trajectories scheme was developed in which its shape descriptor was computed. The local descriptor like HOG, HOF, MBH can be estimated by the SIFT flow method. A complete video was represented in the feature vector by the evaluated descriptor HOG, HOF, and MBH using SIF flow and shape descriptor trajectories using the key points distance measures. There are four classifiers SVM, BOVW, linear and non-linear used to evaluate the performance of the proposed method. The key points trajectories and SIFT flow method provided better results than the existing approach of human action classification [23].

Weng et al. (2015)- presented a survey of various human action recognition approach. The available HAR methods are not robust towards the variations of frame rate. The improvement in the human action recognition approach is made by the more robust visual features and advanced learning algorithms. A keyframe selection technique was developed for choosing a set of suitable frames from the action sequence of HAR. The keyframe selection methods produce a better action classification. The experiment was tested on the three major publically available datasets and provided better classification accuracy of human action recognition [24].

Malpani et al. (2016)- presented a human action classification of a thermal image using the SURF and BoVW approach. The SURF features the descriptor used for the features extraction from images and videos. There are lots of features extraction approach present in the modern scenario, but the SURF approach easily implemented to any images or videos datasets. SURF performed better than the BRISK and FREAK feature descriptor algorithm. The accuracy and F-Score of the SURF algorithm are better than the existing approach of the features descriptor [25].

Sabri et al. (2016)- utilized the co-occurrence information to recognize the human actions from the images and videos. In this, a tradeoff factor is used to compute the optimal tradeoff flow between vocabulary size and recognition rate. The spatiotemporal co-occurrence technique extracted the co-occurrence information from the labeled local features. After that new characteristic of human actions was generated. The spatiotemporal features approach includes the PCA co-occurrence vector and the Haralick texture vector. The multichannel kernel SVM was used as the classifier. The



KTH and UCF sports datasets were tested by the proposed method. The proposed approach improves the standard of Bag of visual words [26].

Das et al. (2015)- presented a supervised framework for automatic recognition and retrieval of interactions (SAFARRIs) for human action recognition. A supervised framework was developed to detect the interaction like jumping, kicking, pushing and hugging. In this study, the vector of the local aggregator descriptor was extended as a compact and encoding of discriminative video represents. The codebook was generated by extracted features from the descriptors using the spatio temporal interest's points. The bag of action words was generated by encoding the first-order statistics of the visual word using VLAD. These codebooks were used to train the SVM classifiers [27].

Briassouli et al. (2015)- presented the interest point approach for the recognition of the activity of daily life. The high recognition rate of ADL was achieved by the proposed method. The computational cost of the ADL recognition was reduced by using motion boundary activity area and dense sampling of interest points. The interest point was computed by the enhanced Kanade Lucas Tomasi (KLT) tracker and provided the three-dimensional structure due to which multi scales descriptors were formed. The spatio temporal approach determined the features from the image or videos and sequential change identification of motion action using the Cumulative Sum approach. So the proposed method builds with the multi-scale hybrid local-global appearance with the motion descriptor algorithm. The encoding process was achieved by the BoVW and fisher approach, which further used to train the SVM for the recognition process [28].

Sil et al. (2016)- proposed extended BoVW approach capturing similarity of the images using eigenvectors. The spatial information of eigenvectors was used to configure the extended BoVW and shown as the projection vector of dimension the same as the number of eigenvectors. The proposed method evaluates the patches of the training, and the closest eigenvectors were computed. The element of the projection vector was modifying by the extracted eigenvalue information, which applied to the real BoVW to figure out the extended BoVW. The proposed algorithm was tested on the coil 100 dataset and provided better classification accuracy [29].

Gracia et al. (2011)- presented a full automated deep model for human action recognition. In this model, the CNN extension to the 3 dimension, which learns spatial features automatically from the images and videos. The classification task is performed with the RNN approach. RNN learned temporal features from the CNN output and classified human action. The KTH dataset is analyzed by the proposed method, and improved outcomes were achieved [30].

III. Analysis and Discussion

We studied lots of work related to human activity recognition. The features based approaches are most popular for the HAR task. The SURF and BoVW combination is proposed in many studies like [1, 2, 13, 14, and so on]. The SIFT approach provided a better accuracy of action recognition. The Support Vector Machine (SVM) is used as a classifier in most of the researches. Some Spatio-temporal based features recognition approach like HOG, HOF, MBH, and velocity are provided in different studies. The proposed methods are used to test the large datasets as well as the small datasets and



real-world video monitoring. The KTH [1] and UCF [5] sports data are analyzed in most studies.

After studied various approaches of HAR, we get an idea of using the SURF and BoVW approach for the features recognition of human activity. We can be tested the UT interaction datasets with the two-level classification approach. The SVM and NN are used as the classifier which classifies the different human-human interaction actions.

IV. Conclusion

This paper has been represented the review of 30 HAR techniques published in 2010-2019. The features based approaches have wide applications in the HAR field. The motion is recognized by a features vector-like HOG and HOF approach. Some spatiotemporal based approaches like SURF and BoVW are used for the HAR. The SVM classifier, in most approaches, provides the final activity classification. We get an idea of using a two level classification approach for the HAR of the UT interaction database can be applied. The list studied approach is provided in the appendix.

References

1. Aslan, Muhammet Fatih, Akif Durdu, and Kadir Sabanci. "Human action recognition with bag of visual words using different machine learning methods and hyperparameter optimization." *Neural Computing and Applications* (2019): 1-13.
2. Al-Akam, Rawya, and Dietrich Paulus. "Local Feature Extraction from RGB and Depth Videos for Human Action Recognition." *International Journal of Machine Learning and Computing* 8, no. 3 (2018).
3. Al-Akam, Rawya, and Dietrich Paulus. "RGBD Human Action Recognition using Multi-Features Combination and K-Nearest Neighbors Classification." *International Journal of Advanced Computer Science and Applications (IJACSA)* 8, no. 10 (2017): 383-389.
4. Matsufuji, Akihiro, Wei-Fen Hsieh, Hao-Ming Hung, Eri Shimokawara, Toru Yamaguchi, and Lieu-Hen Chen. "A Method of Action Recognition in Ego-Centric Videos by Using Object-Hand Relations." In *2018 Conference on Technologies and Applications of Artificial Intelligence (TAAI)*, pp. 54-59. IEEE, 2018.
5. Nazir, Saima, Muhammad Haroon Yousaf, Jean-Christophe Nebel, and Sergio A. Velastin. "Dynamic Spatio-Temporal Bag of Expressions (D-STBoE) model for human action recognition." *Sensors* 19, no. 12 (2019): 2790.
6. Mishra, Om, Rajiv Kapoor, and M. M. Tripathi. "Human Action Recognition Using Modified Bag of Visual Word based on Spectral Perception." (2019).
7. Najjar, Fatma, Sami Bourouis, Nizar Bouguila, and Safya Belghith. "Unsupervised learning of finite full covariance multivariate generalized Gaussian mixture models for human activity recognition." *Multimedia Tools and Applications* (2019): 1-23.
8. Aly, Saleh. "An effective human action recognition system based on Zernike moment features." In *2019 International Conference on Innovative Trends in Computer Engineering (ITCE)*, pp. 52-57. IEEE, 2019.
9. Naveed, Humza, Gulraiz Khan, Asad Ullah Khan, Aiman Siddiqi, and Muhammad Usman Ghani Khan. "Human activity recognition using mixture of heterogeneous features and sequential minimal optimization." *International Journal of Machine Learning and Cybernetics* 10, no. 9 (2019): 2329-2340.



10. Cortés, Xavier, Donatello Conte, and Hubert Cardot. "A new bag of visual words encoding method for human action recognition." In 2018 24th International Conference on Pattern Recognition (ICPR), pp. 2480-2485. IEEE, 2018.
11. Avola, Danilo, Marco Bernardi, and Gian Luca Foresti. "Fusing depth and colour information for human action recognition." *Multimedia Tools and Applications* 78, no. 5 (2019): 5919-5939.
12. Avola, Danilo, Marco Bernardi, and Gian Luca Foresti. "Fusing depth and colour information for human action recognition." *Multimedia Tools and Applications* 78, no. 5 (2019): 5919-5939.
13. Sun, Guangmin, Chenyang Wang, Beichuan Ma, and Xiaomeng Wang. "An improved SIFT algorithm for infringement retrieval." *Multimedia Tools and Applications* 77, no. 12 (2018): 14745-14765.
14. Liu, Yijian, King-Chi Fung, Wenqian Ding, Hongfei Guo, Ting Qu, and Cong Xiao. "Novel Smart Waste Sorting System based on Image Processing Algorithms: SURF-BoW and Multi-class SVM." *Computer and Information Science* 11, no. 3 (2018): 35-49.
15. Plötz, Thomas, and Yu Guan. "Deep learning for human activity recognition in mobile computing." *Computer* 51, no. 5 (2018): 50-59.
16. Nour el houda Slimani, Khadidja, Yannick Benezeth, and Ferial Souami. "Human interaction recognition based on the co-occurrence of visual words." In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops*, pp. 455-460. 2014.
17. Liu, Hong, Hao Tang, Wei Xiao, ZiYi Guo, Lu Tian, and Yuan Gao. "Sequential Bag-of-Words model for human action classification." *CAAI Transactions on Intelligence Technology* 1, no. 2 (2016): 125-136.
18. Jiang, Xinghao, Tanfeng Sun, Bing Feng, and Chengming Jiang. "A space-time surf descriptor and its application to action recognition with video words." In 2011 Eighth International Conference on Fuzzy Systems and Knowledge Discovery (FSKD), vol. 3, pp. 1911-1915. IEEE, 2011.
19. Xu, Ke, Xinghao Jiang, and Tanfeng Sun. "Human activity recognition based on pose points selection." In 2015 IEEE International Conference on Image Processing (ICIP), pp. 2930-2834. IEEE, 2015.
20. Megrhi, Sameh, Marwa Jmal, Wided Souidene, and Azeddine Beghdadi. "Spatio-temporal action localization and detection for human action recognition in big dataset." *Journal of visual communication and image representation* 41 (2016): 375-390.
21. Sabri, Aznul Qalid Md, Jacques Boonaert, Stéphane Lecoeuche, and El Mustapha Mouaddib. "Multi Spatio-Temporal Co-occurrence Measures for Human Action Classification." In *MVA*, pp. 319-322. 2013.
22. Megrhi, Sameh, Azeddine Beghdadi, and Wided Souidene. "Trajectory feature fusion for human action recognition." In 2014 5th European Workshop on Visual Information Processing (EUVIP), pp. 1-6. IEEE, 2014.
23. Zhang, Jia-Tao, Ah-Chung Tsoi, and Sio-Long Lo. "Scale invariant feature transform flow trajectory approach with applications to human action recognition."

- In 2014 International Joint Conference on Neural Networks (IJCNN), pp. 1197-1204. IEEE, 2014.
24. Harjanto, Fredro, Zhiyong Wang, Shiyang Lu, Ah Chung Tsoi, and David Dagan Feng. "Investigating the impact of frame rate towards robust human action recognition." *Signal Processing* 124 (2016): 220-232.
 25. Malpani, Sourabh, C. S. Asha, and A. V. Narasimhadhan. "Thermal vision human classification and localization using bag of visual word." In 2016 IEEE Region 10 Conference (TENCON), pp. 3135-3139. IEEE, 2016.
 26. Sabri, Aznul Qalid Md, Jacques Boonaert, Erma Rahayu Mohd Faizal Abdullah, and Ali Mohammed Mansoor. "Spatio-Temporal Co-Occurrence Characterizations For Human Action Classification." arXiv preprint arXiv:1610.05174 (2016).
 27. Chattopadhyay, Chiranjay, and Sukhendu Das. "Supervised framework for automatic recognition and retrieval of interaction: a framework for classification and retrieving videos with similar human interactions." *IET Computer Vision* 10, no. 3 (2016): 220-227.
 28. Avgerinakis, Konstantinos, Alexia Briassouli, and Ioannis Kompatsiaris. "Activities of daily living recognition using optimal trajectories from motion boundaries." *Journal of Ambient Intelligence and smart environments* 7, no. 6 (2015): 817-834.
 29. Ahad, Md Atiqur Rahman. "Action Representation Approaches." In *Computer Vision and Action Recognition*, pp. 39-76. Atlantis Press, 2011.
 30. Baccouche, Moez, Franck Mamalet, Christian Wolf, Christophe Garcia, and Atilla Baskurt. "Sequential deep learning for human action recognition." In *International workshop on human behavior understanding*, pp. 29-39. Springer, Berlin, Heidelberg, 2011.

31. Appendix

32. Table 1 Literature review summary

Author	Year	Technique	Advantages	Limitation
Aslan et al.	2019	SURF and BoVW approach	Binary image and grey scale image classification	NA
Akam et al.	2018	Bag of features method for 3D RGB depth channel using SURF and BoVW with MCSVM	Invariant scale features extraction of HOG	NA
Paulus et al.	2018	SURF used for RGB image feature extraction and K-nearest neighbor used for	HOG and Hu-moment combination spread its application	Only used for image classification
Matsufuji et al.	2018	Neural network inference for interaction recognition	Ego-centric videos action recognition achieved	Only used for video datasets
Nazir et al.	2019	D-STBoE using SURF and BoVW approach with MCSVM	Used for the large datasets like KTH and UCF sports	NA
Mishra et al.	2019	Bag of visual words with the interest point for RBF-SVM classifier	Cluster formation represents features into the directed graphs	NA
Najar et al.	2019	Generalized Gaussian mixture model	Easily implement to the synthetic dataset	NA
Saleh et al.	2019	Zernike moments features extraction for HAR	Tested on Weizmann dataset and provided better accuracy	NA



Naved et al.	2019	Fusion based features extraction method using HOG, LBG, SIFT and velocity with SVM as a classifier	This methods can be used for both single and multi level datasets	KTH and Weizmann dataset provided better accuracy of classification with proposed method
Cortes et al.	2018	BOVW with interest point selection method	Improve classification accuracy than the Bag of visual words	NA
Avola et al.	2018	Fusion based scheme of human action recognition for RBG D channel	Highly detection accuracy of human activity	NA
Kabbai et al.	2018	CLGC approach for color image feature extraction	Tested on six different dataset and provided efficient accuracy	Only tested in the large datasets
Sun et al.	2017	SIFT method for feature extraction of HAR	Geometrical statistics used to minimize the features therefore execution time is less	NA
Liu et al.	2018	Small waste sorting algorithm using image classification via SURF-BoVW approach	Improved recognition accuracy	NA
Guan et al.	2018	Deep learning approach like CNN LSTM used for features extraction	Sequential learning achieved	NA
Salimani et al.	2014	Spatio temporal features extracted by 3D-XYT	Better classification accuracy obtained	NA
Liu et al.	2016	Sequential Bag of words features extraction	More robust scheme than the other	NA
Jiang et al.	2011	Hybrid SURF and BoVW approach	Improved computation time and classification accuracy	NA
Xu et al.	2015	HOG human action detector and contour detector	3D-SIFT patter designed and provided efficient accuracy	Only motion intensity features are extracted
Megrhi et al.	2016	Interests points trajectories with optimal flow of SURF	Accurate computational time	NA
Sabri et al.	2013	Co occurrence vector organization using Haralick and Correlation texture vector	Higher classification performance than the existing approach	NA
Megrhi et al.	2014	Parameterization of optimal flow using the MBH control	Motion features extracted in short time	NA
Zhang et.al	2014	SIFT for HAR	Better classification accuracy	NA
Weng et al.	2015	Key frame selection technique	Better computation time	Used for publically available datasets
Malpani et al.	2016	SURF and BOVW approach	Better performance than the BRISK and FREAK algorithm	NA
Sabri et al.	2016	Co occurrence feature extraction method	Provided betters performance with KTH and UCF sports datasets	NA
Das et al.	2015	SAFARRIs	Improved accuracy of image action classification	NA
Briassouli et al.	2015	SURF with the BoVW	High accuracy of ADL recognition	NA
Sil et al.	2016	Extended BoVW	Improved classification accuracy	NA
Gracia et al.	2011	Automated deep model for HAR using CNN and LSTM	Better classification performance	NA



DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE REGARDING CORONA VIRUS AMONG FIRST YEAR NURSING STUDENTS

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Abstract:-

Introduction:- Coronaviruses are a group of related viruses that cause diseases in mammals and birds. In humans, coronaviruses cause respiratory tract infections that can range from mild to lethal. Mild illnesses include some cases of the common cold (which has other possible causes, predominantly rhinoviruses), while more lethal varieties can cause SARS, MERS, and COVID-19. Symptoms in other species vary: in chickens, they cause an upper respiratory tract disease, while in cows and pigs they cause diarrhea. There are yet to be vaccines or antiviral drugs to prevent or treat human corona virus infections. **Methodology:-** The non experimental descriptive survey design was undertaken to assess the knowledge regarding corona virus among first year nursing students, Gurugram, Haryana. Total 150 study participants were selected by purposive sampling technique and Data were collected by using a self structured knowledge questionnaire. **Result:-** The findings of the study revealed that half of the participants 53.3% had good knowledge regarding disaster and disaster preparedness in the pre test. Similarly, the post test scores depicted that majority (64%) had very good knowledge regarding corona virus and 36% of study participants had average knowledge regarding corona virus. Most of the demographic variable was not significantly associated with level knowledge of first year students regarding corona virus except gender $p= 0.0001$ was found to statistically significant at 0.05 level of significance. **Conclusion:-** Study concluded that first year nursing students have good knowledge (64%) regarding corona virus and only 36% of study participants have average knowledge regarding corona virus.

Key words:- Corona Virus, Structured Knowledge Questionnaire, First Year Nursing Students.

INTRODUCTION:-

Coronaviruses were earlier come across in the 1930s when an acute respiratory infection of domesticated chickens was shown to be caused by infectious bronchitis virus. In the 1940s, two more animal mouse hepatitis virus, transmissible gastroenteritis virus and corona virus were unaccompanied. Human coronaviruses were come across in the 1960s. The preliminary studied were from human patients with the common cold, which were lamented named human corona virus 229E. Other human coronaviruses have since been point out, including SARS-CoV in 2003, HCoV NL63 in 2004, MERS-



CoV in 2012, and SARS-CoV-2 in 2019. Most of these viruses cause serious respiratory tract infections which may result in loss of person life.

The name "corona virus" is procure from Latin corona, meaning "crown" or "wreath", itself a borrowing from Greek κορόνη korónē, "garland, wreath". The name refers to the characteristic appearance of virions by electron microscopy, which have a fringe of large, bulbous surface projections creating an image reminiscent of a crown or of a solar corona. This morphology is created by the viral spike peplomers, which are proteins on the surface of the virus.

Corona viruses constitute the subfamily of Orthocoronavirinae, in the family Coronaviridae, order Nidovirales, and realm Riboviria. They are basically enveloped viruses with having a positive-sense single-stranded RNA genome and a nucleocapsid of helical symmetry. The corona virus genome size ranges from approximately 26 to 32 kilobases, one of the largest among RNA viruses. They have club-shaped spikes that project from their surface, which in electron micrographs create an image reminiscent of the solar corona from which their name derives.

Statement of problem

A descriptive study to assess the knowledge regarding corona virus among first year Nursing students of SGT University, Gurugram, Haryana

Objectives:-

- To assess the knowledge regarding corona virus among first year nursing students.
- To find the association between knowledge score with selected demographic variable of first year nursing students.

Assumptions:-

- First year nursing students will have some knowledge regarding corona virus.
- Sample will be true representation of population.

Delimitation:-

- Only one setting
- Non standardized instruments
- Study was delimited to only first year nursing students of SGT University, Gurugram, Haryana.

METHODOLOGY

The research design used in this study was non experimental descriptive survey research design. The study was conducted at Faculty of Nursing, SGT University, Gurugram, Haryana. The sample was 150 first year nursing students were selected by using purposive sampling technique. The tool used for the study was self structured knowledge questionnaire. Section A description of demographic characteristics of the study participants (demographic data such as gender, age, educational status, previous knowledge regarding corona virus and source of information regarding corona virus.) Section B self structured knowledge questionnaire related to corona virus. The content validity of tools was done by submitting the tools to seven experts from different nursing departments to seek their opinion and suggestions regarding the items in tools. The reliability of knowledge questionnaire was established by spit half method followed by Karl person correlation ($r=0.99$)

RESULTS AND ANALYSIS**SECTION- A: Description of demographic profile of study participants.****Table no. 1. Frequency and percentage distribution of selected demographic profile of study participants.****N=150**

S. No.	Demographic Profile	Frequency (f)	Percentage (%)
1.	Age in years		
	a) 19-22	76	50.7
	b) 23-26	74	49.3
2	Gender		
	a) Male	28	18.7
	b) Female	122	81.3
3.	Educational status		
	a) GNM 1 st year	20	13.3
	b) Post B.Sc. Nursing 1 st year	30	20
	c) B.Sc. Nursing 1 st year	100	66.7
5.	Previous knowledge regarding corona virus.		
	a) Yes	89	59.3
	b) No	61	40.7
6.	From which Sources of media you heard the term corona virus	48	32
	a) Television/radio	52	34.7
	b) Newspaper	50	33.3
	c) Social media		

Table no.1:- shows description of demographic profile of study participants. Results depicts that majority that is half of the study participants (50.7%) were in age between 19-22. Majority 81.3% were female. Majority that is more than half (66.7%) participants studying in B.Sc. nursing first year. More than half that is 59.3% of study participants were having previous knowledge regarding corona virus. 34.7% of study participant used newspaper to heard the term corona virus.

SECTION – B : Analysis based on the objectives**Table No.2: Knowledge score regarding corona virus among study participants.****N=150**

Knowled ge score	Total score	Range of score	Median	Mean \pm SD	Mean %
	26	12-26	18	18.36 \pm 2.338	70.61

Table no. 2 shows description of knowledge score regarding corona virus. Total knowledge score was 26. The lowest range of score was 12 and the highest range of

score was 26. The mean score and SD was 18.36 ± 2.338 . Mean percentage for knowledge score was 70.61.

Table 3: Level of knowledge of study participants regarding corona virus.

N=150

S. No.	Gained knowledge score	Frequency	Percentage
1.	Poor knowledge (0-8)	00	0%
2.	Average knowledge (9-17)	54	36%
3.	Good knowledge (18-26)	96	64%

Table no.3 shows description of level of knowledge score of study participants regarding corona virus. The score is divided in three parts poor knowledge (0-8), average knowledge (9-17) and good knowledge (18-26). Majority of participants had good knowledge score. Students had having good knowledge score was 96 (64%).

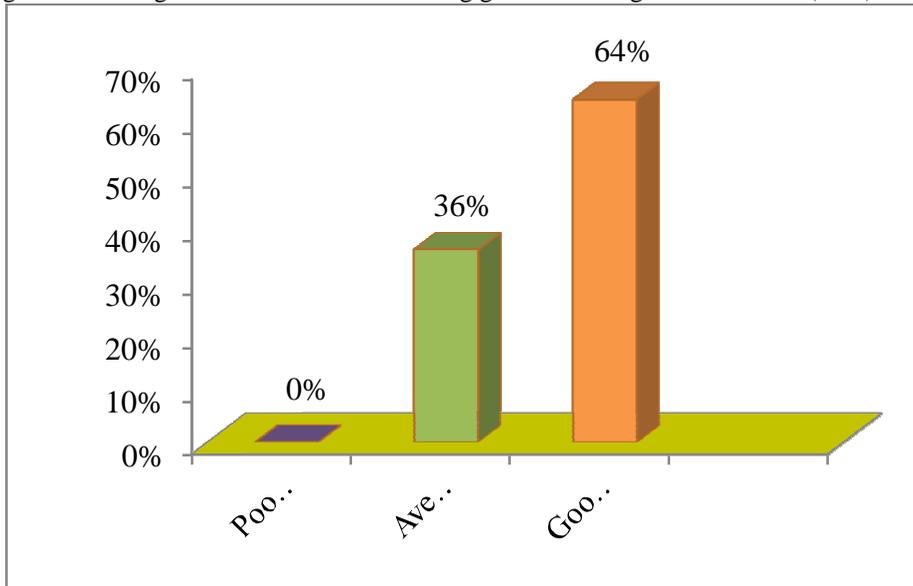


Figure 1: Percentage wise distribution of Level of knowledge of students regarding knowledge of corona virus.

Figure no. 1: Illustrate those majority (64%) students had good knowledge and (36%) of them had average knowledge regarding corona virus

Table 4: Description of Association of knowledge score with selected demographic profile.

N=150

S. No.	Demographic profile	Frequency	At & Below median(13)	Above median(13)	df	p-value
1.	Age in years					
	a) 19-22	76	3	73	1	0.230 ^y
	b) 23-26	74	1	73		
2.	Gender					
	a) Male	28	1	27	1	0.0001^y
	b) Female	122	3	119		
3.	Educational status					
	d) GNM 1 st year	20	0	20	2	0.494 ≈
	e) Post B.Sc. Nursing 1 st year	30	1	29		
	f) B.Sc. Nursing 1 st year	100	3	97		
4.	Previous knowledge regarding corona virus.					
	a) Yes	89	2	87	1	1.000 ≈
	b) No	61	2	59		
5.	From which Sources of media you heard the term corona virus					
	a) Television/radio	48	0	48	2	1.950 ≈
	b) Newspaper	52	2	50		
	c) Social media	50	2	48		

df₁=3.841, df₂=6.97 at p< 0.05 level of significance

Fisher's exact test(≈), Yates's correction test (y)

The data presented in table no.4 depicts the description of association of knowledge score with selected demographic profile. Yates correction test and fisher exact test was performed to find the association. The association between knowledge score with age the p-value was (0.230), gender (0.0001), educational status (0.494), previous knowledge regarding corona virus (1.000) and source of information (1.950).

The result indicates that there was no significant association found between knowledge score with their selected demographic profile such as Age, Educational status, previous knowledge regarding corona virus and source of infection except gender of the participants.

Hence it interpreted that except gender; other demographic profile did not have any influence on knowledge score of study participants.

NURSING IMPLICATIONS

Nursing education-The study has an important implication in nursing education and other fields. Nursing students can give teaching program regarding corona virus.



Nursing practice-Nurses are the backbone of health care set up of any country. The nursing knowledge has gone many evolutions in recent past. The expanded role of professional nurse emphasizes the implication which involves primitive, preventive, curative and rehabilitative aspects.

Nursing Research-A very few interventional studies have been conducted regarding corona virus.

- Nursing is believed to be a discipline as well as a profession. The former cultivates knowledge while the latter uses the knowledge to respond to human needs. Research helps to generate knowledge which guides nursing practice.
- The study was conducted at one institution. A repeat of the study in a different setting is necessary to substantiate the findings. It might be fascinating to investigate whether the beliefs and views of the professional nurses are applied in the clinical environment.
- Knowledge and practice study can be conducted on corona virus.
- Comparative study can be conducted in B.Sc. nursing 1st year students of selected college of nursing Gurugram, Haryana.
- Planned teaching programme can be conducted among B.Sc. nursing students of selected college of nursing, Gurugram, Haryana.

Strength of the study

This study can act as a baseline data for other studies related to corona virus related studies in India.

Limitations

The following limitations in this study are worth noting:

1. The size of the sample was small. Hence, it restricted the generalization.
2. The study duration was limited.
3. The samples were drawn only from the SGT University, Gurugram so the wider generalization was limited.
4. Only knowledge was assessed and no attempt was made to identify other attributes like attitude and practices.

CONCLUSION

Study concluded that first year nursing students have good knowledge (64%) regarding corona virus and only 36% of study participants have average knowledge regarding corona virus.

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CONFLICT OF INTEREST:-

The authors declare no conflicts of interest.



SOURCE OF FUNDING:-

Self

ETHICAL CLEARENCE:-

- Administrative permission was obtained from Dean, Faculty of Nursing, SGT University.
- Ethical permission was obtained from ethical committee of SGT University.
- A written consent was obtained from participants before starting data collection. Commitment was given to the each participant that the confidentiality of each individual will be maintained.

REFERENCES:-

1. McIntosh K (1974). Arber W, Haas R, Henle W, Hofschneider PH, Jerne NK, Koldovský P, Koprowski H, Maaløe O, Rott R (eds.). "Coronaviruses: A Comparative Review". *Current Topics in Microbiology and Immunology / Ergebnisse der Mikrobiologie und Immunitätsforschung. Current Topics in Microbiology and Immunology / Ergebnisse der Mikrobiologie und Immunitätsforschung*. Berlin, Heidelberg: Springer: 87.
2. Kahn JS, McIntosh K (November 2005). "History and recent advances in coronavirus discovery". *The Pediatric Infectious Disease Journal*. **24** (11 Suppl): S223–27, discussion S226.
3. Geller C, Varbanov M, Duval RE (November 2012). "Human coronaviruses: insights into environmental resistance and its influence on the development of new antiseptic strategies". *Viruses*. **4** (11): 3044–68.
4. "The woman who discovered the first coronavirus"
5. De Groot RJ, Baker SC, Baric R, Enjuanes L, Gorbalenya AE, Holmes KV, Perlman S, Poon L, Rottier PJ, Talbot PJ, Woo PC, Ziebuhr J (2011). "Family Coronaviridae". In King AM, Lefkowitz E, Adams MJ, Carstens EB, International Committee on Taxonomy of Viruses, International Union of Microbiological Societies. *Virology Division* (eds.). *Ninth Report of the International Committee on Taxonomy of Viruses*. Oxford: Elsevier. pp. 806–28.
6. Jump up International Committee on Taxonomy of Viruses (2010-08-24). "ICTV Master Species List 2009—v10"
7. Jump up Woo, Patrick C. Y.; Huang, Yi; Lau, Susanna K. P.; Yuen, Kwok-Yung (2010-08-24). "Coronavirus Genomics and Bioinformatics Analysis". *Viruses*. **2** (8): 1804–1820.



काव्यप्रकाशस्य जयन्तीटीका

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संस्कृतभाषायां संस्कृतकाव्यशास्त्रस्य प्राचीनतमं नाम काव्यालङ्कार एवास्ति। प्राचीनविद्वद्वरेण्यानां शब्दं प्रयोगाय मतं सर्वदा सुविदितं भवति। अतः महाभाष्यकारस्य पतञ्जलेः कथनं सार्वकालिकः प्रामाणिकः मार्गदर्शकश्च भवति यत् " -एकः शब्दः सम्यग् ज्ञातः शास्त्रान्वितः सुप्रयुक्तः स्वर्गे लोके कामधुक् भवति।"संस्कृतवाङ्मयस्य इतिहासे काव्यालङ्कारशास्त्रस्य महत्त्वपूर्णस्थानं भवति। काव्यालङ्कारशास्त्रस्य प्रयोगः सर्वप्रथमम् अग्निपुराणे उपलब्धः भवति। अग्निपुराणे उल्लेखः प्राप्यते यत् " -इत्याग्नेयमहापुराणे अग्निप्रोक्तं काव्यालङ्कारशास्त्रं समासम्"। प्राचीनाचार्याणां मतानुसारम् अग्निपुराणं काव्यालङ्कारशास्त्रस्य आदिग्रन्थः भवति। यस्मिन् शास्त्रेऽस्य सौन्दर्यस्य पर्यालोचनं क्रियते तच्छास्त्रं काव्यशास्त्रमित्यभिधीयते। काव्यशास्त्रमिदं स्वोत्पत्तिसमयादेव नितरां लोकप्रियतां गतं-क्रियाकल्प-काव्याशास्त्र-तस्मादेतत् काव्यालङ्कार , कतिपयनामभिः ससमानं सानुरागञ्च समादृतमभूत्। शास्त्रमिदं-शास्त्रसाहित्यशास्त्रादि-साहित्यविद्यालङ्कार शास्त्रान्तराणीव परमोपादेयं शास्त्रम्। लौकिकानां वैदिकानाञ्च शास्त्राणां सर्वाङ्गीणतया ज्ञानं तावत् भवितुमर्हति यावदस्य काव्यशास्त्रस्य ज्ञानं न वर्तते। काव्यालङ्कारशास्त्रस्य उत अलङ्कारशास्त्रस्य उद्भवविकासयोः मुख्यः स्रोतः'वेदः' इति मन्यते। 'वेदस्य सर्वविद्या'निधानत्वम्- इति दृष्टिकोणानुसारं समीक्षकैः अलङ्कारशास्त्रस्य मूलमपि वेदेषु अन्विष्यते।

रुद्रटादीनां -वामन-आलोचनाशास्त्रस्य संस्कृतभाषायां सर्वप्रसिद्धनाम अलङ्कारशास्त्रम्। भामह काव्यशास्त्रसम्बन्धिनः ग्रन्थाः सामान्यतः काव्यालङ्कारनाम्ना प्रसिद्धाः सन्ति। कदाचिन्नामेदमेतेषु ग्रन्थेषु अलङ्काराणां वैशिष्ट्यदृष्ट्यैव सम्प्राप्तम्। प्रायः प्राधान्येन व्यपदेशा भवन्तिअस्याः उक्त्यारेवानुसरणं कृतम्।

अलङ्कारशास्त्रे बहवः प्राचीनग्रन्थाः उपलभ्यन्ते। यथा - श्रीमदानन्दवर्धनाचार्यप्रणीतः ध्वन्यालोकः , ' अस्य ग्रन्थस्य श्रीमदभिनवगुप्तविरचितालोचन'टीका विद्यते'रुद्रटप्रणीत 'काव्यालङ्कारः' इत्यस्य टीका नमिसाधुः'वामनविरचित 'काव्यालङ्कारसूत्राणि' इत्यस्य टीका श्रीगोपेन्द्रत्रिपुरहरभूपाल ,विरचिता कामधेनुः- 'आचार्यभामाहविरचितकाव्यालङ्कारः'-आचार्यदण्डिप्रणीत 'काव्यादर्श'स्य शशिप्रभाटीका , भरतमुनिप्रणीतनाट्यशास्त्रस्य अभिनवगुप्तटीका ,क्षेमेन्द्रविरचित'औचित्यविचारचर्चा ' , 'कुन्तकविरचितवक्रोक्तिजीवितम्'विरचित-महिमभट्ट , 'व्यक्तिविवेकःजयदेवस्य ,भोजस्य सरस्वतीकण्ठाभरणम् , मम्मटभट्टस्य काव्यप्रकाशः इत्यादयः ग्रन्थाः उपलभ्यन्ते। काव्यप्रकाशस्य बहव्यः टीकाः प्राप्यन्ते। ,चन्द्रालोकः एतेषु ग्रन्थेषु अन्यतमः काव्यप्रकाशः।

यत्किल मम्मटभट्टविरचितः काव्यप्रकाशो हि नाम ग्रन्थः सर्वेषु साहित्यालङ्कारग्रन्थेषु चूडामणित्वमुपगतो विभाति नितराम्। अस्य हि विद्वत्सर्वस्वभूतस्य ग्रन्थप्रवरस्याद्यावधिकालं बहुभिर्मान्यैर्गण्यविद्वद्भिर्द्वारार्यैः सुविहिताः नैकविधाष्टीकाः विद्यन्ते, मुद्रिताः भूतले ह्यस्मिन् तत्प्रचारश्च विद्यते कोविदसंसारे प्राचुर्येण।

यद्यप्यस्मिन् ग्रन्थे माणिक्यचन्द्रः ,विश्वनाथचक्रवर्ती ,सोमेश्वरः ,जयन्तभट्टः ,सरस्वतीतीर्थः , प्रदीपक ,श्रीवत्सलाञ्छनः ,गोविन्दठक्कुरः ,भास्करः ,चण्डीदासः ,आनन्दकविःारः ,कमलाकरभट्टः , महेशचन्द्रः इत्यादिकाः बहवो व्याख्यातारः व्याख्याः ,नागोजीभट्टः ,भीमसेनः ,वैद्यनाथः ,महेश्वरनरसिंहठक्कुरः व्यधुः। परञ्च नेतादृशी कापी व्याख्या यथाऽनायासेन मन्दधियोऽपि ग्रन्थकर्तृहार्दं भावं ज्ञातुं शक्नुयुरिति।

काव्यप्रकाशस्य टीकाबहुत्वे च हेतुरयम्। यदयं हि काव्यप्रकाशाभिधो निबन्धप्रवरः सर्वांशं नितरामुत्कर्षमावहति। किं चात्र कस्यचिदंशस्याभिप्रायोऽतीव दुरधिगमः यं सम्यक्परिनिष्ठतमतयोऽपि यथातथ्येन मनोविषयं कर्तुमशक्ताः। अत एवास्य बहव्यः टीकाः संवृताः। महेश्वरभट्टाचार्यैरप्युक्तम् -

"काव्यप्रकाशस्य कृता गृहे टीकास्तथाप्येष तथैव दुर्गमा

सुखेन विज्ञातुमिमं य ईहते धीरः स एतां निपुणः विलोकताम्॥" इति।



■ जयन्ती वा दीपिका टीका

साहित्यालङ्कारग्रन्थेषु चूडामणित्वमुपगतस्य काव्यप्रकाशस्य सुप्रसिद्धासु टीकासु अन्यतमा टीका जयन्तभट्टविरचिता 'जयन्ती' वा 'दीपिका'। रचनाकालक्रमानुसारेण चण्डीदासदीपिकानन्तरं नव्यविचारधारायाः आलम्बनभूता श्रीजयन्तभट्टप्रणीता काव्यप्रकाशजयन्ती वा दीपिका व्याख्यापि प्राधान्यं वहति। काव्यप्रकाशव्याख्यासु नितान्तप्राचीनासु टीकासु अन्यतमा जयन्ती वा दीपिका। अस्याः टीकायाः भाषा प्राञ्जला सरला चास्ति। एषा टीका अप्रकाशिता वर्तते।

M. Krishnamachariar विरचिते 'History of Classical Sanskrit Literature' इत्यस्मिन् ग्रन्थे जयन्तभट्टप्रसङ्गे उल्लेखः प्राप्यते यत् -Jayanta Bhatta (1277-1297 A.D.) was the son of Bhāradvāja, a priest at the court of King Śārangadeva, Vaghela king of Guzerat. He Wrote his commentary Jayantī in 1264 A.D.ⁱⁱ

■ व्याख्याकृत्सङ्क्रान्तो वृत्तान्तः

जयन्तभट्टकृतायां जयन्ती वा दीपिकाख्यटीकायामपि क्वचित्क्वचिन्मुकुलस्यैव नाम दृश्यते, नान्यस्या जयन्तभट्टः स्वयमेव निजकालनिर्माणोपायमुपास्थापयत्। अयं जयन्तभट्टः गुजरातदेशीयः निजटीकान्तिमभागे आत्मनो वृत्तमुपास्थापयत्। अस्य जयन्तभट्टस्योदन्तस्तु स्वकृतदीपिकाख्यटीकाया अवसाने स्वयमेव लिखितः। तथा हि-

"संवत् १३५० वर्षे ज्येष्ठवदि ३ खै अद्येह आशापल्लीसमावसितश्रीमद्विजयकटके सकलारातिभूपालमौलिमुकुटालङ्कारभूषितपादपङ्कजमहाराजाधिराजश्रीसारङ्गदेवकल्याणविजयराज्ये - साहित्यविद्याबिसिनीविकासनैकविभाकरस्य सकलालङ्कारविवेकचतुरमानसमानसराजहंसस्य - निमज्जनैकमहापोतस्य- षड्दर्शनपारावारपोतायमानान्वान्तरप्रतिभा निखिलपुराणपुराणीकृतमार्गेतरविद्वज्जनमनोऽज्ञानमहान्धकारसंहारसहस्रकरस्य - चन्द्रोदयस्य - श्रुतिस्मृतिमहार्थनिभ्रान्तविभ्रान्तविद्वज्जनमनोऽज्ञानतिमिरपरिहार किरणस्य - श्रीमद्गूर्जरमण्डलेशमुकुटालङ्काररत्नप्रभापरिचुम्बनबहुलीकृतचरणनख भुवा पुरोहितश्रीजयन्तभट्टेन सकलसुधीजनमहामात्यपुरोहितश्रीमद्भरद्वाजस्याङ्गमनोऽज्ञानतिमिरविनाशकारणं विरचितेयं काव्यप्रकाशदीपिका। श्रीमद्भरद्वाजपदाम्बुजीयप्रसादतो ग्रन्थरहस्यमेतत्। विज्ञाय किञ्चित् कृतवान् जयन्तस्तत्र प्रमाणं सुधियां वितर्कः॥ काव्यप्रकाशदीपिका समाप्ता।"

सः जयन्तभट्टः स्वयं 'श्रीपुरोहितः' नाम्ना उपाक्षिपत्। तस्य पितुः नाम भरद्वाजः। सः गुजरातप्रदेशस्य नृपतेः शारङ्गदेवस्य प्रधानामात्यपुरोहितः अथवा गृहार्चकः आसीत्। जयन्तभट्टः स्वटीकालेखनकार्यं १३५० तमसंवत्सरे जैष्ठमासस्य भानुवासरे तृतीयमहाराजधिराजशारङ्गदेवस्य गतशुल्कचतुर्दश्यां रात्रौ यदा-विजयिसैनिकाः आशापल्लीं निकषा संन्यस्ताः अभवन् तदा समाप्त्यकरोत्।

■ जयन्तीटीकायाः उपलब्धमातृकाणां परिचयः

जयन्तीटीकायाः अष्टौ मातृकाःⁱⁱⁱ उपलभ्यन्ते। परन्तु मया पञ्च मातृकाः प्राप्ताः मातृकाग्रन्थालयात्। अधः तासां मातृकाणां विवरणं प्रदत्तमस्ति।

१ प्रथमा मातृका .

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प्रारम्भांशः(Beginning)

श्रीजिनाय नमः॥ ॐ सिद्धिः॥ गणपतये नमः॥

इन्द्रादिदिक्पालवरैरजस्रं बद्धादिभिर्यः परिचारकैश्च।

उपास्यते रुच्यणिमादिभिर्यो वक्तास्य देवाय नतोऽस्मि तस्मै॥१॥

वाग्देवी सततं यस्य सेवते वदनाम्बुजम्।

जयति श्रीभरद्वाजः सविद्वन्मौलिमण्डनम्॥२॥

इयं काव्यप्रकाशस्य दीपिका सुमनोहरा।

विरच्यते जयन्तेन श्रीरंभरद्वाजसूनुना॥३॥

इमामालम्ब्य सुधियः सञ्चरन्तु गतभ्रमाः।

वने काव्यप्रकाशाख्ये जडबुद्धितमोमये॥४॥

हसन्तु निन्दन्तु च वा स्तुवन्तु त एव विद्वत्प्रवराः प्रमाणम्।

प्रारब्ध एवात्र मया प्रयासः स्वतातपादाम्बुजयोः प्रसादात्॥५॥

समाप्तांशः(Ending)

स विरोधस्थासम्भवोऽनुचितार्थत्वम्। तथा आरोप्यारोपविषययोर्मध्यादेकस्य केनचिद्धर्मेण रूपणं नान्यस्येति रूपके आधिक्यम्। तथा निर्मोकमुक्तिमिव गगनोरगस्य गङ्गामपश्यदित्यत्ररूपकेणैव साम्योक्तिसिद्धाविव शब्दे अधिकः। तथा श्लेषविषये श्लेषेण रूपकेण च प्रतीयमानस्य साम्यसिद्धिरुपमायामाधिक्यं यदाहुः। वाच्यात्प्रतीयमानोऽर्थस्तद्विदां स्वदतेऽधिकं रूपकादिरतः श्रेयोऽनलङ्कारेषु नोपमा।

पुष्पिका(Colophon)



इति पुरोहितश्रीजयन्तभट्टविरचितायां काव्यप्रकाशदीपिकायाम् अर्थालङ्कारनिर्णयो नाम दशम उल्लासः समाप्तः।

उपपुष्पिका(Post-Colophon)

संवत् १३५० वर्षेज्येष्ठवदि ३ खै अद्येह अशोपल्लीसमावासितश्रीमद्विजयकटके सकलारातिभूपालमौलिमुकुटालङ्कारभूषितपादपङ्कजमहाराजाधिराजश्रीसारङ्गदेवकल्याणविजयराज्ये साहित्यविद्याविशिनीविकाशनेकविभाकरस्य सकलालङ्कारविवेकचतुरमान-समानसराजहंसस्य षड्दर्शनपारावारपोतायमानावान्तरप्रतिभा-निमज्जानैकमहापोतस्य निखिलपुराणपुराणीकृतं मार्गतरविद्वज्जनमनोज्ञानमहान्धकार-सहस्रकरस्य श्रीमद्गूर्जरमण्डले श्रुतिस्मृतिमहार्थनिभ्रान्तविभ्रान्तविद्वज्जनमनोज्ञानतिमिरपरिहारचन्द्रो-दयस्य शमुकुटालङ्काररत्नप्रभापरिचुम्बनबहुलीकृतचरणनख-किरणस्य श्रीमद्गूर्जरमण्डले महामात्यपुरोहितश्रीमद्भारद्वाजस्याङ्गभुवापुरोहितश्रीजयन्तभट्टेन सकलसुश्रीजनमनोज्ञानतिमिरविनाशकारणं विरचितेयं काव्यप्रकाशदीपिका।

श्रीमद्भारद्वाजपदाम्बुजीयप्रसादतो ग्रन्थरहस्यमेतत्।

विज्ञाय किञ्चित् कृतवान् जयन्तः सूत्रप्रमाणं सुधियां वितर्कः॥१॥

काव्यप्रकाशदीपिका समाप्ता।।

गुरुवासरे लिपिकृतं जोसिपरसरां १४ रामिति बेसाषवद १९४१ । संवत्।.....श्री॥ ग्रन्थाग्रदं ममारषाडिज्ञातिपुस्करणा ब्राह्मणा। अमदावादमध्ये।

रद्वितीया . मातृका

सङ्ख्या/Mss. No/ Acc. No - G 5893

शीर्षक:/Title - काव्यप्रकाशटीका/Kāvya prakāśa Commentary

टीका प्रणेता /Commentary Author /जयन्तभट्ट:-JayantaBhaṭṭa

टीकायाः नाम /Title of Commentary- दीपिका/Dīpikā

विषय:/Subject-अलङ्कारः

भाषा/Language-संस्कृतम्/Sanskrit

मातृकोपलब्धिस्थानम्/Manuscript Place -Scindia Oriental Research Institute, Vikram University, Ujjain, Madhya Pradesh

लिपि:/Script-देवनागरी/Devanāgarī

विस्तृति:/Extent-सम्पूर्णा/Complete

साधनवस्तु/Material -कर्मजपत्रम्/Hand Made paper

पत्रम्/Folio - 86

आकारः/Size in cm - 30×12 cm

पङ्क्तिसङ्ख्या/Lines in per page - 17 Lines

अक्षराणि/Letters in per page - 56

परिस्थिति:/Condition-समीचीना/Good

टिप्पणी/Remarks- जीर्णतमजैनशैल्यां लिखिता (पृष्ठमात्रा)

प्रारम्भांशः(Beginning)

श्रीजिनाय नमः॥ॐ सिद्धिः॥ गणपतये नमः॥

इन्द्रादिदिक्पालवरैरजस्रं बद्धादिभिर्यः परिचारकैश्च।

उपास्यते रुच्यणिमादिभिर्यो वक्तास्य देवाय नतोऽस्मि तस्मै॥१॥



वाग्देवी सततं यस्य सेवते वदनाम्बुजम्।
जयति श्रीभरद्वाजः सविद्वन्मौलिमण्डनम्॥२॥

इयं काव्यप्रकाशस्य दीपिका सुमनोहरा।
विरच्यते जयन्तेन श्रीरंभरद्वाजसूनुना॥३॥

इमामालम्ब्य सुधियः सञ्चरन्तु गतभ्रमाः।
वने काव्यप्रकाशाख्ये जडबुद्धितमोमये॥४॥

हसन्तु निन्दन्तु च वा स्तुवन्तु त एव विद्वत्प्रवराः प्रमाणम्।
प्रारब्ध एवात्र मया प्रयासः स्वतातपादाम्बुजयोः प्रसादात्॥५॥

समाप्तांशः(Ending)

। तथारोप्यरोपविषययोर्मध्यादेकस्य केनचिद्धर्मेण रूपणं नान्यस्येति रूपके स विरोधस्यासम्भवोऽनुचितार्थत्वम् आधिक्यम्। तथा निर्मोकमुक्तिमिव गगनोरगस्य गङ्गामपश्यदित्यत्र रूपकेणैव साम्योक्तिसिद्धाविदशब्दोऽधिकः। तथा श्लेषविषये श्लेषेण रूपकेण च प्रतीयमानस्य साम्यसिद्धिरुपमायामाधिक्यं यदाहुः। वाच्यात्प्रतीयमानोऽर्थस्तद्विदां स्वदतेऽधिकं रूपकादिरतः श्रेयोऽनलङ्कारेषु नोपमा।

पुष्पिका(Colophon)

इति पुरोहितश्रीजयन्तभट्टविरचितायां काव्यप्रकाशदीपिकायाम् अर्थालङ्कारनिर्णयो नाम दशम उल्लासः समाप्तः।

उपपुष्पिका(Post-Colophon)

संवत् १३५० वर्षेज्येष्ठवदि ३ खौ अद्येह अशोपल्लीसमावासितश्रीमद्विजयकटके सकलारातिभूपालमौलिमुकुटालङ्कारभूषितपादपङ्कजमहाराजाधिराजश्रीसारङ्गदेवकल्याणविजयराज्ये साहित्यविद्याविशिनीविकाशनैकः विभाकरस्य सकलालङ्कारविवेकचतुरमान-समानसराजहंसस्य षड्दर्शनपारावारपोतायमानवान्तरप्रतिभा-निमज्जानैकमहापोतस्य निखिलपुराणपुराणीकृतं मार्गेतरविद्वज्जनमनोज्ञानमहान्धकार-सहस्रकरस्य श्रीमद्गूर्जरमण्डले श्रुतिस्मृतिमहार्थनिभ्रान्तविभ्रान्तविद्वज्जनमनोज्ञानतिमिरपरिहारचन्द्रो-दयस्य श्रीमद्गूर्जरमण्डले शमुकुटालङ्काररत्नप्रभापरिचुम्बनबहुलीकृतचरणनख-किरणस्य श्रीमद्गूर्जरमण्डले महामात्यपुरोहितश्रीमद्भारद्वाजस्याङ्गभुवापुरोहितश्रीजयन्तभट्टेन सकलसुश्रीजनमनोज्ञानतिमिरविनाशकारणं विरचितेयं काव्यप्रकाशदीपिका। श्रीमद्भारद्वाजपदाम्बुजीयप्रसादतो ग्रन्थरहस्यमेतत् विज्ञाय किञ्चित् कृतवान् जयन्तः सूत्रप्रमाणं सुधियां वितर्कः॥१॥इति काव्यप्रकाशदीपिका समाप्ता॥ श्री॥ स्वेष्टदेवतायै नमः॥ ग्रन्थसंख्या ५०००॥

३तृतीया मातृका .

सङ्ख्या/Mss. No/ Acc. No – G835

शीर्षकः/Title – काव्यप्रकाशः /(टीका)Kāvya prakāśa (with Commentary)

टीका प्रणेता /Commentary Author /जयन्तभट्टः-JayantaBhaṭṭa

टीकायाः नाम /Title of Commentary– जयन्ती अथवादीपिका/Dīpikā or Jayantī

विषयः/Subject –व्याकरणम्/Grammar

भाषा/Language – संस्कृतम्/Sanskrit

मातृकोपलब्धिस्थानम्/Manuscript Place – Asiatic Society, Kolkata

लिपिः/Script – नागरी/Nāgarī



विस्तृति:/Extent – सम्पूर्णा/Complete
साधनवस्तु/Material – कर्गजपत्रम्/Hand Made paper
आकार:/Size in cm - 38×18 cm
पङ्क्तिसङ्ख्या/Lines in Per Page – 13 Lines
पत्रम्/Folio – 354(1-354)
परिस्थिति:/Condition – Laminated
टिप्पणी/Remarks – सर्वकारसङ्ग्रह:/Government collection.

प्रारम्भांशः)Beginning)

ॐ श्रीगणेशाय नमः। ॐ नमो नारायणाय। अत्र च साहित्यदीपिकाख्यटीकाकारः श्रीभास्करः न ते टीकाकाराः परिणामदविद्यां यतमसां प्रमेयं शास्त्राणां प्रतिफलति। येषां न मतिषु न टीकास्ता यासां विलसति।

समाप्तांशः)Ending)

लिङ्गस्येति एकतरस्यैवेति यदि तु विपरिणमेन लिङ्गवचमोरपरस्यासम्बन्धस्तदान्यश्च लक्षको - वाक्यभेदः स्यात्।

पुष्पिका)Colophon)

इति श्रीसकलविपश्चिच्चक्रवर्तिश्रीराजानकमम्मटाचार्यज्जटाचार्यविरचिते काव्यलंकाररहस्यनिबन्धे श्रीकाव्यप्रकाशे अर्थालंकारनिर्णयो नाम दशम उल्लासः। समाप्तोयं काव्यप्रकाशः। शुभमस्तु सर्वजगत्।

४ चतुर्थी मातृका .

सङ्ख्या/Mss. No/ Acc. No – G 244/1875-76

शीर्षक:/Title – काव्यप्रकाशटीका /Kāvya prakāśa Commentary

टीका प्रणेता /Commentary Author /जयन्तभट्टः-Jayanta Bhaṭṭa

टीकायाः नाम /Title of Commentary– जयन्ती/Jayantī

विषय:/Subject – अलङ्कारः

भाषा/Language – संस्कृतम्/Sanskrit

मातृकोपलब्धिस्थानम्/Manuscript Place – Bhandarkar Oriental Research Institute, Pune (India)

लिपि:/Script– देवनागरी/Devanāgarī

विस्तृति:/Extent – असम्पूर्णा/Incomplete

साधनवस्तु/Material – कर्गजपत्रम्/Hand Made paper

पत्रम्/Folio – 101

आकार:/Size in cm - 28×20 cm

पङ्क्तिसङ्ख्या/Lines in Per Page – 16Lines

अक्षराणि/Letters in per page – 40-60

परिस्थिति:/Condition – Good

टिप्पणी/Remarks – सर्वकारसङ्ग्रह:/Government collection & Bond Paper

Description – Country paper, not very old; Devanāgarī characters; hand-writing, small but clear and legible throughout; text written in the middle of folios, commentary being written below and above the text; the Ms is incomplete; colophon of vii Ullāsa appears on folio 85. The Ms is not very old.

प्रारम्भांशः)Beginning)

श्रीगणेशाय नमः।

इन्द्रादिदिक्पालवरैरज्ज्रं बुद्धादिभिर्यः परिचारकैश्च।



उपास्यते रुच्यणिमादिभिर्यो वक्तास्य देवाय नतोऽस्मि तस्मै॥१॥

वाग्देवी सततं यस्य सेवते वदनाम्बुजम्।
जयति श्रीभरद्वाजः सविद्वन्मौलिमण्डनः॥२॥

इयं काव्यप्रकाशस्य दीपिका सुमनोहरा।
विरच्यते जयन्तेन श्रीरंभरद्वाजसूनुना॥३॥

इमामालम्ब्य सुधियः सञ्चरन्तु गतभ्रमाः।
वने काव्यप्रकाशाख्ये जडबुद्धितमोमये॥४॥

हसन्तु निन्दन्तु च वा स्तुवन्तु त एव विद्वत्प्रवराः प्रमाणम्।
प्रारब्ध एवात्र मया प्रयासः स्वतातपादाम्बुजयोः प्रसादात्॥५॥

समाप्तांशः)Ending)

तथा अतासा अक्षयारम्भा अस्तु तु इति नियमे तव रक्षत एव तथा हे अत क्षरतक्षस्तनूकरणं तं राति ददाति इति तक्षरनतक्षरोऽतक्षरः सर्वतो भद्रम् अन्ये इति। मुशलधनुर्बाणशक्तिहलशूलस्वस्तिकनागपाशचक्रादीनि। तथा स्वरव्यञ्जनस्थानगतिनिय

५पञ्चमी मातृका .

सङ्ख्या/Mss. No/ Acc. No - G 7399

शीर्षक:/Title - काव्यप्रकाशटीका/Kāvya prakāśa Commentary

टीका प्रणेता /Commentary Author /जयन्तभट्टः-JayantaBhaṭṭa

टीकायाः नाम /Title of Commentary- जयन्ती/Jayantī

विषयः:/Subject-अलङ्कारः

भाषा/Language-संस्कृतम्/Sanskrit

मातृकोपलब्धिस्थानम्/Manuscript Place -Scindia Oriental Research Institute, Vikram University, Ujjain, Madhya Pradesh

लिपिः:/Script-देवनागरी/Devanāgarī

विस्तृतिः:/Extent-असम्पूर्णा/Incomplete

साधनवस्तु/Material-कर्गजपत्रम्/Hand Made paper

पत्रम्/Folio -18

आकारः:/Size in cm - 24×18 cm

पङ्क्तिसङ्ख्या/Lines in per page - 13 Lines

अक्षराणि/Letters in per page - 40

परिस्थितिः:/Condition -समीचीना/Good

टिप्पणी/Remarks-खण्डिता। अस्यां मातृकायां पत्राणि १तः २२ तथा १९, १८, पत्राणि न सन्ति। पत्रसंख्या १६ एवं १७ समानपत्रम्।

प्रारम्भांशः)Beginning)

हेतुत्वस्यातिप्रसक्तत्वात् अवधानादिद्वारा वाक्यशुश्रूषोपयोगात् मौनिकृतमौनिपठितग्रन्थेऽव्याप्तेश्च। एतेनाभिधीयमानाभिधेयसम्बन्धप्रयोजनकः संविशेषो ग्रन्थ इत्यपास्तं माघनैषधादिष्वव्याप्तेः।



समाप्तांशः)Ending)

तेषामपि वास्तवे पौर्वापर्याभावात् क्रमिन् संयोगानां त्रुमेण क्रमप्रतीतेः त्वि प्रत्ययः। तदुक्तं यावत्सिद्धमसिद्धं नासाध्यत्वेनावभासते। आश्रितक्रमरूपत्यात्साक्षिपेत्यभिधीयते। तदेतश्चोक्तव्यवहारमनुस्मृत्योक्तम्। न स्तुतः।

काव्यप्रकाशस्य बह्व्यः टीकाः प्रकाशिताः वर्तन्ते। परन्तु एतस्याः जयन्तीटीकायाः अग्रे प्रकाशनं भविता चेत् संस्कृतवाङ्मयस्य सहृदयलोकस्य महान् लाभः भवति काव्यप्रकाशावगमने। तथा संस्कृतवाङ्मयस्य पारम्परिकता अवश्यं स्थास्यति।

† काव्यप्रकाशस्य टिप्पण्यः सहस्रं सन्ति यद्यपि।

ताभ्यस्त्वस्या विशेषो यः पण्डितैः सोऽवधार्यताम्।।

‡CC, I, 101, II.19.BR, (1883-4) ap. 326. See Vamanācārya, I.c. 30; PR. II, 16, 20; BR, (1883-4) 17-18, Jayanta, author of Kādambarīkathāsāra was an earlier author.

‡‡New Catalogues Catalogorum - Vol.4.Page – 96.

सहायकग्रन्थसूची

काव्यप्रकाशः, सम्पा. ज्योत्स्ना मोहन .दिल्ली : नाग पब्लिशर्स, १९९५।

काव्यप्रकाशः, दिल्ली : परिमल पब्लिकेशन्स , २००८।

काव्यादर्शः, सम्पा. शिवनारायण शास्त्री .दिल्ली : परिमल पब्लिकेशन्स, २००३।

काव्यालङ्कारः, सम्पा. रामानन्द शर्मा .वाराणसी : चौखम्बा संस्कृत सीरिज आफिस, २००२।

नाट्यशास्त्रम्, सम्पा. केदारनाथ .नई दिल्ली : भारतीय विद्या प्रकाशन, २००३।

घुसींगा .रमेश चन्द्र , अलंकार शास्त्र का बृहद् इतिहास, जयपुर : रचना प्रकाशन, २००६।

Krishnamachariar, M. *History of Classical Sanskrit Literature*, Delhi: MotilalBanarasidas Publishers Private Limited, 1989.

A Descriptive Catalogue of Sanskrit Manuscripts in the Asiatic Society Library, Kolkata, Vol-vi, by MahamahapadyayaHaraprasadaShastri.

New Catalogues Catalogorum – An Alphabetical Register of Sanskrit and Allied works and Authors, Vol. iv, University of Madras, 1968.

Catalogues Lists etc., used in the New Catalogues Catalogorum with the abbreviations used for them, University of Madras, 1984.



A ROLE OF MICRO, SMALL AND MEDIUM ENTERPRISES (MSMES) IN INDIAN ECONOMY: STATUS AND PERFORMANCE

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Abstract: - The Micro, Small & Medium enterprises (MSMEs) is one of the very crucial sectors of every economy. For developing countries like India, MSMEs role is to ensuring equitable, inclusive & employment generative economic growth. MSMEs sector also plays very crucial role in socio-economic development of Indian economy with respect to their inherent advantages like low capital needs, high employment, decentralization of industrial activity, utilization of domestic available resources and widening of entrepreneurial base. MSMEs has performed remarkably well and enabled the country to achieve a wide measure of industrial growth and development. In this study an attempt has been made to analyze and measure the growth and performance of the MSME sector in India. The study also discusses the present status of MSME sector and various challenges faced by the sector. Secondary data has been used and analyzed to study the MSMEs sector and its performance in India. From the study it has been observed that the MSMEs sector has contributed heavily towards the growth and development for India economy. Further the study reveals that there is an increasing pattern in the employment and number of units of MSMEs during the study period. The study reveals that MSMEs has shown very good performance in recent years. However at the same time many challenges are also faced by the sector. The role of MSMEs sector is growing speedily and it has become a thrust area for future development for rural and urban area.

Key words: MSMEs, Employment, Manufacturing sector, Economical development, CAGR

Introduction:

The Micro, Small and Medium Enterprises (MSME) sector has emerged as a extremely vibrant and dynamic sector for the Indian economy over the recent past years. It contributes considerably in the economic and social progress of the country by nurturing entrepreneurship and generating greatest employment opportunities at relatively lower capital cost. MSMEs are complementary to other larger industries as ancillary units and this sector contributes considerably in the inclusive industrial growth of the an economy. The MSMEs are increasing their area across sectors of the economy, producing varied range of products and services to meet demands of national as well as international markets. The Micro, Small & Medium Enterprises (MSMEs) have been contributing extensively to the expansion of entrepreneurial development through business innovations practices. The MSMEs sector in India are playing a very important role by providing huge employment opportunities at reasonably lower capital cost than



large industries as well as through industrialization of rural & backward areas, it reducing regional imbalances and assuring more equitable distribution of national wealth and income. Particularly among the developing countries, the MSMEs performs very crucial role as it largely contribute towards the employment generation, regional development, producing diverse range of product and services and significant contribution towards GDP of an economy. Through the development of MSMEs, overall balance development of an economy is possible, hence the government should always take initiative to enhance the scope and development of the sector.

REVIEW OF LITERATURE:

The comprehensive literature demonstrates that MSMEs are essential for sustained economic growth and development of an economy. To justify the need for present study, following literature has been reviewed:

Bargal (2009) mentioned the causal relationship among the variables GDP, SSI output and SSI exports. Further study indicates that the annual average growth rate of various parameters of SSIs have reduced during the period of nineties vis-à-vis the pre-reform years. There is an absence of any lead-lag causal relationship between exports and production in SS sector and GDP of an Indian economy. Dixit and Pandey (2011) studied co integration analysis to examine the relationship between SMEs output, employment, exports, number of SMEs and their capital investment and GDP, Their study discovered the positive causality relationship between SMEs output and India's GDP. Singh R (2012) studied the performance of SSI in India and focused on policy development which have opened new opportunities in this sector. The study concluded that SSI sector has shown good progress with respect to number of SSI units, production and employment generation. The study suggested the technological development and intensification of financial infrastructure to develop SSI and to achieve high growth target. Venkatesh and Muthiah (2012) observed that the role of small & medium enterprises in the industrial sector of an economy is growing speedily and the sector have become a thrust area for future growth. The study emphasized that promotion of SME sector is very crucial for the economic well-being of the country. Dr. Neeru Garg (2014) mentioned that the MSMEs in India faces a tough situation due to high competition from large industries due to lack of infrastructure, withdrawal of subsidy, challenges on total quality management, anti dumping policy, etc. Further the study reveals that the Globalization has increased competitiveness among Indian MSMEs to certain extent, but still Indian MSMEs are not effectively prepared to compete with the global company. Mrs Ashu Katyral, (2015) mentioned that MSME are the heart of Indian Industry. Their contribution particularly to a developing country like India is very valuable and crucial. Further she mentioned that MSME not only contribute in generating employment but also it encourages low skilled level workers to start and take initiative as entrepreneur in rural areas. **Vinay Kumar (2017) observed that MSME sector in India is developing at good pace & even is generating employment opportunities to masses of the people in India. Further he mentioned that the contribution of Manufacturing Sector and Service Sector of MSMEs is considerable to**

the total GDP of the Country. The Govt. of India has taken number of measure and is in the process of gearing up the growth of MSMEs in the country. **Jeeban Jyoti(2018) mentioned that** MSMEs sector as whole is the engine for the growth of an India economy. The study reveals that there is an increasing trend in the employment, number of units, and market value of an assets. Further the study reveals that there is an increasing pattern in the employment and number of units of MSMEs during the study period. The study reveals that MSMEs has shown very good performance in recent years. However at the same time many challenges are also faced by the sector.

Research Methodology:

The present study utilizes the facts and information available in various forms of secondary data sources to make essential evaluation and from this regards, the nature of this study will be analytical research study. This study is based on the secondary data which are collected from the various sources including Annual report of MSME, Economic Survey Reports and various publications of Ministry of Commerce. This study considers previous 6 years data i.e from 2011-12 to 2016-17. The collected data are properly edited, classified and analyzed.

Objectives:

- To measure the contribution of MSMEs sector in Indian economy.
- To analyze the performance and growth of MSME in Indian economy
- To give suggestions to policy makers to improve the performance of MSMEs.

Result and Analysis:

1. Contribution of MSMEs in Country's Economy

Table 1: Contribution of MSMEs in Country's Economy at Current Price ³ (Figures in Rs. Crores)						
Year	MSME GVA	Growth Rate (%)	Total GVA	MSME share in GVA (%)	Total GDP	MSME share in GDP (in %)
2011-12	2622574	-	8106946	32.35	8736329	30
2012-13	3020528	15.17	9202692	32.82	9944013	30.4
2013-14	3389922	12.23	10363153	32.71	11233522	30.2
2014-15	3704956	9.29	11504279	32.21	12467959	29.7
2015-16	4025595	8.65	12566646	32.03	13764037	29.2
2016-17	4405753	9.44	13841591	31.83	15253714	28.9

Source: MSME Annual Report 2018-19

It has been observed from the above table that the share of MSMEs in total GVA (Gross value added) was around 32% during the whole study period. Similarly the share of MSMEs in the GDP (Gross domestic product) was around 30%, which indicates the significant contribution of MSMEs in the GDP on an Indian economy. Further it can be

concluded that the contribution of MSMEs in Indian economy is very significant as it has remarkable influence on in the GVA and GDP of the nation.

2. Estimated Number of MSMEs (Activity wise)

Table 2: Estimated Number of MSMEs (in Lakh)				
Activity Category	Urban	Rural	Total	Share (%)
Manufacturing	82.5	114.14	196.65	31
Trade	121.64	108.71	230.35	36
Other Services	104.85	102	206.85	33
Electricity*	0.01	0.03	0.03	0
All	309	324.88	633.88	100

Source: MSME Annual Report 2018-19

It has been observed from the above table that out of the total 633.99 lakh MSMEs, 31% of MSMEs were found to be engaged in Manufacturing activities, while 36% were engaged in Trade and 33% were engaged in Other Services. Further 324.88 lakh MSMEs (51.25%) were operating in rural area and 309 lakh MSMEs (48.75%) were operating in the urban areas. Out of the total MSMEs in India, trade sector have attracted highest number of MSMEs i.e. 230.35 laks.

3. Distribution of Enterprises category wise

Table 3: Distribution of Enterprises Category Wise					
Sector	Medium	Small	Micro	Total	Share (%)
Rural	0.01	0.78	324.09	324.88	51
Urban	0.04	2.53	306.43	309	49
All	0.05	3.31	630.52	633.88	100

Source: MSME Annual Report 2018-19

It has been observed from the above table that the Micro sector have the highest number of units with 630.52 lakh estimated enterprises which is accounts for more than 99% of total number of MSMEs in India. Small sector and Medium Sector account for 3.31 lakh and 0.05 lakh estimated MSMEs in total estimated MSMEs, respectively. Out of total 633.88 lakh estimated number of MSMEs, 324.88 lakh MSMEs (51%) are counted in rural area and 309 lakh MSMEs (49%) are counted in the urban areas. Further it can be concluded that majority of enterprises are attracted by Micro sector in the MSMEs segments of India.

4. Percentage Distribution of Enterprises by Male/ Female Owners:

Table 4 : Percentage distribution of Enterprises by Male/Female Owners			
Category	Female	Male	All
Micro	20.44	79.56	100
Small	5.26	94.74	100
Medium	2.67	97.33	100
All	20.37	79.63	100

Source: MSME Annual Report 2018-19

It has been observed from the above table that the out of 633.88 lakh MSMEs, male owned 79.63% of enterprises as compared to 20.37% owned by female. Further male dominance in enterprise ownership has been more prominent for Small and Medium enterprises with almost around 95% or more enterprises being owned by male, as compared to Micro enterprises where around 80% of enterprises were owned by males.

5. Percentage Distribution of Enterprises by Social Category Wise

Sector	ST	SC	OBC	Others	Not known	All
Micro	4.11	12.48	49.83	32.79	0.79	100
Small	1.65	5.5	29.64	62.82	0.39	100
Medium	1.09	0	23.85	70.8	4.27	100
All	4.1	12.45	49.72	32.95	0.79	100

Source: MSME Annual Report 2018-19

The Table no. 5 shows the ownership of enterprises owned by socially backward groups in each of the three segments of MSMEs sector. The analysis reveals that the Micro sector has around 66.42% of enterprises which is owned by socially backward group(ST,SC &OBC), whereas Small and Medium sectors has around 36.80% and 24.94% of enterprises owned by the socially backward groups respectively. Further it has been observed that, out of the socially backward group, the OBC category people have the highest contribution in MSMEs ownerships.

6. Estimated Employment in MSME Sector:

Employment (in lakh)				
Broad Activity Category	Urban	Rural	Total	Share (%)
Manufacturing	173.86	186.56	360.41	32
Trade	226.54	160.64	387.18	35
Other Services	211.69	150.53	362.22	33
Electricity*	0.02	0.06	0.07	0
All	612.1	497.78	1109.89	100

Source: MSME Annual Report 2018-19

Above analysis shows the employment generation by the MSMEs sector. As per the data of National Sample Survey (NSS) 73rd round conducted during the period 2015-16, MSME sector has created around 11.10 crore jobs (387.18 lakh in Trade, 360.41 lakh in Manufacturing, and 362.22 lakh in Other Services and 0.07 lakh in Non-captive Electricity Generation) in the country including both rural and the urban

areas. Further it has been observed that the trade sector is the leader in terms of employment generation as compared to the other sector of MSMEs.

7. Growth of MSMEs

Table 7: Growth of MSMEs			
Parameter	Fourth All India Census of MSMEs, 2006-07	NSS 73rd Round#, 2015-16	Annual Compound Growth Rate (%)
No. of MSMEs (Total)	361.76	633.88	6.43
Manufacturing	115	196.65	6.14
Services	246.76	437.23	6.56
Employment (Total)	805.24	1109.89	3.63
Manufacturing	320.03	360.42	1.33
Services	485.21	749.47	4.95

Source: MSME Annual Report 2018-19

Above table shows the growth in number of MSMEs and employment in India during the period of 2006-07 to 2015-16. The data shows that service sector have enjoyed the highest ACGR of 6.56% followed by 6.14% ACGR of manufacturing sector. Further Total 6.43% of ACGR is observed in number of MSMEs in India. Out of total employment generation of 1109.89 lakh, service sector have generated highest number of employment I.e, 749.47 lakh. Further there is around 4.95% of ACGR is observed in service sector during the mentioned ten years period.

Conclusion:

In India MSMEs has achieved sound growth over the last couple of decades. The role of MSMEs sector is growing rapidly and they have become one of the most important areas for future growth of an economy. The major advantage of the sector is its significant contribution towards Indian GDP, employment generation and encouragement of entrepreneurship. The labour intensity of the MSME sector is much higher than that of the large enterprises. Similarly the capital cost for the establishment of MSMEs are much lower as compared to the large enterprises. MSMEs are complementary to other larger industries as ancillary units and this sector contributes considerably in the inclusive industrial growth of the nation. MSMEs have great potential to drive economic growth, so governments should remove constraints and create an enabling and healthy environment for the further development of the sector which will ultimately drive the growth of an economy.



References:

1. Bargal, H., Dashmishra, M., and Sharma, A. (2009), „Performance Analysis of Small Scale Industries - A Study of Pre-liberalization and Post-liberalization period“, International Journal of Business and Management, Vol 1, No 2
2. Dixit, A. and Pandey, A.K. (2011),SMEs and Economic Growth in India: Co integration Analysis“, The IUP Journal of Financial Economics, Vol. IX, No. 2, PP. 41-59
3. Singh, R., Verma, O.P., and Anjum, B. (2012), „Small Scale Industry: An Engine of Growth“, Zenith International Journal of Business Economics & Management Research, Vol.2 Issue 5
4. Venkatesh, S. and Muthiah, K. (2012), „SMEs in India: Importance and Contribution“, Asian Journal of Management Research, Vol. 2, No. 2.
5. 5 Dr. Neeru Garg, Micro, Small and Medium Enterprises in India: Current Scenario and Challenges, Paripex - Indian Journal Of Research, Volume : 3, Issue : 9, September 2014 ISSN - 2250-1991
6. Mrs Ashu Katyal, A Study on MSMEs’ - Role in Propelling Economic Development of India & a Discussion on current HR issues in MSMEs’ in India, International Journal of Scientific and Research Publications, Volume 5, Issue 2, February 2015,ISSN 2250-3153
7. Vinay Kumar, An Analysis of Growth of MSMEs in India and Their contribution in Employment and GDP of the Country, International Journal of Interdisciplinary and Multidisciplinary Studies (IJIMS), 2017, Vol 4, No.2,187-191.
8. Jeeban Jyoti Mohanty, A Study on Micro, Small and Medium Enterprises (MSMEs) in India: Status and its Performance, International Journal of Research and Scientific Innovation (IJRSI) | Volume V, Issue V, May 2018 | ISSN 2321–2705



CUSTOMER'S RETENTION POLICY OF MICRO ENTREPRENEURS IN HYDERABAD

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Abstract

Customers are very important to any business. Large scale business units adopt unique customer's retention policy. Micro entrepreneurs adopt traditional and psychological policy for customer's retentions. Micro entrepreneurs have close relationships with the micro entrepreneurs. Customer and entrepreneurs both make a close relationship. It is found that good behaviour is the key factor for customer's retentions. Customer retention is a business strategy. Without adopting the proper policy no businessmen get successful benefits from business activities. Every businessman targets the customers and makes a policy to motivate the new customers including old customers. Every product faces high level computations. Large scale entrepreneur adopt different mode of motivation by advertising gift voucher, festival offer etc. but this type of policy impossible to the micro entrepreneurs. Micro entrepreneurs direct contact with the customers and they adopt good behaviour policy. It gives long term benefits to the entrepreneurs. This research paper is to be critically analysed "**Customer Retention Policy of Micro entrepreneurs in Hyderabad**"

Key Words: Retention Policy, Sellers and Retailers Distribution Policy, Customer Requirements, Purchasing goods, Enterpreneurs

Statement of Problem

Profit is main motive of business. It can be achieved by adopting business policy as well as strategy. Every product produced by keeping the requirement of the customers. Whole sellers, Retailers are the part of channel of distribution. They play as a bridge between



industries and the customers. Customers play important role in every part of the economic system. Close relation with the customers are one of the important tool of the business. It helps in maintaining as well as promoting the business. Retailers are very near to the customers. They know the customers habits and their requirements. They can absolute forecast the requirement of the goods according to nature, seasons and level of the customers. Customers purchase goods from a particular shop or seller.

All customers not like every one seller. They want to purchase who satisfy them with price, quality of goods and with respect. Good communication creates close relationship in the business. This is costless thing which provide strong thought to the business. Large scale entrepreneurs adopt different business policies to motivate the customers. Discount policy, Home delivery, monthly instalments, Loan facilities, Festival offers, etc are some motivational factors which adopt by the large level entrepreneurs. They are very from the customers. Retailors, Micro entrepreneurs are near to the customers. Close relationship with the customers is main factor which is adopted by the micro entrepreneurs. Some time they discuss with the regular customers about health, education, Marriages, festivals, functions, and customs. Sometime take the suggestions from the customers about their children's. Good communication between them creates strong relationship which gives the profit to the retailer as well as the producers. Industrialist produces the goods and it can be passingthrough whole seller and retailors to the customers.

Significance of the research study

Micro entrepreneurs are very near to the residence areas. They know the customers need and wants. Every business gives preference to the customer's choice. Heavy competition in the market but micro entrepreneur not suffering and they are in safe mode. Customers visit only selected shops where they receive respect and proper things. After closed relation with the entrepreneurs they not count and take the bill, but they paid the price of the thing. Trust, respect, understanding are some important things which play very important role in promoting the business. New entrepreneurs should learn with



the policies of customer's retention. Every customer has different nature. Some customer follows the mutual respect policy which is create close relationship with the entrepreneurs. Psychological factors also play very important role in creating good relationship and trust. Customer prefers to go who will cooperate in the form of quality and reasonable prices.

Review of Literature:

RupaliPramaik and other (2015) express the customer retention modes in their article, "Empirical study of customer retention strategies of small retail shoppers". The three types of retail shoppers Grocery, Bakery and Apparel selected for the study with 200 samples. This paper shows the some policy of adopted by small retailers. Offering seats, offering choc lets to the kids, greetings on festivals, providing requirement goods, informing new arrivals are some method adopting by retailers.

Customer retention is the propensity of the customer to stay with their service provider (Ranaweera & Neely, 2016). Companies also need to be careful about the technological comfort of their customers, for example, innovations, which are smartphone app only, may end up alienating rural customers, where smartphone penetration is low, but on the other hand, prepaid card based innovations will be a major success amongst rural customers (Tripathy & Jain, 2020). Strydom et al. (2015) identify non-linear and asymmetric effects that suggesting that customers' evaluations of service performance are more sensitive to negative performance (dissatisfaction) than positive performance (satisfaction), accordingly, focusing on attributes for which customers are experiencing negative performance first, and then allocating resources to attributes for which customers are experiencing positive performance, can be far more consequential for improving customer satisfaction.

Managers can make suitable service improvement plans even with limited resources and once the improvements are duly implemented, the service might get higher user retention in the near future Vieira et al. (2019) found that salesperson assessment focus amplified



locomotion's effect on acquisition– retention ambidexterity, and salespeople increased their performance by implementing an acquisition–retention ambidextrous orientation that balances prospecting for new customers and growing existing customers.

Calculation of optimal commission based on customer retention and salesperson attributes helps a sales manager classify salespeople according to attributes and the importance of customers from a relationship perspective and it also aids sales managers in implementing an equitable pay structure based not only on salespersons' results, but also on their behaviors (Echchakoui & Ghilal, 2019). Service value (i.e., convenient hours, quality, friendliness), as well as length of ownership influence service retention, also, gender moderates the service value dimensions and service retention relationship such that various components of service value (convenient hours, friendliness and quality) were significant predictors of service retention whereas service value (friendliness, quality) were significant predictors of service retention for females (Darley & Luethge, 2019).

The optimal acquisition and retention expenditure strategies depend on each firm's marginal customer equity, but not on the market share or the number of customers, and in response to the variation of the firm's parameters, if its acquisition effectiveness is greater than its retention effectiveness, the firm would take action by making the same investment decision as its rival's; instead, if its acquisition effectiveness is lower than its retention effectiveness, its rival would take action by making the different investment decision from the firm's. Customers are loyal because of their attitude or behaviour, and they can be affected through quality products, reputation in the market, location of the store and price levels (Xhema et al., 2018). Retail companies, especially in Kosovo, should focus more on their reputation and product/service quality rather than lowering costs through having their store location in rural places, and the location of the store affects customers behaviour – the further the location of our store, more customers will replace with the competitors (Xhema et al., 2018).



Fader et al. (2017) found that even when aggregate retention rates are monotonically increasing, the individual-level churn probabilities are unlikely to be declining over time, as conventional wisdom would suggest. Osakwe & Anaza (2018) reveal the use of both traditional and digital marketing resources is associated with higher organizational performance, and customer retention efforts implemented by a firm, along with brand promotional tactics, increase not only firm profitability but also customer loyalty. Osakwe & Anaza (2018) also extend past findings by theoretically integrating firm size as a segmentation tool used to further evaluate the role of marketing resources on organizational performance and confirm that enterprise size is a significant moderator when explaining the relationship between customer retention orientation and e-brand promotion.

Li et al. (2018) reveal that uncertainty, identity attractiveness, and switching costs of omnichannel retailers partially mediate the effect of cross-channel integration (CCI) on customer retention while fully mediating the relationship between CCI and interest in alternatives, and also uncovered that customer showrooming strengthens the negative relationship between CCI and retailer uncertainty. Service quality and personalized attention is the most important factor followed by high cost of repair and time taken in servicing, according to industry experts, but from the customer's point of view, service quality and personalized attention are most important, followed by time taken in servicing and workshop timing (Kumar et al., 2017). Time taken in servicing, service quality and personalized attention, workshop timing and low customer awareness of warranty benefits are cause factors according to industry experts, but customer opinions are that careless attitude is also a cause group factor, not low customer awareness of warranty benefits (Kumar et al., 2017).

ASAGBA **Samuel1 and other** (2019) express the importance of customer retention, in their article “Customer Retention Strategies and Business Performance: A Survey of Selected Retail Chain Stores in South-South, Nigeria”. They focused on 18 selected retail chain stores and supermarkets in south-south region of Nigeria. This paper shows the customer retention policy as well as business profits.



Research Gap:

Research is conducted to full fill the research gap on customers retention policy of micro entrepreneurs.

Objectives of the study:

Research objectives have been evoked from research problem of statement and review of literature. The present research paper on “Customer’s Retention Policy of Micro Entrepreneurs” Hyderabad.

To study on customers retention policy of the micro entrepreneurs’

To know the impact of customers retention policy on business.

Methodology and Data Analysis:

Data is collected with simple random sampling method in different areas of the Hyderabad. Selected general business where customers visit very freely. Simple statistical tools used for analysing and findings.

Table No 1
The researcher taken Sample Size

Type of Business	Barber Shop	Boutique	Tailor	Tiffin Centre	Kiran Shop	Fresh JawarRoo ti	Total
Men	20	---	20	20	10	----	70
Women	---	10	10	---	-----	10	30
	20	10	30	20	10	10	100

Source: Primary Data collected by the researcher

Above table shows the sample size. Total hundred samples are collected out of which thirty per cent are female and seventy per cent



are male despondence. Data is belongs to six type of micro entrepreneurs.

Table No 2

Reasons

Particulaar s	Comm uni- cation	Trust and Close relatio ns ship	Punctua lity	Near to reside nce	Pri ce	Quali ty	Tot al
No of Respondent s.	20	30	10	15	10	15	100
Percentage	20%	30%	10%	15%	10 %	15%	00 %

Source: Primary Data collected by the researcher

Above table shows the reasons of the customer retention to the micro entrepreneurs. Thirty per cent of the respondece given that trust and close relationship with the customers is one of the important way by which customers can be retained with the business. Twenty per cent respondece shown that Communication is the one of the way for customer retention. If we join both it will be fifty percentage it means good communication and trust are the primary way for customers retention in micro entrepreneurs. Other factors like punctuality price quality are other factors which also adopt by the micro entrepreneurs. Automatically these factors are the part of trust. Good communication with the customers creates trust and close relationship. It helps in increasing the business. Some time they do general discussion like market situation, Government policies, Elections, Political policies etc.



Conclusion

Business is an economic activity. Profit is the main objective of the business. Every businessman adopts own business policy for long term benefits. Customer retention is one of the main problems in the market. Due to heavy competitions every business men adopt different policy for motivating the customers. Customer is a king in the market; hence all business activities run around him. Micro entrepreneurs not have huge investment and they cannot announce financial gift to the customers. Good communication is one of the important way by which create trust and confidence in the customers. All business benefits related with customers retention. Macro entrepreneurs adopt large scale customers retention policies like discount policy, gift voucher, festival offers, etc. Micro entrepreneurs cannot adopt like macro entrepreneurs. They adopt simple and cost free mode by which customer attract with the entrepreneurs.

References

1. Andreini, D., Pedeliento, G., Zarantonello, L., & Solerio, C. (2018). A renaissance of brand experience: Advancing the concept through a multi-perspective analysis. *Journal of Business Research*, 91(August 2017), 123–133. <https://doi.org/10.1016/j.jbusres.2018.05.046>
2. Anggraece, D., & Parawansa, S. (2016). Effect of commitment and customers' satisfaction on the relationship between service quality and customer retention in rural banks in Makassar, Indonesia. *Journal of Management Development*, 37(1), 53–64. <https://doi.org/10.1108/JMD-12-2016-0303>
3. Ascarza, E. (2018). Retention futility: Targeting high-risk customers might be ineffective. *Journal of Marketing Research*, 55(1), 80–98. <https://doi.org/10.1509/jmr.16.0163>
4. Bahri-Ammari, N., & Bilgihan, A. (2017). The effects of distributive, procedural, and interactional justice on customer retention: An empirical investigation in the mobile telecom industry in Tunisia.



- Journal of Retailing and Consumer Services*, 37(November 2016), 89–100. <https://doi.org/10.1016/j.jretconser.2017.02.012>
5. Bustamante, J. C., & Rubio, N. (2017). Measuring customer experience in physical retail environments. *Journal of Service Management*, 28(5), 884–913. <https://doi.org/10.1108/JOSM-06-2016-0142>
 6. Chang, C. W., & Zhang, J. Z. (2016). The Effects of Channel Experiences and Direct Marketing on Customer Retention in Multichannel Settings. *Journal of Interactive Marketing*, 36, 77–90. <https://doi.org/10.1016/j.intmar.2016.05.002>
 7. Chen, K. K., Chiu, R. H., & Chang, C. Ter. (2017). Using beta regression to explore the relationship between service attributes and likelihood of customer retention for the container shipping industry. *Transportation Research Part E: Logistics and Transportation Review*, 104(2017), 1–16. <https://doi.org/10.1016/j.tre.2017.04.015>
 8. Curras-Perez, R., Ruiz, C., Sanchez-Garcia, I., & Sanz, S. (2017). Determinants of customer retention in virtual environments. The role of perceived risk in a tourism services context. *Spanish Journal of Marketing - ESIC*, 21(2), 131–145. <https://doi.org/10.1016/j.sjme.2017.07.002>
 9. Dahmiri, Octavia, A., & Patricia, R. S. (2017). The Influence of Service Marketing Mix and Service Quality on Students' Satisfaction in Jambi University, Indonesia. *International Journal of Economics, Commerce and Management*, V(6), 398–414.
 10. Dal Bó, G., Milan, G. S., & De Toni, D. (2018). Proposal and validation of a theoretical model of customer retention determinants in a service environment. *RAUSP Management Journal*, 53(2), 202–213. <https://doi.org/10.1016/j.rauspm.2017.06.004>
 11. Darzi, M. A., & Bhat, S. A. (2018). Personnel capability and customer satisfaction as predictors of customer retention in the banking sector: A mediated-moderation study. *International Journal of Bank Marketing*, 36(4), 663–679. <https://doi.org/10.1108/IJBM-04-2017-0074>
 12. Del Rio Olivares, M. J., Wittkowski, K., Aspara, J., Falk, T., & Mattila, P. (2018). Relational price discounts: Consumers' metacognitions and nonlinear effects of initial discounts on customer retention. *Journal of Marketing*, 82(1), 115–131. <https://doi.org/10.1509/jm.16.0267>
-



13. Eberle, L., Milan, G. S., De Toni, D., & Lazzari, F. (2018). New services development: a study in the context of a health organization. *International Journal of Quality and Service Sciences*, 10(4), 366–383. <https://doi.org/10.1108/IJQSS-08-2017-0072>
14. Fader, P. S., Hardie, B. G. S., Liu, Y., Davin, J., & Steenburgh, T. (2018). —How to Project Customer Retention! Revisited: The Role of Duration Dependence. *Journal of Interactive Marketing*, 43, 1–16. <https://doi.org/10.1016/j.intmar.2018.01.002>
15. Wahab, N. A., Hassan, L. F. A., Shahid, S. A. M., & Maon, S. N. (2016). The Relationship Between Marketing Mix And Customer Loyalty In Hijab Industry: The Mediating Effect Of Customer Satisfaction. *Procedia Economics and Finance*, 37(16), 366–371. [https://doi.org/10.1016/s2212-5671\(16\)30138-1](https://doi.org/10.1016/s2212-5671(16)30138-1)
16. Xhema, J., Groumpos, P. P., & Metin, H. (2018). Switching-Costs , Corporate Image and Product Quality effect on Customer Loyalty : Kosovo Retail Market ScienceDirect Image and Product Quality IFAC Image 51-30 Product Switching-Costs , Corporate Corporate and Quality effect effect on on Customer Custome. *IFAC-PapersOnLine*, 51(30), 287–292. <https://doi.org/10.1016/j.ifacol.2018.11.303>
17. ASAGBA Samuel1 and others “Customer Retention Strategies and Business Performance: A Survey of Selected Retail Chain Stores in South-South, Nigeria”. *International Academy Journal of Business Administration Annals* Volume 7, Issue 1, PP 78-92, ISSN: 2382-9175, May, 2019 Double Blind Peer Reviewed International Research Journal <http://arcnjournals.org> journals@arcnjournals.org ©Academic Science Archives (ASA).
18. RupaliPrاماik and other “Empirical study of customer retention strategies of small retail shoppers”. *Journal of Business and Retail Management Research (JBRMR)* Vol. 4 Issue 2 April 2010,PP.99-106.