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SMT.MITHIBAI MOTIRAM KUNDNANI: ACCOUNTANCY COMMERCE ECONOMICS

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FROM THE DESK OF EDITOR

India is facing a battle on economic fronts and adversaries like inflation, slow growth, low GDP, Weakening industrial base etc. However, strong policy making base and resolving decade long issues effectively gives us the hope of revival on economic front too very soon.

Now the time has come to push India's economy towards solving Socio-economic issues, such as Unemployment and Poverty which can only make India emerge as an economic Superpower in real sense. Inculcating strong Higher Education base could be the right technique of solving many such problems which have been inherited over Generations. In order to achieve strong Higher Education base "Research" aptitude and attitude is essential. True objective 'Research' makes Education neutral and immensely useful to the society at large.

Keeping all such ideas in mind and heart I felt extremely overwhelmed to have the goal of bringing together a community of Researcher, Academicians and Students together in the form of Research Journal. It was the opportunity time for us to discuss the problems pertaining to the field of Accountancy, Commerce & Economics and also to share views with readers through this E-Journal "MMK: ACE". The Papers included in this Journal address various aspects of Accountancy, Commerce & Economics.

I extend my sincere thanks to the Management of HSNC Board and our dear I/C Principal Dr.CA Kishore Peshori for their valuable inputs, support and confidence in me for shouldering such a great responsibility.

I also extend my gratitude towards Editorial Board Members Dr. Megha Somani and Mr. Manikandan Iyer for always motivating me.

Further my sincere thanks to Peer-reviewers and Publishing House for helping us in publishing this E-Journal "MMK: ACE".

Last but not the least I would like to sincerely thank all the academicians' and students who have wholeheartedly contributed to this E-Journal.

I invite feedback and suggestions' from our Readers, Researchers and Academicians for further improving the quality of this E-Journal.

Dr. Aashish S. Jani

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PRINCIPAL'S MESSAGE

The Vision and Mission of Smt. M.M.K. College of Commerce and Economics, is to kindle intellectual curiosity among students and to motivate them to attain academic excellence. Simultaneously, it has also been our aim to encourage our faculty towards continuous up gradation of knowledge and improvement. It is also the endeavor of the HSNC Board to be at the forefront of human knowledge and work towards the fulfillment of cultural, scientific, intellectual and humane needs of society in general and students in particular.

In keeping with these ideals, we have come out with our first in house E-Journal "MMK: ACE". We are extremely happy to launch the inaugural volume of this journal at such an auspicious time when we are hosting the International Economics Convention in our college under the aegis of HSNC Board.

I wish to express my heartfelt gratitude to our management for providing such a platform of sharing ideas and views in a scientific manner. I also applaud the initiative taken by my editorial board in the compilation of this intellectual work.

I appreciate all the academicians, scholars and students for their valuable contributions and the thoughts that they have shared through this journal.

I hope that this journal will go a long way in contributing to the field of higher education and also to our society at large.

Dr. CA Kishore Peshori

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Noble Price Winner 2019
Abhijit Banerjee

we are Proud of You..!

Abhijit Vinayak Banerjee his full name, 58, was born in Mumbai (India) and attended South Point School in the city. He went to Presidency College, Calcutta, where he completed his BS degree in Economics in 1981. He completed his M.A. in Economics at the Jawaharlal Nehru University, Delhi in 1983. He was awarded a PhD in Economics at Harvard in 1988. Banerjee wrote his doctoral thesis on 'Essays in Information Economics' and received his doctorate in 1988.

Abhijit Vinayak Banerjee recently made India proud when his name was been declared in the list of the noble price winners in economics for their experimental approach towards alleviating global poverty, along with two others which included Michael Kramer and Esther Duflo who also is a respective wife of Abhijit Banerjee they become the 6th couple to win the noble prize and Abhijit Banerjee became the second Indian to receive this honor following Amartya Sen who won the first Nobel price in the year 1998 in economic sciences for his contributions to welfare economics and social choice theory and for his interest in the problems of society's poorest members.

Abhijit Banerjee has written over 6 books such as Poor economics, what the economic needs to know which was written along with the Ex Indian Governor Raghuram Rajan. Abhijit Banerjee has a 17-page long CV. The document boasts his impeccable academic records, key positions at Harvard, Princeton universities and several articles, as well as his books. The CV can be accessed on the Massachusetts Institute of Technology (MIT) website. In various Interviews Banerjee clearly stated that the slowdown of an country’s economy is a serious concern which should not be taken lightly and one must have a proper vision before implementing a particular economic policy.

Hence Abhijit Banerjee has made whole India proud at global level through his remarkable achievements and accomplishments his vision towards human empowerment is clearly visible.

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An Analytical Study on Financial Statements of Telecom Companies in India

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Abstract:- Telecommunications companies are essential for different sectors of society, as telecom company provides quality service and also helps to achieve objectives especially of business firms and enterprises. Telecommunications industry has observed many challenges and problems from different phases of growth such as maintainence of consistency in profit earning, competitive advantage, and many internal challenges like upgrading to accounting standards, cost of maintainence of quality service providing, taxes payments etc and other expenditures incurred.

Telecommunications sector are active agents for various banks, government organisation, and various other private sectors which help them to adopt different variations in changing technology and upgrade accordingly. Whereas telecom company income earning has taken big turn with different changing policies of government, ICAI guidelines for adopting upgraded accounting standards which lien burden of financial crisis on them. Telecommunications has always played vital role in development of growth of different countries of the world.

Keywords:- *Telecommunication Companies, Financial Performance, Changes In Accounting Standard.*

I. INTRODUCTION

Telecommunication has made the whole world a small village making life of people easy and fast moving, telecommunication has being major sector contributing for revenues, employment, and infrastructure development of the country.

Telecommunication also plays an essential role in the economicdevelopment of the country. Not only it has indicated Strong trading relations with other countries but also helps inraising the standard of living and their life style behaviours.

The Indian Accounting Standards (Ind AS) are bringing about a paradigm shift in financial reporting which is going to potentially affect many key metrics of performance.

The growth in demand for telecom services in India is not limited to basic telephone services but expanded in many service areas. India has witnessed rapid growth and development in internet services, wireless connections, mobile services and many more. There has been tremendous growth in telecom industry with the growing need in banking sector, industrial areas , corporate sector , educational field, and in various other areas but this growing need has created competition intensely between performance of their services in public as well private sectors.

Today's telecom market is full of services providers with varied range of networks and its coverage areas, although public sector and private sector play important role in hand in hand satisfaction of user's requirements. For example companies providing telecom services like reliance, Tata teleservices Ltd,Airtel, Bsnl, Aircel, etc.The intensity of competition is experienced between private and public telecom sectors and accordingly performance efficiency of respective industries are affected along with their profitability.

II. IMPORTANCE OF TELECOMMUNICATION COMPANIES SERVICES

- Telecommunications operators are mastering the demands of technological and regulatory changes while illustrating transparency, customer innovation and bringing new services to the market
- At present Privacy remains a significant issue for many telecommunications operators and poses ever-increasing challenges. This should come as no surprise; operators capture and hold enormous amounts of data on their customers. Therefore telecom service providers has to closely with governments to clarify their responsibilities in areas such as anti-terrorism and content for children, and collaborate with suppliers and partners to tackle privacy and security issues in new service areas
- Telecom services provide the network for information to be exchanged electronically, through wired or wireless methods. This information is shared from room to room or across the country. Examples include telephone, Internet-connected computers, fax machines and handheld communication devices. Smartphones and tablets have increased capabilities through mobile communication. Employees can use these devices to access information and applications, work on documents, send and receive emails and join conversations via teleconference.
- Nowadays consumers think of telecommunications in terms of both products and services. In modern times it has become permissible and increasingly common

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for consumers to buy telecommunications applications or equipment as products as well as services. For example, a customer-owned and customer-installed WiFi local area network may be the first access link supporting a voice over Internet Protocol (VoIP) service, and a consumer may purchase a VoIP software package and install it on his or her personally owned and operated personal computer that connects to the Internet via an Internet service provider.

- Telecommunication services has increased as such According to Global Workplace analysis, 3.3 million people work for an organization from home, and this number has grown drastically in the last ten years. If you have remote employees in your organization, or your employees are required to travel frequently for training and client meetings, the appropriate telecom services can help them stay connected.
- With increase in efficient use of telecommunication one can remove various constraints of all the sectors in the economy resulting into increased productivity and better administration. Effective controlling mechanism can be possible only through better communication and with better use of telecommunication equipments. In the developing countries earlier telecommunication was a big problem because all the means of communications were confined to the rich people only. But with the revolution in this sector now all the means are also available to middle and lower class people who play vital role in the growth of economy of any country.
- At present government alsouse of telecommunications have been in the area of document handling, to make it easier for agencies to process the paperwork associated with issuing regulations, granting permits, recording transfers of property, improving the use of information to collect taxes or assessments, and processing claims for benefits. Many of these applications of telecommunications allow agencies to deliver services to clients in a matter of minutes rather than hours and by telephone rather than in person.
- Telecommunication devices can also be most useful during natural calamity in any part of the country. At the time of earthquakes, floods and cyclones valuable lives can be saved with the help of telecommunication devices.
- With the changes in accounting policies regulatory changes like the new revenue recognition standard are prompting organizations to assess their current financial architecture and many are using this opportunity to refresh and make key changes to their core finance processes.
- 10.The next generation of telecommunications companies has to maintain the ability to respond with need and requirements of customer, regulatory and market changes.

III. AIMS AND OBJECTIVES OF STUDY

- To study revenue recognition practises of telecom companies
- To study the employee benefit schemes and problems related to it
- To study financial performance of telecom companies cost efficiency
- To study innovative accounting adopted by telecom companies
- To study of close down cdma process of telecom companies

IV. REVIEW OF LITERATURE

- KPMG LLP (2016), publication “Revenue for telecoms issues in depth” study of comparatives of current IFRS and US GAAP requirement and relevant
- AdjeiBoadi R. &Gause S.A 2006- in research paper publication ”Telecommunication is a significant source of revenue not only for its business operators but also to government through taxes paid by income earners in the mobile telecom industry
- Nodh&Nodh 2007, in research publication ”Telecommunication is cheap means of communication and therefore cost efficient and effective since it helps in reduction of cost of travel”
- Nigel scott et al..,2004- in research publication “ one might expect most call to be related to economic issues, research confirms that at present in India, it is socially used that helps usage of phone even among the poor people”
- S.GNimako 2009 in research publication “An assessment and analysis of customer satisfaction with service delivery of mobile telecommunication in Ghana” the study highlights mobile telecommunication plays a major role in updated information and knowledge to the business world
- Deloitte & aptitude revstream, 2018 in their publication, “ assisting clients of various sizes across the globe to ensure compliance with IFRS15 revenue standard” study makes us understood the impact on overall program of cost relevancy in illustrative manner
- Kai wong& Christopher Millikon, (Revstream),2017, in their publication, “Two transition methods that are acceptable to implement as per new revenue standards” the study reveals significance of changes in existing deferred revenue concept which may never be recognized as revenue as per changes in new accounting norms.
- KPMG 2018, Publication issues no. 19, “Accounting and auditing update” highlights an organization is a business model which is a vehicle through which it creates value, and the said values are adopted for capital impairment, organization are likely to increase or decrease the capital funds which may results into sustainable development growth
- EY limited, 2015 in their Publication ”The new revenue recognition standards- telecommunications” the said study reveals that IFRS15 specifies

accounting treatment for all revenue of telecommunication industry from contract with customers, the standards also helps in providing a model of recognition and also measurement of gains and losses on sale of certain assets like property, plant and equipments and also for intangible assets

- Andrea Pannone, 2001, Vol-10, pg no. 453-480, "Accounting and pricing for telecommunication industry, an operational approach" the said publication makes us understand the contradictory approach of problems arising during production and cost analysis models as such models are incapable of solving specific issues related to network services activities on one side and on other side it also it leads to incorporating tools to organize and keep accounting records for performing production activities.
- GRAPHA-Telecom audit advisory board,2012, publication, "Accounting for revenue in the telecommunications industry" the following study reveals that GRAPHA has studied set of guidelines and best practices which have proven to be helpful in revenue accounting, managerial accounting, to increase their efficiency and effectiveness
- Dravid Griffin and Clare Tebbenham, Deloitte 2010, publication, "Accounting in the telecommunications industry: A new view of revenue emerges" the study states the different types of issues like modifying revenue, accounting for cash or equipment incentives, contract cost consistency, losing control on long term contracts resulting bad debts, etc. as such requirement of revenue accounting in telecommunication industry needs disaggregation and its categorization in respect to products and geographies.
- Joseph Mbawuni, 2014, vol-3, pg. no. 4, in their Journal of Accounting and finance research, published paper "exploring management accounting practices in emerging telecommunication market in Ghana" the study states illustrative analysis of a leading telecommunication company i.e. MTN Ltd. in Ghana, which uses management accounting practices as strategic policy analysis with higher usage rate, as such MTN uses traditional budgeting techniques, costing methods which were based as low activity based costing, the reason evaluated for adoption of such management accounting practices are due to global competition, increasing cost and economic crises
- SP Kothari,2004, "Accrual accounting process Part -1, in this book, it states in details of basic accounting functions like classifying, preparation of T- accounts, T-accounts uses and purposes, recording of assets and liabilities, recording of expenses and revenues in an illustrative manner, which is basically applicable to all types firms for their accounting practices.
- Rai Technology University, in their book "Financial Accounting" the book states basic accounting standards, framework of financial accounting, basic principles of final accounting preparation, basic of management accounting and also various tools of financial analysis which is applicable and useful to all types of firms in their routine function of mechanics of accounting
- Institute of Cost accounting of India (ICAI)2016,publication,"Accounting and costing aspects in telecom" which highlights summary of Indian telecom market with reference to airtel, Vodafone, and Ideal Ltd., having 60% customers and 70% revenue share, study also reveals basic accounting practices like revenue for pre-paid and post paid transactions, profit and loss account preparation, relationship between revenue and cost, cost allocation methods, and also highlights guidelines and impact of TRAI on Indian telecommunication industry.

V. ANALYSIS OF FINANCIAL STATEMENTS OF TELECOM COMPANIES-

BSNL and MTNL are public owned telecom company income and revenue status have faced a changes whereas BSNL & MTNL share accounted for 13.6% and other private telecom companies accounted for 86.4% as per 2011 analysis of market share done

❖ *BSNL*

Years	Revenue (Rs. lacs)	Provisional Loss (Rs. lacs)	Employee benefits expense (Rs. lacs)	Depreciation and amortisation expense (Rs. lacs)	Trade receivables (Rs. lacs)	Trade payables (Rs. lacs)
2017	32,41,132	(4,85,916)	15,36,915	7,20,560	261515	268
2018	31,53,344	(4,79,321)	15,71,545	6,33,042	309881	592993
2019	2,507,064	(799,285)	1,483,724	583,158	392538	782989

Table 1

❖ *MTNL (Including Delhi and Mumbai Telecom Markets)*

Years	Revenue (Rs. Lacs)	Provisional Loss (Rs. Lacs)	Employee benefits expense (Rs. Lacs)	Depreciation and amortisation expense (Rs. Lacs)	Trade receivables (Rs. Lacs)	Trade payables (Rs. Lacs)
2017	3693	1947.54	2639.32	1151.59	492.01	388.53
2018	3552.46	2941.08	2647.81	1087.63	491.58	429.75
2019	3116.42	2973.03	2445.79	1028.68	424.27	428.80

Table 2

➢ *Review-*

Reason for provisional losses for BSNL and MTNL are as follows-

- Revenue for all services is recognized when earned and are realizable at the time of billing. Unbilled revenues from the billing date to the end of the year are recorded as accrued revenue during the period in which the services are provided
- Low tariff's due to competition in mobile segment
- High staff maintenance expenditure
- Absence of 4G services for customers in telecom market
- Great set back in year 2016 due entry of reliance Jio
- BSNL had 50% more expenditure than revenue
- MTNL has 70% more expenditures than its revenue earned
- BSNL & MTNL failed to build up brand building and also market building
- BSNL& MTNL had also lost most of its mobile subscriber base
- BSNL & MTNL also faced structural problems
- BSNL & MTNL also lacked the professional and skilled employees
- Anupam Shrivastav, BSNL chairman and managing director said " that bsnl is cutting cost in terms of electricity, administrative expenses and freezing the employee benefits in relation to leave travel concession and also other medical expenses are controlled
- BSNL 's Depreciation is provided based on the Written Down Value method at the rates prescribed in Schedule XIV to the Companies Act, 1956 except for Subscriber Installation. The Subscriber Installation is depreciated over the useful life of 5 years on Written Down Value method.
- BSNL's Intangible assets such as Entry License Fee for Telecom Service operations are amortized over the license period (i.e. 20 years) and standalone computer software applications are amortized over the license period subject to maximum of 10 years as per straight line method.
- BSNL Company did not have appropriate internal controls for reconciling and obtaining balance confirmation from sundry debtors, sundry creditors and other parties. This could potentially result in the Company materially misstating the trade payables and trade receivables.
- MTNL Depreciation is provided on Straight Line Method at the rates prescribed in Schedule XIV to the Companies Act, 1956 except in respect of Apparatus & Plant (including Air Conditioning System attached to exchanges), which is depreciated at the rates based on technical evaluation of useful life of these assets i.e. 9.5%, which is higher than the rates prescribed in Schedule XIV to the Companies Act, 1956.
- 100 % depreciation is charged on assets of small value in the year of purchase, other than those forming part of project, the cost of which is below Rs.0.01 Millions in case of Apparatus & Plants, Training Equipment & Testing Equipment and Rs.0.20 Millions for partitions.
- MTNL's credit risks related to trade receivables are mitigated by taking bank guarantees from customers where credit risk is high. The Company closely monitors the credit-worthiness of the debtors through internal systems that are configured to define credit limits of customers, thereby, limiting the credit risk to pre-calculated amounts.
- MTNL's all the receivables and payables including amount receivable/payable from/to Department of Telecommunication (DOT), ITI Limited, inter unit balances, bank balances including unlinked credits, and subscriber's deposits pertaining to Delhi wireless unit are subject to confirmation and/or reconciliation. Further, The Company is not making any provision for old un-reconciled outstanding balances from DOT, Govt. Agencies and dues from operators

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❖ *Reliance Jio-*
Reliance jio are privately owned Telecom Company has shown changes positively as shown below-

Years	Revenue (Rs. In cr.)	Profit & loss (Rs. In cr.)	Employee benefits expenses (Rs. In cr.)	Depreciation and amortisation expenses (Rs. In cr.)	Trade receivables (Rs. In cr.)	Trade payables (Rs. In cr.)
2017	1	-31	6	5	-	5923
2018	20158	723	963	3577	912	13263
2019	38844	2964	1658	6398	735	3601

Table 3

➢ *Review*

- A wholly owned subsidiary of Reliance Industries headquartered in Mumbai, Jio provides wireless 4G LTE service network (without 2G/3G based services) and is the only 'VoLTE-only' (Voice over LTE) operator in the country which lacks legacy network support of 2G and 3G, with coverage across all 22 telecom circles in India.
- The services were first beta-launched to Jio's partners and employees on 27 December 2015 on the eve of 83rd birth anniversary of late Dhirubhai Ambani, founder of Reliance Industries.
- It was commercially launched on 5 September 2016. Within the first month of commercial operations, Jio announced that it had acquired 16 million subscribers. This is the fastest ramp-up by any mobile network operator anywhere in the world.
- In October 2015, Jio announced that it would be launching its own mobile handset brand named LYF. In January 2016, it launched its first set of 4G-enabled smartphones named after the four elements: Earth, Flame (Fire), Water, and Wind.
- Reliance jio started since 2015-16 and accumulated profits as well as losses and presently it lead the market by 8million subscribers
- Reliance Jio has created a strong data network with infrastructure and backhaul for offering wireless services, wire line services, FTTH, Enterprise offering, IoT services and other digital services. These will lead to sustained growth in data consumption on the network
- JioGigaFiber services for Homes and Enterprise is being rolled out across 1,600 cities and customer feedback during the trials has been very encouraging. Jio is currently optimizing its service offerings across fixed broadband, entertainment and IoT based smart home solutions.
- Reliance Jio Industries' telecom arm, on Thursday reported 64.7 per cent increase in its net profit to Rs 840 crore in the March quarter of 2018-19
- The Company continues to invest in augmentation of the wireless network capacity and setting up wireline telecommunication project.
- Reliance Jio reported steady growth in subscribers with net addition of 26.6 million during the March quarter. The total subscriber base, as on March 31, 2019, was at 306.7 million.
- The undiscounted amount of short term employee benefits expected to be paid in exchange for the services rendered by employees are recognised as an expense during the period when the employees render the services.
- The Company pays gratuity to the employees whoever has completed five years of service with the Company at the time of resignation/superannuation
- Property, Plant and Equipment / Intangible Assets are depreciated / amortised over their estimated useful lives, after taking into account estimated residual value
- The depreciation / amortisation method is selected so as to reflect the pattern in which future economic benefits of different assets are expected to be consumed by the Company
- The application of Accounting Standard on Revenue Recognition involves complexity and use of key judgments with respect to multiple elements deliverables, timing of revenue recognition, accounting of discounts, incentives, etc
- The accounting policy followed by the company. “Jio says that currently its depreciation and interest costs are calculated on the basis that it is only utilising 20 per cent of its assets. As utilisation level increases, so will the expenses," which is again aggressive accounting policy but as per accounting standards that is uniqueness of reliance jio accounting policies.
- Trade and other receivables are initially recognised at fair values plus transaction costs and subsequently measured at amortised cost using the effective interest method less impairment. Interest is recognised by applying the effective interest method, except for short-term balances when the effect of discounting is immaterial.
- Trade and other payables are initially measured at fair value, net of transaction costs, and are subsequently measured at amortised cost, using the effective interest method, with interest expense recognised on an effective yield basis, except for short-term payables when the effect of discounting is immaterial.

❖ *Bharti Airtel Limited*

Years	Revenue (Rs. cr)	Profit & loss (Rs. cr)	Employee benefits expenses (Rs. In cr.)	Depreciation and amortisation expenses (Rs. In cr.)	Trade receivables (Rs. In cr.)	Trade payables (Rs. In cr.)
2017	62460	-99256	17385	12203.4	3211.8	14696.8
2018	53898	79.2	1720.9	13048	4319.6	17699
2019	49858	-1829	1471	15087.6	3849	19168

Table 4

➢ *Review*

- Bharti Airtel Limited also known as Airtel is an Indian global telecommunications services company based in Delhi, India
- Bharti airtel got losses due dramatic entry of reliance jio and its free cost service
- The company's customer base marginally fell to 282 million in India from 284 million in the December quarter. Its monthly churn rate fell to 2.8 per cent from 7.3 per cent in the previous quarter.
- Bharti Airtel also had taken steps for passive infrastructure pertaining to telecom operations
- Bharti Airtel has about **303.08 million subscribers** worldwide—264.58 million in India and South Asia and 50.949 million in Africa as of December 2011. The numbers include mobile services subscribers in 19 countries and Indian Tele media services and Digital services subscribers.
- Sunil mitthal founder member of Bharti airtel limited has put proposal for 5g subscibtion rights for25000 crores from digital tv,broadband services etc.
- The Companys employee benefits mainly include wages, salaries, bonuses, defined contribution to plans, defined benefit plans, compensated absences, deferred compensation and share-based payments, The employee benefits are recognized in the year in which the associated services are rendered by the company employees.
- The receivables are assessed on an individual basis or grouped into homogeneous groups and assessed for impairment collectively, depending on their significance, Moreover, trade receivables are written off on a case-to-case basis if deemed not to be collectible on the assessment of the underlying facts and circumstances
- Depreciation on tangible assets is provided on the straight line method based on useful lives of respective assets as estimated by the management or at the rates prescribed under Schedule XIV of the Companies Act, 1956, whichever is higher. The assets" residual values and useful lives are reviewed at each financial year end or whenever there are indicators for review, and adjusted prospectively. Freehold Land is not depreciated.
- The carrying value of trade payables and trade receivables at their fair value due to short term maturities of these instruments subject to floating rates.

❖ *Vodafone Idea Limited-*

Years	Revenue (Rs. cr)	Profit & loss (Rs. cr)	Employee benefits expenses (Rs. In cr.)	Depreciation and amortisation expenses (Rs. In cr.)	Trade receivables (Rs. In cr.)	Trade payables (Rs. In cr.)
2017	35475	-831	16256.38	7700.02	12580.95	3992.13
2018	28126	-4780	13968.10	8316.12	887.3	3560.45
2019	37932	-14056	2120.9	14409.8	3308.10	12674.30

Table 5

➢ *Review*

- The company's operating profit decreased by 40.8% YoY during the fiscal. Operating profit margins witnessed a fall and stood at 21.4% in FY18 as against 28.7% in FY17.
- Depreciation charges increased by 7.4% and finance costs increased by 20.9%
- Vodafone Idea, which is in the phase of leveraging merger synergies, has advanced the target of realisation of these by two years to FY21
- The company also said though headline tariffs remained stable during the quarter, with customers moving to lower bundled offers, leading to fall in revenue

- Both companies — which are making losses amid huge revenue pressure and combined debt of some Rs 1,20,000 crores
- Trade receivables represent amounts owed by customers where the right to payment is conditional only on the passage of time. Trade receivables that are recovered in installments from customers over an extended period are discounted at market rates and interest revenue is accredited over the expected repayment period
- Trade payables mainly consist of amounts owed to suppliers that have been invoiced or are accrued and contract liabilities relating to consideration received from customers in advance
- It continues to focus on progressive employee relations policies, creating an inclusive work culture and building a strong talent pipeline

5. CDMA business closed down by many telecom companies due to emergence of 4G services to the subscribers as a result subscribers need led to close down of CDMA services in many areas as followed-

They are different types of cellphone technology.
1G was analog voice. Huge brick phones.
2G was digital = voice + text. Nice small phones with long battery life but no internet.
2.5G adds internet: slow, text only. Similar to dial-up
3G = voice + reasonably good data. First smartphones & of today's phones.
4G = broadband wireless data, with voice as VoIP. Fast data, and smartphones in the future.

They are different technologies:

- CDMA is a standard used in USA and a few other places for 2G & 3G eg by Verison
- GSM was a rival standard for 2G, that is used in most of the world
- WCDMA and HSPA are the follow-on technology for 3G
  (but in America some people still called it GSM to emphasize its roots and just to confuse people) LTE is the 4G technology used everywhere

CDMA, Code Division Multiple Access, uses advanced mathematical techniques to allow multiple wireless devices to transmit simultaneously on the same frequency. Every device, such as a mobile phone, is assigned a unique mathematical signature. It applies this signature to the original signal and transmits the modified signal. A receiver applies the inverse of the mathematical operation to recover the original signal.

BSNL offers variety of services on CDMA technology like CDMA fixed, limited mobile &mobile services. BSNL also offeres CDMA data VPN for enterprises customers using CDMA 2000 technologhy. WI-FI router are also available for home/office usage.

Fixed CDMA service is a service provided using fixed wireless Terminal and a telephone instrument or integrated fixed wireless terminal (IFWT). The Fixed Wireless Terminal (FWT)/IFWT will be connected with an indoor type or outdoor type antenna depending on the location of the premises keeping in view the strength of the radio signal to be transmitted and received.

MTNL was refunded Rs 458.04 crore and BSNL Rs 169.16 crore on account of surrender of CDMA (Code Division Multiple Access) spectrum, as a procedure to provide financial benefit to MTNL and BSNL
Reliance Jio-

- RCOM had apparently already informed its subscribers in early April about migration of its CDMA services to 4G. For this transition, RCOM had paid Rs 5383.84 crore as a liberalization fee to the telecom department under the 800 Mhz band in 16 circles in January.
- **JIO** works on **GSM** 4G VoLTE technologies. If your are considering **GSM** as 2G, then you cannot use it. **JIO** only supports 4G devices. It doesn't work on 2G, 3G devices.

Reasons of Failure of CDMA in India-

- CDMA failed because it doesn't give choice and freedom to users. Unlike in US where customers are in contract with mobile operators in India customers are free to choose any operator and hence CDMA brings a mental roadblock for the customers where they are tied up with the operators.
- In market right now there are very less manufacturer for CDMA handsets as well as except TATA , Reliance and MTS none of other operator is providing CDMA services. So Due to lack of availability of CDMA handsets and CDMA service provider, customers always prefer to use GSM networks only.
- he higher frequencies of 3G mean that are greater density of base stations is needed to provide coverage as good as GSM, so this is a technological factor. CDMA is attractive for cellcos as it allows them simpler radio planning and no fixed limits on users per base station. Advantages for users are often not so clear.
- A disincentive for operators has been the regulatory uncertainty (more than in GSM) for 3G CDMA spectrum.
- There is simply not enough spectrum to allocate a dedicated frequency between the handset and the base station to every individual user by CDMA technology
- Limited data rates, difficult to support demand for internet and e-Mail Real works fail to match type, failure for internet access also led to decline in CDMA based technology
- In India, CDMA handsets and equipment are not easily available and vendors have also stopped supplying these. Further, technological advances such as the emergence of 4G and 5G, which are newer and better technologies, have also added to its woes

- he total number of CDMA users in the country stood at 12.59 million on March 31, 2017, a drastic fall from its peak of 114 million in June 2011
- GSM is used mostly across Europe, Asia and West Asia, while CDMA is available only in a few Asian countries and the US.
- In 2017 TATA Telecom closed down with debt of Rs.30000 crores due to Failure of joint venture with NTT docomo 3years ago, and again consolidation with other telecom led to debt raising and great effect with the entry of reliance Jio services in September 2016, competition led to closure of TATA telecom services, therefore in March2017,with the Net Loss of 4617 crores closure was announced
- Tata Teleservices which operates mobile services under the Tata DOCOMO brand with its sister company Tata Teleservices Maharashtra Ltd (TTML), has completed the proposed surrender of 20MHz of CDMA spectrum to the Department of Telecommunications (DoT) in december 2013.

VI. CONCLUSION OF STUDY

- Through this study customer relationship of selected telecom companies can be revealed along with future prospects can be traced for long term relationship of the customer loyalty programme and the telecom company policies for the future growth and development
- Through this study the revenue expenditures of selected telecom companies along with the comparison in its efficiency can be identified which can be helpful for justifying profit earninf efficiency of the telecom companies
- Through this study the different cost accounting estimations of selected telecom companiesand also cost benefit advantages enjoyed by the different telecommunication companies by pooling together their networks and contract policy resources for providing competitive quality services in the market
- Through this study plans and policies of selected telecom companies can be understood with reference to contract modifications in providing services for the existing contracts and also for the new connection contracts with the banking operations, security systems, business dealings etc.
- The study can also focus on contribution towards society by tax payments policies by the selected telecom companies as such services sector is comparatively ahead in payment of various taxes as such tax deduction at source, professional taxes, banking regulations taxes wealth tax, and any other direct tax as per applicability resulting in contribution in growth and developments in the welfare of the society
- The study also gave importance to the changes and up gradation on accounting standards adopted by the various telecommunication services providers as such adoption of IND AS as earlier GAAP regulations was followed which will also show positive growth and accountability in the transactions, their contract policy, revenue recognition, customer loyalty points and many more developments as per standards.
- The study helps in understanding the usage of capital reserves and also allocation of overheads in capital utilisations with the help of cash flow statement of different telecommunication companies
- The also helps in gaining the knowledge regarding amortisation and other non – cash expenditure policy and their adjustment in the revenue statements and cash flow statements
- Through this study the deferred government grants and its utility can be understood for the different telecommunication companies
- The helps to understand the role of telecommunication as agent of banks and stock markets for providing different transfer services to keep pace with delighting the customers

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An Empirical Study on Perceptions towards Tax Planning among Youth

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Abstract:- One of the best way to reduce the tax liability is, taking a timely decision. For this it is necessary that appropriate measure are taken in this regards in terms of saving and investment. Generally it's observed that tax payers make planning at the end of the financial year to reduce their tax liability, this may be due to lack of awareness or complexities of the tax laws. Considering above background, the present study is watchfully carried out to appraise the tax planning perception among youth, as the future of any country depends on their young and vibrant population. And also they are prospective tax payers of future, once they enter the real world after their completion of education. The primary data have been collected through a well-structured questionnaire, comprising optional type and Likert's 5 point scale type questions, and in total 210 sample were collected from the participants. Major significance was reported from the study based on Gender and education and Budgeting and keeping financial records are essential for Tax Planning and Regular updating of knowledge perception

I. INTRODUCTION

The aim of any tax planning is to make sure that there is tax efficiency. Tax planning let's all fundamentals of the financial plan to role in synchronization to deliver all-out tax efficiency. Tax planning is necessary and viral for budgetary effectiveness. If an individual wants to reduce its tax liability and if he wants to maximize the ability of retirement plans he or she must do proper tax planning. And one should to analysis his or her own financial state of affairs from a tax productivity point of view so as to plan his or her financial situation in the most enhanced manner.

With the proper Tax planning the tax payer is in a situation to take the benefits of all different types of tax exemptions, deductions and benefits to minimalize their tax liability over a financial year. Several of us engross in an economic activity and to put our maximum effort for that work really hard to make a living. But then again as we work hard to make a living, it becomes vital for us to work a slightly more harder and cleverer to save our taxes (the legal way) too. Very often it has been observed that that many of us (especially the younger ones) keep their tax planning implementation pending till the eleventh hour. They prefer indulging on things of money-oriented interest which leads them to sub-optimally save tax.

The utmost significant argument in financial planning is that one must start from the early age. Even a minor quantity invested over a longer period will have an immense influence on one's portfolio. It cannot be rewarded even by doubling up the investment.

On the other hand, not all young people are in the frame of mind to save when they start their career. Their pay cheque may not be heavy, but they do not have many accountabilities at this juncture. This is the reason they may have tendency to spend high, bearing in mind that they are recognizing financial independence for the first time. According to a survey carried on by the HDFC Life, the reports disclosed that many of the young Indians who are in the age group of 20-30 years usually score low on financial awareness and planning. That does not mean there id complete unawareness of planning, this displays that they are not fully aware about the advantages of goal-based financial planning. Many of them do not realize that this is the perfect opportunity or time to start construction a corpus by investing additional funds so that they can accomplish all their visions.

Disagreeing to common conviction, there is a requirement for financial planning is for all age groups. Despite the fact that the younger generation must have to plan for their whole life, the middle-aged have to safeguard that they don't fall short of money subsequently after retirement. Notwithstanding of the age, there are some problems we can face anytime. Have you planned anything if you losses your job? Or for that matter as if stock market does not move according to your expectation or it crashes that can wipe off a large portion of your savings? Or in case of unfortunate accident that can leave you unfit to provide for your family? Such things are harsh to visualize but they occur more frequently all the time. The applicability of a financial plan is completely understood when you start to put your complete future in viewpoint, emotional as well as financial. As long as there are income and expenses, financial planning must be done for every single individual notwithstanding of age or wealth. The plan should predominantly answer three questions. Where you are today, where do you want to be tomorrow and what you must do to get there. A financial plan supports you to deal with the consequence of inflation and shape a superannuation corpus.

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II. LITERATURE REVIEW

- **Ronald.C.Gable** (1983) conducted a study on investments and financial planning of individuals and it was observed that each individual must be responsible for his or her financial decision making. Only knowledgeable active decision makers will achieve financial security. The study observed that all planning is purposeful and financial planning can be done only by those who sets goals and actively strive to implement those goals.
- **Dr.G.Thimmaiah** (1984) provided a theoretical background to the principles of tax design and tax reform. The defects in the existing taxes in India were discussed against such theoretical background and outlined the need and scope for tax reforms in Indian tax structure. The study covered most of the direct taxes of the Central Govt. and also gave attention to important indirect taxes levied by the central and state governments.
- **Sunnykutty Thomas** (1998**)** studied the tax planning practices among the salaried people of Kerala, in general to judge the extent of awareness and compliance of tax planning schemes among the salaried people. The study revealed that there is a positive relation between tax planning awareness and assessment age. It was found that neither the tax administration nor the employer had framed any regular methodology so far to impart training to the salaried people in effective tax planning. The study also revealed that there was a significant variation among the employees of different employment sector as regards the number of tax planning schemes selected by them. The study concluded that even though employees were aware of certain tax planning schemes, they were not implementing the decision of tax planning in their actual life.
- **Muneer** (2002) studied the awareness of college and university department teachers on tax planning measures and the investment pattern followed by them for availing tax benefits under the Income Tax Act. The study included the tax planning measures adopted by the respondents for the AY 2001 - '02. It was observed that there was a general level of awareness among the respondents on the various tax planning measures available under the Income Tax Act. However, there was variation in the extent of awareness among the respondents regarding certain tax planning measures
- **Rini Hastuti** (2014) conducted a study, It employed 341 students of Soegijapranata Catholic University (SCU); they then were divided into two groups that were 54.3% business and 45.7% non-business students. Meanwhile there are significant differences of student's perception in the importance of tax education and the need to have tax as a subject between the groups. This research is mainly aimed to investigate contextual and ethical tax awareness between business and non-business students; it is also investigate student's perception if tax is important therefore they need to learn since it is unavoidable onus. Level of the importance and the need between the two groups is significantly difference.

III. NEED OF THE STUDY

Tax planning reduces the tax liability through appropriate savings and investment decisions. Generally, tax payers plan their tax liability only at end of the financial year. So, tax payers cannot make viable investment decisions for minimizing their tax incidence. The prime reason for this issue is lack of awareness on taxation laws and complexities in the understanding of tax laws even among the educated assesses too. Hence, the awareness on various investment avenues with tax benefits is also too scanty. Only a few studies were conducted in India as the concept is relatively new, therefore, an effort has been made to study perception towards tax planning level of youth. One of the study found that those who are well informed and updated when they are young will more likely takes steps later in life to build wealth .With this background, the present study is vigilantly carried out to evaluate the tax planning perception among youth, as they are the future of the India and will contribute to the economic development to great extent.

The present study will help in determination of critical areas that will assist educators, regulators and financial institutions to design Tax planning courses with better significance in serving adults to accomplish better financial freedom and be well equipped for retirement.

IV. RESEARCH DESIGN

A. Objectives of the Study

- To measure perception of individual towards tax planning among youth.
- To appraise the effect of factors like age, gender and education level on perception of individual towards tax planning
- To compare perception of individual towards tax planning between arts, Science & commerce streams of the education.
- To offer suggestions and findings of the study

B. Hypothesis of the Study

H0: There is no association between gender, age, Educational Qualification and perception towards tax planning among youth

H1: There is an association between gender, age, Educational Qualification and perception towards tax planning among youth

C. Research Methodology

The data have been collected through both primary and secondary data. The primary data have been collected through a well-structured questionnaire, comprising optional type and Likert's 5 point scale type questions. Secondary data is referred from internet, books, magazine, journal, newspaper etc.

- **Research design** – Descriptive and Explanatory
- **Sampling method** – Convenience sampling
- **Sample size** -267
- **Tool used (MS-Excel & SPSS)**

- **Data collection tool**- Questionnaire
- **Data analysis tool**- Frequency & Percentage analysis
- **Data presentation tool**- Table
- **Hypothesis testing** –Pearson Chi-Square Test

V. LIMITATIONS OF THE STUDY

The research area of the study is confined to Mumbai city. The information provided by the respondents is purely based on their perception only. The quality and reliability of the data collected is the actual expression of respondents. Results of the present may not be generalized, as different results could be obtain due the different perception of individuals in another city.

VI. DISCUSSION AND ANALYSIS

- *Frequencies Analysis*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	16-17 Age	8	3.0	3.0	3.0
	18-21 Age	223	83.5	83.5	86.5
	22-25 Age	34	12.7	12.7	99.3
	4.00	2	.7	.7	100.0
	Total	267	100.0	100.0	

Table 1:- Age of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	193	72.3	72.3	72.3
	Female	74	27.7	27.7	100.0
	Total	267	100.0	100.0	

Table 2:- Gender of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Arts	22	8.2	8.2	8.2
	Science	35	13.1	13.1	21.3
	Commerce/Mgmnt	210	78.7	78.7	100.0
	Total	267	100.0	100.0	

Table 3:- Educational Background/Stream

VII. DATA ANALYSIS & INTERPRETATION:

The Cronbach's alpha coefficient for the eleven items is .792, suggesting that the items have relatively high internal consistency. (Note that a reliability coefficient of .70 or higher is considered "acceptable" in most social science research situations.)

Reliability Statistics	
Cronbach's Alpha	N of Items
.792	11

Table 4

The hypothesis was tested by applying Chi-Square test with the help of SPSS software.

Perceptions towards Tax Planning	**Age (P value)**	**Gender (P value)**	**Education (P value)**
Budgeting & keeping financial records are essential for Tax Planning	0.797	0.150	**0.002**
One must know the Income tax Rules and Regulation	0.657	0.370	0.093
I freely discuss with others ,regarding financial or tax planning	0.363	0.439	0.128
One must try to take information from all authenticated sources and keep myself updated regarding Income tax issues for my better	0.984	0.762	**0.050**
Proper tax planning will significantly reduce your income tax liability	0.978	0.982	0.770
Tax planning highly essential in today's dynamic world	0.901	**0.050**	0.686
Tax saving can add to your income	0.226	0.439	0.107
Everyone single person must acquire basic tax planning knowledge	0.733	0.363	0.230
The hardest thing in the world is to understand income tax	0.299	0.842	0.069
Knowledge of tax planning will help you to escape any unnecessary delay, and therefore penalty imposed by government agencies	0.820	0.112	0.919
Basic Tax Planning subject must be included to non-commerce based courses also	0.954	0.328	0.818

Table 5

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VIII. FINDINGS

Since the p-value is less than our chosen significance level ($\alpha = 0.05$), we reject the null hypothesis. Rather, we conclude that there is enough evidence to suggest an association between Education and Budgeting and keeping financial records are essential for Tax Planning and Regular updating of knowledge perception. Since the p-value is less than our chosen significance level ($\alpha = 0.05$) , we reject the null hypothesis. Rather, we conclude that there is enough evidence to suggest an association between Gender and Essentials of Tax planning perception.

IX. CONCLUSION & RECOMMANDATION

- It can be understood from the data analysis that there is no relation between the tax planning perception and age of the respondent.
- Gender of the respondent plays no role in the perception of tax planning however the only aspect here, 'considering tax planning essential' is affected by the age of the respondents.
- Education is meant to improve learner's understanding and knowledge/information gathering skills. The same is revealed by the study that education of the respondents affect budgeting and keeping records' and authentication of the information aspects of the tax planning rest all aspects are not getting affected by the education of the respondent.
- It is observed that youth are aware about their onus of the tax planning which may turn them responsible citizen in future.
- However, it is also observed during the study that though the respondents know their responsibility towards taxation but they are not aware about the procedures or rules and regulations of taxation. Therefore, it is recommended that tax department and other concerned stakeholders shall carry extensive awareness campaign to make the taxation procedures known more among the taxpayers

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The MSME Sector – Significance, Constraints and Need for Exploring Alternative Funding Sources

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Abstract:- The Micro, Small and Medium Enterprises (MSME) sector comprises large number of business units involved in various manufacturing and service oriented activities. It has presence in urban and rural areas. Through its contribution to economic growth, employment generation and exports, it has great potential to bring about overall economic development, eliminate regional imbalances, provide employment opportunities and contribute to poverty alleviation. Several concerted efforts were made by the Government aimed at furthering its development and growth. The study examines the size and characteristics of the sector, its significance in terms of its contribution to the growth of the economy, employment generation, policymeasures adopted, constraints to its growth, specific reasons for lack of formal funding in the form of bank finance. While it is necessary to address the specific constraints to low bank credit, it is equally important to explore alternative sources of funding for the sector.

Keywords:- *Bank Credit, Credit Gap, Informal Sources of Finance, Non-Banking Financial Sources, Venture Capital, Private Equity.*

I. INTRODUCTION

The Micro, Small and Medium Enterprises (MSME) sector includes business units which are involved in production of a wide range of products or provision of services. They are heterogeneous and are spread across the length and breadth of the country, employ skilled or unskilled labor, have different capital requirements, cater to urban or rural markets. They have wide disparities in their operations, usage of technology, customer base or market presence. Most of business units are unregistered and tap informal sources of finance while a few of them are registered and have access to institutional finance. The MSME sector is the focus of several policy initiatives by the Government on account of their potential to promote job and employment opportunities, develop entrepreneurial skills, provide regional development, alleviate poverty and contribute to national income and prosperity.

➢ *Definition*

- The MSMED Act, 2006 uses the criteria of investment in Plant and Machinery for a manufacturing unit and investment in Equipment for a service unit as a basis for definition. All business units in manufacturing or service sectors are classified into Micro, Small or Medium sector enterprises.
- "In manufacturing sector, an enterprise is defined as Micro Enterprise if its investment in plant and machinery is less than Rs. 25 lakhs, Small Enterprise if its investment is in the range of Rs. 25 lakhs to Rs. 5 crores, Medium Enterprise if its investment is in the range of Rs. 5 crores to Rs. 10 crores.
- In service sector, an enterprise is defined as Micro Enterprise if its investment in equipment is below Rs. 10 lakhs, Small Enterprise if its investment is in the range of Rs. 10 lakhs to Rs. 2 crores, Medium Enterprise if its investment is in the range of Rs. 2 crores to Rs. 5 crores"[1].
- As per amendment to MSMED Act 2006 approved by the cabinet, the new definition of MSME is proposed on the basis of Annual Turnover. A business unit producing goods or rendering services will be classified as follows: "A Micro Enterprise is a unit whose annual turnover does not exceed Rs. 5 crore. A Small Enterprise is a unit whose annual turnover is between Rs. 5 crore to Rs. 75 crore. A Medium Enterprise is a unit whose annual turnover is between Rs. 75 crore to Rs. 250 crore"[2].

II. OBJECTIVES OF THE STUDY

- ➢ To understand the size and characteristics of MSME sector
- ➢ To study the significance of the sector
- ➢ To study the policy measures adopted for promotion of the sector
- ➢ To examine the problems faced by the sector
- ➢ To understand the credit gap and constraints in accessing bank credit
- ➢ To explore the need for alternative funding sources.

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III. SIZE AND CHARACTERISTICS OF THE SECTOR

The total number of enterprises comprising MSME sector, its classification into micro, small and medium sector, its presence in rural and urban locations, registered and unregistered units, its organization structure are detailed below.

As per National Sample Survey round 73 on unincorporated non-agricultural enterprises, there are 633.88 lakh enterprises in MSME sector in the country during 2015-16. Their distribution is as follows:

Category	Rural (in lakhs)	Urban (in lakhs)	Total (in lakhs)	Percentage share
Manufacturing	114.14	82.5	196.65	31%
Trade	108.71	121.64	230.35	36%
Other Services	102	104.85	206.85	33%
Electricity	0.03	0.01	0.03	0
Total	324.88	309	633.88	100

Table1:- Number of MSMEs category-wise and location-wise during 2015-16
Source: Annual Report of the Ministry of MSME.

Enterprises in manufacturing sector are 196.65 lakhs, in trade 230.35 lakhs, in service 206.85 lakhs. There are around 324.88 lakh units in rural areas and 309 lakh units in urban areas. In terms of business activities, they are evenly distributed across manufacturing, trade and other services. Location-wise, manufacturing units are concentrated more in rural areas while trade and other services units are more in urban areas.

The micro sector constitutes 99.46% of the total with around 630.52 lakh units. The share of small sector and medium sector is 0.54% with around 3.31 lakh and 0.05 lakh units respectively. The aggregate growth rate was 6% in the decade of 2006-07 to 2015-16[3].

Registered	8.5	15%
Unregistered	47.6	85%

Table 2:- Number of MSMEs in terms of registration(in Million)
Source: Ministry of MSME-UdyogAadhar, World Bank Group-Intellecap Analysis[4].

Majority of the MSME units are unregistered. Registration is not compulsory under MSMED Act, 2006.

Business structure	Percentage
Sole Proprietorship	93.38
Partnership	1.53
Private Company	0.23
Public Company	0.04
Cooperatives	0.13
Others	4.24

Table 3:- Organization Structure Adopted
Source: MSME Annual Report, 2017, World Bank Group-Intellecap Analysis[5].

Majority of them are organized as Sole Proprietorship units.

IV. SIGNIFICANCE OF MSME SECTOR

The significance of the sector is examined in terms of its contribution to economic growth and employment generation.

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Year	MSME GVA	Total GVA (at current price)	Share of MSME in GVA (%)	Total GDP (at current price)	Share of MSME in GDP (%)
2011-12	2583263	8106946	31.86	8736329	29.57
2012-13	2977623	9202692	32.36	9944013	29.94
2013-14	3343009	10363153	32.26	11233522	29.76
2014-15	3658196	11481794	31.86	12445128	29.39
2015-16	3936788	12458642	31.60	13682035	28.77

Table 4:- Contribution to Economic parameters (in Rs. Crores adjusted at current prices)
Source: Annual Report of the Ministry of MSME.

The MSME sector has contributed around 31 percent to Gross Value Add (GVA) and 28 to 29 percent to total Gross Domestic Product (GDP). Its contribution has remained constant over the period of five years from 2011-12 to 2015-16. Contribution of service sector MSME to GDP is in the range of 27.4% to 30.5% during 2006-07 to 2012-13, while that of manufacturing sector MSME is in the range of 7.73% to 7.04% for the same period[6].

It promotes manufacturing through more than 6000 products, contributes about 45% to manufacturing output and about 40% of exports[7].

Category	Rural (in lakhs)	Urban (in lakhs)	Total (in lakhs)	Percentage share
Manufacturing	186.56	173.86	360.41	32%
Trade	160.64	226.54	387.18	35%
Other Services	150.53	211.69	362.22	33%
Electricity	0.06	0.02	0.07	0
Total	497.78	612.1	1109.81	100

Table 5:- Employment Generation by MSME Category-Wise (in lakhs)
Source: National Sample Survey (NSS) 73rd Round, 2015-16[8].

The share of micro sector in total employment is 97%, while that of small and medium sector is 2.88% and 1.75% respectively. In quantitative terms, Micro sector provides employment to 1076.59 lakh employees. Small and Medium sector provides jobs to 31.95 lakh and 1.75 lakh employees[9].

MSME is the second largest employment generator in the country, next only to agriculture. It provides 80 percent of the jobs in the industry with only 20 percent of investment[10]. More jobs are provided in urban areas than in rural areas. Employment opportunities are more or less evenly divided over different categories of MSMEs.

V. INSTITUTIONAL SUPPORT AND POLICY MEASURES

The following section details the institutions involved and policy measures adopted for promotion of the sector:

❖ *Institutions Involved:*

The Ministry of MSME, Government of India, formulates policies aimed at facilitating overall growth and development of the MSME sector. It has formulated MSMED Act in 2006. Prior to that, several regulations were in place, indicating their significance in promoting economic growth.

The Reserve Bank of India (RBI) regulates formal credit through Banks and Non-Banking Financial Companies. Banking sector includes Scheduled Commercial Banks such as Public Sector Banks, Private Sector Banks, State Financial Corporations, Regional Rural Banks, Cooperative Banks, Small Finance Banks. Non-Banking Finance Companies includes Micro Finance Institutions and Other Non –Banking Finance Companies. RBI formulates policies which have direct impact on access of bank and non-bank credit to MSME sector. Some of the Banking institutions involved in providing funds for the sector are:

- State Financial Corporations (SFC)were set up with the objective of providing long term loans and equity support to Small Scale Industries (SSI). Its focus is to grant loans for acquisition of fixed assets, provide financial assistance to units whose capital does not exceed Rs. 3 crore. Overtime, the role and significance of SFC has reduced on account of high Non Performing Assets (NPA) and emergence of other lenders such as Non-Banking Financial Corporations (NBFC), private lenders, etc.
- Regional Rural Banks were established in 1975 to meet the credit requirements of units in rural areas.
- The Self Help Group (SHG) bank linkage programme was launched in 1992 in order to extend bank finance to the member of the SHG members. SHG is a self -

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regulated group whereby members pool their savings and borrow among themselves to meet their requirements for business and social purposes.
- Small Finance Banks were set up in September 2015, in order to provide a means of saving and credit to small and micro business units, marginal farmers, entities operating in unorganized sector[11].

Small Industries Development Bank of India (SIDBI) is the apex financial institution which provides refinance facilities to institutions engaged in lending funds to the sector. It also provides direct lending, equity support, etc. It has set up a Credit Rating Agency (ACUITE Rating Research), Venture Capital Company (SVCL), MUDRA, a Technology Company (ISTSL), a Lending Platform (PSB loans in 59 minutes), etc. It takes active involvement in supporting startups with a view to encouraging entrepreneurship[12]. The Micro Units Development & Refinancing Agency (MUDRA), set up with a corpus of Rs. 20,000 crores, provides refinance to micro units with an aim to ease the credit availability and provide them liquidity[13].

The Securities Exchange Board of India (SEBI) regulated institutions providing capital are Small and Medium Enterprises (SME) Exchange, Angel Investors, Venture Capital and Private Equity. It has formulated the Alternative Investment Fund (AIF) Regulations Act 2012, replacing the SEBI Venture Capital Fund Regulations 1996.

❖ *Policy Measures:*

- The scheme "Entrepreneurial and Managerial Development of SMEs through Incubators" promoted in 2008, to provide support for entrepreneurial development.
- The MSME Technology Centers provides high end skill training to the youth.
- The Make in India Programme of MSME in 2015, promotes innovation, rural industry and entrepreneurship. It aims to set up technology and incubation centers to accelerate and promote startups for innovation and entrepreneurship in agro industry. The scheme identifies 25 sectors for financing small enterprises in MSME sector.
- The Atal Innovation Mission (AIM) by NITI Aayog, aims to promote Research and Development, Innovation and Scientific research through collaborations between academia, industry and research.
- The Self Employment and Talent Utilization (SETU) scheme set up by NITI Aayog provides technical and financial support, incubation for promotion of all aspects of startup businesses.
- The Electronics Development Fund launched by the Ministry of Communications and Information Technology, provides support for innovation in the field of Information Technology (IT) and associated sectors.
- Digital India Programme was launched to provide broadband connectivity in rural and urban areas.
- The India Aspiration Fund (IAF) launched by SIDBI in 2015 with a corpus of Rs. 2,000 crore aims to invest in various venture capital funds which provides startup capital to MSMEs.
- The SIDBI Make in India Loan for Small Enterprises (SMILE) scheme was set up with a corpus of Rs. 10,000 crores to make equity investments in MSMEs[14].
- The Priority Sector Lending (PSL) norms of RBI were in operation since 1960s. Under PSL norms, banks are required to lend 40% of Adjusted Net Bank Credit or Credit Equivalent amount of Off Balance Sheet Exposure, whichever is higher, to few specified sectors in MSME. MSMEs engaged in manufacture of goods specified in the first schedule of Industries (Development and Regulation) Act 1951, MSMEs engaged in service sector are eligible for obtaining finance under PSL norms.
- Credit Guarantee Scheme was formulated in 2000 to provide collateral free credit to micro and small enterprises.
- Under PSB Loans Scheme in 59 Minutes, launched in 2018, banks give in-principal approval for loans up to Rs. 1 crore by examining data points such as GST data, IT returns, Bank /statements, etc, online. Business unit is required to submit physical documents only after getting in-principal approval. However, all in-principal approvals have not been converted to sanction of loans. Rejection rate was observed to be quite high[15].

VI. CHALLENGES FACED BY MSME SECTOR

Though the sector is one of the major contributors to the growth of the economy, it suffers from several constraints. There is no credible data about most of the business units as they are unregistered, do not maintain proper accounting records, adopt cash based operations, are outside the reach of institutional sources of finance. Policy initiatives and benefits under various schemes do not reach them on account of lack of awareness and illiteracy.

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The Constraints / challenges identified by the Prime Ministers Task Force in 2010 were as follows:

- Finance related constraints: lack of adequate and timely credit, high cost of credit, collateral requirements, limited access to equity capital.
- Operations related: non availability of cost efficient supply of raw materials, problems of storage, designing, packaging, product display
- Legal and tax related: multiplicity and complexity of tax laws, no mechanism for quick revival of sick units
- Infrastructural and technology related: lack of access to global market, modern technology, inadequate infrastructure, lack of skilled man power.
- Out of all these challenges, availability of credit at affordable cost, adequate and timely supply of credit is considered to be the most important constraint. Smaller firms find it more difficult to access credit compared to larger firms[16].

➢ *Sources of Finance:*

The following are the main sources of finance:

- Informal sources - Personal funds, funds from friends and family, money lenders.
- Internal financing - Profits retained from the business.
- Debt based financing – Term loans, Overdrafts from Commercial Banks, usually provided against some collateral.
- Equity based financing – Funds provided in exchange of ownership share such as by Business Angels / Venture Capital / Private Equity / Initial Public Offer.
- Non-collateral debt products – Asset based financing such as Factoring, Leasing, Invoice Discounting.
- Government Grants, Subsidies, Guarantees – Provided through Commercial Financial Institutions.

Micro and Small business units use informal and internal sources of finance[17].A business needs to tap various sources at different stages in its life cycle. MSMEs in startup phase are considered to be highly risky as they do not have the financial capacity to meet demand supply or inflow outflow mismatches. Inability to raise working capital funds quickly would put them at the risk of liquidation. As business grows and reaches the growth and maturity stage, funds would be required for investment in production capacities[18]. As per MSME census of 2006-07, 92% of the MSME business units did not have access to institutional sources and depend heavily upon personal sources, friends, money lenders for their financial needs[19]. This is due to lack of credit information, improper accounting, small ticket size, high transaction cost, lack of collateral and so on.

VII. TOTAL DEBT FINANCING TO MSMES AND CREDIT GAP

The study conducted by International Finance Corporation (IFC) revealed the following statistics.

Denomination	Banking Institutions	NBFCs	Total Formal Sources	Total Informal Sources	Total Credit Supply
Rs. (Trillion)	9.4	1.5	10.9	58.4	69.3
US $ (Billion)	144.3	24	168.3	898	1066.3

Table 6:- Debt supply
Source : IFC Report.

Informal Sources such as Moneylenders, Chit Funds account for 84% of total debt financing while the formal sources constitute mere 16%. Out of formal sources, Banks constitute 86% of total debt financing.

Huge demand and supply mismatch exists in the issue of credit. The total addressable demand for external credit is estimated to be Rs. 36.7 Trillion (US $ 565 Billion), while the overall supply of credit from formal sources is Rs. 10.9 Trillion (US $ 168.3 Billion). Therefore, addressable credit gap in MSME sector is estimated to be Rs. 25.8 Trillion (US $ 396.7 Billion). Almost 75% of the addressable credit demand from Micro enterprises and 80% of addressable credit demand from Small enterprises is currently unmet by formal financial sources[20].

VIII. CONSTRAINTS IN ACCESSING BANK FINANCE

Banks are the primary lending institutions among formal sources but they are faced with several constraints in meeting the financial requirements of MSMEs. Most of the MSMEs are unregistered and outside the reach of financial institutions. Comprehensive data is not available about such unregistered businesses. As a result, focused measures cannot be undertaken by the regulatory authorities for providing financial, technical or other support. Registered MSMEs constitute a minority, though their number is increasing. Both registered and unregistered MSMEs face

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several demand and supply side constraints, which limit their ability to access funds.

➢ *Supply Side Constraints:*

- High transaction costs
- Low ticket sizes
- High risk of Non-Performing Assets.
- Lack of collaterals, especially in respect of business unit in its early stages of development
- Lack of stable turnover and cash flows
- Poor financial performance and improper books of accounts
- Low credit worthiness
- Lack of transparency
- Asymmetry of information

High risk of lending to the sector is on account of their inability to repay loans. This is due to their low capacity to mitigate business risk such as changes in market demand, delayed payment from borrowings, etc. Assessing creditworthiness becomes difficult in the absence of information about the financial performance of business units. Low equity base, absence of collateral further reduces the ticket size of loans.

➢ *Demand Side Constraints:*

For MSMEs the constraints in accessing bank finance are the following:

- High interest rates
- Complex and Time consuming loan disbursal procedures
- Difficulty in securing loans for working capital requirements
- Lack of awareness of various schemes
- Lack of technical, managerial skills to take business forward[21].

➢ *Reasons for Low Bank Credit:*

Multitude of factors is responsible for low bank credit such as:

- As many as 85% of MSME s are unregistered. Information relating to their cash flows, track record of the promoter not available.
- Lending norms from banks and financial institutions require collateral based lending. Many MSMEs were unable to provide collateral for debt financing.
- There is a high risk of default on lending to MSME. Most of such loans turn out to be NPAs for banks.
- The growth rate of micro and small firms is low.
- Many of the MSMEs follow informal business practices, do not keep proper records. Hence, it becomes difficult to ascertain their credit and repayment capacity.
- Due to lack of documentation relating to accounts, income and business transactions, loans are provided on the basis of collaterals and not on the basis of assessment of their business potential.
- Even promising businesses require heavy upfront investment in working capital. Lack of positive cash flows limits the capacity of banks to provide for funds.
- Relatively high processing costs as the loans required are of smaller denomination
- Lack of transparency due to poor reporting of firm data.
- Cost of making and monitoring small loans to large number of MSMEs is greater compared to large size loans to few large businesses. Transaction costs are large due to longer due diligence process, information asymmetry or lack of credit information about the borrowing entities[22].

IX. NEED FOR ALTERNATIVE SOURCES OF FINANCE

Lack of adequate bank finance necessitates exploring alternative sources of finance for the sector. Equity finance is relevant for innovative, high growth oriented businesses with high risk return profile.

Alternative source of equity financing for an enterprise are:

➢ Private Equity – Business Angels and Venture Capital Funds,
➢ Public listing of securities on an SME platform

Business Angels/Angel Funds are high net worth individuals who invest their own money in companies at very early stages of their development as seed money for firm creation and development. Business angels support new enterprises by providing funding and their own expertise as former entrepreneurs. They usually exit by selling their stake to Venture capitalists. A well-developed network of business angels create investment opportunities and deal flow for venture capitalists.

Venture capitalists invest in companies that have already received some rounds of funding from business angels. They usually concentrate on a small pool of companies with high commitment from the entrepreneur, having strong management team, strong market potential for high growth in a short span of time, high research and development spending. Exit possibilities in the form of a well-developed Initial Public Offering (IPO) market and Mergers & Acquisitions (M&A) market are preconditions for venture investment.

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SME Exchanges provide opportunities for raising equity finance by providing for listing of securities through primary and secondary issues[23].

X. CONCLUSION

The MSME sector has a huge potential for economic development, balanced regional growth, industrial growth, employment generation, etc. Their potential can be unlocked if efforts are made to mitigate the constraints limiting their growth. Among other things, their growth is hampered by lack of access to adequate finance at low cost. Many policy initiatives were introduced in recent times for the promotion of the sector. However, 85% of the enterprises are unregistered and outside the reach of formal institutions. The benefits of various Government schemes do not reach them. Majority of the business units are in the category of micro sector, a very small percentage are in small and medium sector. 84% of their financial needs are serviced by informal sources such as money lenders and chit funds. Formal sources of finance constitute only 16%. Finance from commercial banks is 86% of the formal sources. There is a huge credit gap as many of the enterprises face unmet credit demand on account of their small size, high transaction costs, high risks, informal nature of businesses, etc. Hence, while efforts should be made to overcome the constraints involving disbursal of credit through commercial banks, it is desirable to make efforts to tap alternative sources of financing as well.

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A Comparative Analysis of Growth, Income and Hybrid Mutual Fund Schemes

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Abstract:- Mutual funds have emerged as an important intermediary in all the capital markets of the world. The mutual funds play and will continue to play an important role in the growth of the capital market in India. Making investment in a mutual fund is more convenient as compared to dealing in the capital market. So, a mutual fund is a suitable investment for a common man as it offers an opportunity to invest in a diversified and professionally managed basket of securities at a relatively low cost. Thus, due to their increasing popularity it becomes necessary to measure their performance and identify the right schemes for investment. The main aim of this paper is to compare schemes of 4 companies in growth, income and hybrid category and to identify the best scheme in each category and it also highlights the best category by considering the return and risk of each fund.

Keywords:- *Beta, Sharpe Ratio, Standard Deviation, Yield, Total Return and Mutual Funds.*

I. INTRODUCTION

The word "mutual" signifies a vehicle wherein the benefits of investment accrue prorate to all the investors in proportion to their investment. A mutual fund is the ideal investment vehicle for today's complex world. It is an institutional device through which the investors pool their funds to invest in a diversified portfolio of securities thus spreading and reducing the risk quotient. With the increase in domestic savings and improvement in deployment of investment through markets, the need and scope of mutual funds operations has increased tremendously. The innovative content with which mutual funds have been offered make the investors confident that product differentiation will reach the various income segments, geographical segments and risk bearing segments of investors.

II. NEED FOR THE STUDY

The small investors turn to mutual funds to reap the twin advantages of less risk and high return. But, withthe advent of liberalization measures the investors are more vulnerable to the fluctuations of the international capital market. Secondly, due to increasing demand there is rise in mutual fund schemes and institutions. The ordinary investors may not be aware of the challenges involved and the required tool to select the scheme for his investment. Hence, the study aims to examine the performance of variousmutual fund schemes in different category on the basis of the returns given by them in past 3 years.

IV. OBJECTIVES OF THE STUDY

1. To compare various mutual funds belonging to different category.
2. To analyse the performance of growth funds, income funds and hybrid funds with respect to risk.
3. To rank the schemes according to their overall performance.

V. SCOPE OF THE STUDY

The period taken into consideration for the study is from November 2016 to November 2019. The companies taken into consideration for study are SBI, Axis, L & T and Aditya Birla Sun Life. The reason for choosing these companies is they enjoy the highest market share. In growth funds category, the schemes selected for the study have their majority investment in blue chip and large cap stocks. In Income funds category, the schemes selected for the study have their majority investment in long term debt. In hybrid fund category, the schemes have a balanced approach toward their investment in equity and debt. The proportion of equity and debt in hybrid funds differ from company to company.

VI. LIMITATION OF THE STUDY

1. The research is limited to a period of 3 years.
2. There are only 4 funds which are studied in each category. Hence, the findings of the study may not be generalized on the other funds.
3. The schemes used for comparison in different category are similar schemes and not exactly the same schemes.

VII. RESEARCH METHODOLOGY

- *Source of Data:*

The data for this study is collected from secondary sources like books, journals, magazines and various websites.

- *Statistical Tools:*

The simple statistical techniques like total return, standard deviation, beta and Sharpe ratio are also used for evaluating the performance of the schemes.

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VIII. MAJOR FINDING

Rank	Fund
1	AXIS blue-chip fund
2	SBI blue-chip fund
3	Aditya Birla Sun Life frontline equity fund
4	L & T India value fund

Particulars	SBI dynamic bond	AXIS strategic bond fund	L & T banking & PSU debt fund	Aditya Birla Sun Life Banking & PSU debt fund
Total return (3 years) – as of 22ND November 2019	4.57	4.79	5.74	5.99
Category 3 years total return	4.18	4.18	5.74	5.74
3-year Sharpe ratio as of 31/10/19	0.51	0.63	-	1.07
3-year Std. dev as of 31/10/19	4.41	2.95	-	2.86
12-month yield	4.37	5.27	2.89	5.06

Table 1:- Growth funds
Source: Morningstar.in

Table 1 demonstrates the return and risk of 4 funds which belongs to large cap category. These funds have their major investment in equities and therefore are considered as growth funds. From the above data, we can observe that the axis fund has given more returns as compared to the other funds and have also outperformed the category average returns. L &T fund has the highest risk as compare to others and lowest return but the total return is more than the category average return which means the company is able to outperform its competitors. Sharpe ratio is a tool to measure the fund performance with respect to its risk and Axis fund ranks first as perthis ratio. From beta we can conclude that SBI, AXIS and Aditya Birla sun life funds are defensive fund whereas L&T is an aggressive fund which hasmore volatility as compared to the market index.

Rank	Fund
1	Aditya Birla Sun Life Banking & PSU debt fund AXIS blue-chip fund
2	AXIS strategic bond fund
3	SBI dynamic bond
4	L & T banking & PSU debt fund

Particulars	SBI blue-chip fund	AXIS blue-chip fund	L & T India value fund	Aditya Birla Sun Life frontline equity fund
Total return (3 years) – as of 22ND November 2019	12.56	20.76	10.16	10.99
Category 3 years total return	13.62	13.62	8.99	13.62
3-year Sharpe ratio as of 31/10/19	0.50	1.05	0.29	0.37
3-year Std. dev as of 31/10/19	12.91	12.74	14.91	12.46
3-year Beta as of 31/10/19	0.95	0.88	1.06	0.93

Table 2:- Income funds
Source: Morningstar.in

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Table 2 demonstrates the return and risk of 4 funds which belongs to debt funds category. Among the four funds Aditya Birla Sunlife has given the highest return but if we considered yield it's the axis mutual fund which has outperformed. The risk of all 4 funds is comparatively less since they are debt funds. All the 4 funds have given return more than their category average. According to Sharpe ratio, Aditya Birla Sunlife funds ranks first.

Rank	Fund
1	AXIS equity hybrid fund
2	SBI equity hybrid fund
3	L & T hybrid fund
4	Aditya Birla Sun Life hybrid fund

Particulars	SBI equity hybrid fund	AXIS equity hybrid fund	L & T hybrid fund	Aditya Birla Sun Life hybrid fund
Total return (3 years) – as of 22ND November 2019	10.72	10.32	10.27	6.71
Category 3 years total return	8.73	6.80	8.95	4.25
3-year Sharpe ratio as of 31/10/19	0.64	0.97	0.49	0.46
3-year Std. dev as of 31/10/19	7.15	5.80	10.01	5.48

Table 3:- Hybrid funds
Source: Morningstar.in

Table 3 demonstrates the return and risk of 4 funds which belongs to hybrid category. The first three funds have an approach of aggressive allocation whereas the last one has a conservative approach. All 4 funds have outperformed their category average and there is marginal difference among their return. Since they are hybrid funds their risk is more than the income funds but less than the growth funds. According to Sharpe ratio, Axis fund ranks first.

IX. CONCLUSION

This paper was an attempt to evaluate the performance of the mutual fund schemes. The outcome of the paper is clear, that Axis fund is been ranked first in growth and hybrid category whereas Aditya Birla Sunlife has been ranked first in income category. While comparing the categories, we can conclude that the income category has given the best return as compared to the risk faced in this category. Though the total return of the growth funds is highest, the risk is equally highest and according to the Sharpe ratio the return given by growth funds doesn't compensate the amount of risk faced in it as compared to income category. The reason behind this is downfall in equity market in recent years due to uncertain global scenario.

However, the above conclusion may not remain true in the long term in case the uncertainties arising in the international market get resolved.

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A Study of Various Factors Influencing Brand Loyalty of Smartphone Users in Thane City

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Abstract:- The fascination of digital gadgets amongst young consumers worldwide, in particular mobile phones, has presented an opportunity for telecommunication marketers to target this group. The vast majority of mobile phone users have a personal relationship with their phones. They no longer regard them as a mere luxury, but rather as a necessity for everyday life. The mobile phone has attracted massive recognition all over the world and has millions of users including India. There is the continuous development of new products, frequent changes in the technology and design which has reduced the life of the mobile phone. The features, functions, outer appearance of the smartphone mobile keep on changes and updated within short period of time. As a result, large part of the population is inclined to buy these updated models. So, the brand loyalty in Smartphone mobile is a great area of research.

The present study is undertaken in Thane city. This study examines the general information about sample using Smartphone brand (such as preference of brand, purchasing year, source of purchasing, best feature of the brand and overall satisfaction with the brand). All the information pertaining to the research topic is collected with the help of structured questionnaires from the sample respondents. And after thorough analysis and interpretation of data, necessary suggestions and recommendation are made by the researcher.

This research study mainly focuses on factors influencing people's (sample's) brand loyalty towards Smartphone brand in Thane city.

Keywords:- *Brand Loyalty, Consumer Behaviors, Telecommunication Sector, Smartphone.*

I. INTRODUCTION

Brand loyalty can be defined as the extent of consumer faithfulness towards a specific brand and this faithfulness is expressed through repeat purchases and other positive behaviours such as word of mouth advocacy, irrespective of the marketing pressures generated by the other competing brands (Kotler & Keller, 2006).

The globalization of competition, saturation of markets, and continuous growth of information technology have increased customer awareness and created a situation where long term success is no longer achieved only through optimized product's price and qualities. Instead, companies build their success on a long term customer relationship. Today's empowered consumer with the support of advancement in communication and information technology is much better placed to select and take a decision among the plethora of brands available in the market. Companies are trying to keep the existing customer by building a strong brand loyalty. In intensely competitive markets like India with high unpredictability and little product differentiation, brand loyalty is a major element in marketing strategies and tactics. Perceived quality has been defined as the consumer's subjective judgment about a product's overall brilliance or supremacy. Loyalty for a brand is a deeply held commitment to re-purchase a preferred product or service consistently in the future. It was found that loyal customers show more favourable response to a brand than non loyal customers. In this 21st century, the international community has shifted from the industrial era into the era of information technology without borders. As well as, one can find the growth of new technology devices such as mobile phones, laptops, cameras, and others where too many extra features are available in these devices. These days smartphone with advanced features has been a basic device that one must possess.

In this competition era in almost all the industries including mobile / smart phone segment, consumers have plenty of choices to choose from and they are the ultimate king, it is essential for marketers to develop brand loyalty with the intention of creating long-term consumer-brand relationships. According to International Data Corporation (IDC)'s Smartphone Consumer PULSE research study on the mobile phone consumer trends in India, one out of three mobile phone consumers are willing to spend more than their planned budget and more than half ready to spend between $100 to $200 on a new smartphone. This reflects the attractiveness of this mass segment which contributes almost half of the India smartphone market and is dominated by brands like Xiaomi, Samsung and Motorola. The availability of consumer offers like zero cost EMIs, easy exchange programs at both offline retail stores and online are additional incentives for customers to spend more. It is easily to customers or users to switching to another brand if they feel not satisfied with current brand and choose the better Smartphone brand. So this study is to determine the factors that influencing brand loyalty among Smartphone users.

➢ *Market Share of Smartphone in India:*

	2014				2015				2016				2017			
	Q1	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Samsung	35	29	24	22	23	23	24	27	27	25	23	25	28	24	23	24
Micromax	15	18	20	18	16	17	17	14	13	13	8	-	-	-	-	-
Karbonn	10	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Nokia	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lava	6	6	8	7	6	7	5	7								
Motorola		5	5	4	-	-	-	-	-	-	-	-	-	-	-	-
Xiaomi	-	-	-	8	-	-	-	-	-	-	-	11	14	17	23	27
Intex	-	-	-		9	11	11	9	9	7	7					
Lenovo	-	-	-		6	6	9	12	8	8	10	10	10	7	9	6
Reliance Jio	-	-	-	-	-	-	-	-	7	7	7	-	-	-	-	-
Vivo	-	-	-	-	-	-	-	-	-	-	-	8	11	7	9	7
Oppo	-	-	-	-	-	-	-	-	-	-	-	9	9	8	8	5
Others	30	34	35	41	45	36	34	31	36	40	45	37	28	37	28	31

Table 1:- Market Share of Smartphone in India from 2014 to 2017
Source: Statista (2018), https://www.statista.com/statistics/269487/top-5-india-smartphone-vendors

II. REVIEW OF LITERATURE

This section outlines the review of literature on factors influencing brand loyalty of Smartphone users at International, India and Thane level.

Salem Mohammad Zedan Yehia S. M. and Massimo C. (2016) in their research paper 'An Experiment on Brand Loyalty Among Mobile Phone Users in the Basque Region of Spain' attempts to examine brand loyalty among mobile phone users – the case of the main six mobile phone companies operating in the Basque region of Spain. An empirical study was conducted by collecting the primary data using a questionnaire. The findings proved that there is a low loyalty toward phone mobile companies according to users' attitudes. In addition, there is no loyalty among mobile phone users toward companies they deal with according to users' behaviors. The purpose of the study Bikash Singh B., (2016) is to identify the factors which are influencing the brand loyalty for the users of Samsung mobile in Nepal. For this study, researcher has taken 120 sample from Nepal who are using Samsung brand. A total of 186 questionnaires was sent online, out of them, 128 responses were recorded in Google docs. 120 responses were considered for data analysis because the remaining of them were incomplete and disqualified. From the regression analysis, we found out that customer satisfaction and brand experience are significant and determining brand loyalty. Other independent variables i.e. perceive brand quality, brand image, social media marketing and the control variable age, gender, and education do not have significant influence to determine brand loyalty for Samsung phones.

Apple topped the list with the highest brand loyalty score followed by Asus, Blackberry, LG, Samsung, Motorola, Micromax, Nokia/Microsoft, Sony, Xiaomi, Lenovo, Huawei, and HTC in the study conducted among IT employees. The statistically significant difference found in the brand loyalty scores of different smartphone brands signals the manufacturers to seriously focus on brand loyalty building to cope up with the cut throat competition and to ensure their long-term growth and survival. The manufacturers should concentrate more on areas such as image building, manufacturing quality products, and ensuring customer satisfaction. (Kumar S. S and Menon R. P., 2017). A total number of 600 young adults comprising of both students and working professionals from various reputed colleges and companies in Bangalore were surveyed and their responses were analyzed using SPSS 20. The study indicated that Apple has the most loyal base of customers, though Samsung is the most popular brand, and among the various demographic factors, only age had an impact on brand loyalty. Technical incompatibility and new technical and value added features are the primary reasons for switching to a new handset. (Nandi S. and Pattanayak J. K., 2010)

Wilson Lobo (2016) investigated customer's perceptions on brand loyalty for household appliances in Thane. For this study, the researcher used qualitative approach. The researcher conducted two focus groups with the household owners in Thane. The data collected were then analysed using thematic analyses and several key themes were formed. The result of this research shows that, majority of the participants were brand loyal and influential factors like experience, advertisements, loyalty schemes, price, perceived quality and customer satisfaction affected their repurchase behaviour for household appliances. The findings of this research also pointed out that, consumer's preference with regards to Indian versus international brand varied greatly from one participant to another.

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III. OBJECTIVES OF THE STUDY

- To study the demographic profile of sample users.
- To analyse the factors influencing people's (sample's) brand loyalty towards Smartphone brand in Thane city.
- To provide conclusion on the basis of findings of the study.

IV. SCOPE OF THE STUDY

The scope of research is restricted within the limits of Thane city. This research mainly concentrates on people's brand loyalty towards Smartphone brand in Thane city.

V. SAMPLE SELECTED FOR THE STUDY

For the purpose of this study, 350 Smartphone users are taken as a sample from Thane city. The study is conducted by collecting data through primary sources like questionnaires. All the data are properly classified and arranged in tabular form. Simple charts are used as statistical tool for the analysis and interpretation of the study.

VI. ANALYSIS AND INTERPRETATION OF DATA

This section includes analysis and interpretation of the data collected through primary method

A. Profile of Sample Customers:

	Responses	
	In Numbers	**In Percent**
Males	207	59%
Females	143	41%
Total	**350**	**100%**

Table 2:- Gender of Sample

It is evident from the above that 59% of selected sample for this study, who are using Smartphone, is male and remaining is female.

	Responses	
	In Numbers	**In Percent**
<=20	70	20%
21 - 35	185	53%
36 - 50	81	23%
>50	14	4%
Total	**350**	**100%**

Table 3:- Age Group of Sample

From the above table, it is understood that 53% of sample is in the age bracket of 21-35, followed by 23% of sample is in the range of 35-50, 20% of sample is less than 20 and remaining is above 50.

	Responses	
	In Numbers	**In Percent**
Student	77	22%
Working (Service)	228	65%
Business	24	7%
Others	21	6%
Total	**350**	**100%**

Table 4:- Occupation of Sample

From the above table, it is found out that 65% of selected sample belong to working class, followed by 22% who are students, 7% of them doing business and remaining 6% of them are in other category.

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	Responses	
	In Numbers	**In Percent**
< 40,000 Rs.	42	12%
41,000 – 80,000 Rs.	122	35%
81,000 – 1,20,000 Rs.	168	48%
Above 1,20,000 Rs.	18	5%
Total	**350**	**100%**

Table 5:- Family Income (Monthly) of Sample

In terms of annual family income, then above table and Chart shows that 48% of sample is found in the range of 81,000 – 1,20,000 Rs, followed by 35% is in the range of 41,000 – 80,000, 12% of the is < 40,000 Rs, and remaining 5% of them are earning > 1,20,000 Rs.

B. General Information about Sample Smartphone users:

	Response	
	In Numbers	**In Percent**
Samsung	133	38%
Lenovo	14	4%
Xiaomi	74	21%
Vivo	42	12%
Oppo	59	17%
Others	28	8%
Total	**350**	**100%**

Table 6:- Which Brand of Smartphone Purchased by You?

Above table shows that majority of sample (i.e. 38%) is using Samsung brand, followed by 21% of sample using Xiaomi, 17% of sample using Oppo, 12% of sample using Vivo, 8% of sample using other brands such as Reliance jio, Motorola etc. and remaining 4% of sample is using Lenovo brand.

	Response	
	In Numbers	**In Percent**
2017 & Above	28	8%
2016	112	32%
2015	161	46%
2014	42	12%
2013 & Below	7	2%
Total	**350**	**100%**

Table 7:- In which Year, you Purchased the Smartphone Brand Currently Being Used?

It can be understood from the above table that 46% of selected sample has been using the Smartphone brand since 2015, followed by 32% of sample using since 2016, 12 % of sample using since 2014, 8% of sample using since 2017 and remaining 2% of sample has been using the brand since the year 2013 and below.

	Response	
	In Numbers	**In Percent**
Online	80	23%
Directly from Distributor	32	9%
Visiting Electronic Store	231	66%
Other Sources	7	2%
Total	**350**	**100%**

Table 8:- From where you have Purchased the Smartphone?

From the above table, it is cleared that 66% of selected sample has purchased the Smartphone brand by visiting the electronic store personally, followed by 23% of sample purchased online, 9% of sample purchased directly from distributors and 2% of sample has purchased the brand from the other sources.

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	Response	
	In Numbers	**In Percent**
Studies	63	18%
Business Purpose	14	4%
Fun & Entertainment	252	72%
Other Purposes	21	6%
Total	**350**	**100%**

Table 9:- For which Purpose, Smartphone is being Mainly Used by you?

Above table shows that majority of sample (i.e. 72%) uses the Smartphone for the purposes of fun & entertainment (i.e. games, videos etc.), followed by 18% of sample uses it for studies (Google search, access to MS office etc.), 6% for other purposes and remaining 4% of sample uses it for the business purposes (i.e. Mailing, PPT etc.)

	Response	
	In Numbers	**In Percent**
Very Happy	189	54%
Somewhat Happy	101	29%
Neutral	28	8%
Not Very Happy	18	5%
Not at All Happy	14	4%
Total	**350**	**100%**

Table 10:- Are you Satisfied with the Customer Service of your Smartphone Brand?

It is evident from the above table that 83% of sample is satisfied (i.e. very happy or somewhat happy) with the customer service of their Smartphone brand. Whereas, 9% of sample is not satisfied with the customer service and remaining 8% of sample is in neutral.

	Response	
	In Numbers	**In Percent**
Camera Clarity	94	27%
Advanced Features	109	31%
Strong Battery Back-up	63	18%
Broad Display Size	56	16%
Other features	28	8%
Total	**350**	**100%**

Table 11:- Tick any One Best Feature of your Smartphone Currently Being Used.

From the above table, it is found out that 31% of sample mention advanced features as best feature of their Smartphone currently being used, followed by 27% of sample who mention camera clarity as a best feature, 18% of sample mention strong battery back-up, 16% of sample mention broad display size as best feature and remaining 8% of sample mention other features.

	Response	
	In Numbers	**In Percent**
Very Likely	255	73%
Likely	71	20%
Neutral	10	3%
Not Likely	10	3%
Very Unlikely	4	1%
Total	**350**	**100%**

Table 12:- Will you Recommend to Others?

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It is cleared from the above table and chart that 93% of sample is very likely or likely to recommend their Smartphone brand to others. On the other side, 4% of sample would not like to recommend and remaining 3% of sample is neutral.

C. Factors Influencing Customer's Brand Loyalty towards Smartphone Mobile Users

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
1. Trustworthiness	0	0	2	36	62	**100%**
2. Quality	0	0	0	57	43	**100%**
3. Pricing	14	34	8	28	16	**100%**
4. Status Symbol	2	22	2	54	20	**100%**
5. Quick after sale-service	4	6	4	63	23	**100%**
6. Easy accessible customer service centre.	6	12	8	56	18	**100%**
7. Have strong image in the market	0	2	7	68	23	**100%**
8. Company is transparent in its dealing	6	28	18	36	12	**100%**
9. Reviews (Feedback)	0	3	12	62	23	**100%**
10. Always coming up with new models	14	46	14	20	6	**100%**
11. Availability in both modes (Online & Offline)	12	38	18	30	2	**100%**

Table 13:- Factors Influencing Brand Loyalty towards Smartphone Mobile Users.

Above table show that almost majority of sample say that trustworthiness, quality, after sale service, strong image and reviews are the significant factors influence their brand loyalty towards Smartphone mobile.

VII. CONCLUSIONS

- It can be concluded from the study that sample user's first choice is Samsung brand, followed by Xiaomi and Oppo. These are all foreign brands which are also operating in India and became household name. Among all the Smartphone brands, Samsung Smartphone has the highest market share in India.
- Sample users have accepted that Smartphone has become necessity of their day to day activities. The use of smart phone has not only been limited to communicate with friends, families, business personals but has a multi-purpose feature which includes data storage, camera, multimedia and others.
- Users have accepted that they do have knowledge of other brands also but they will prefer their own Smartphone brands due to its mainly advanced features, camera clarity, and strong battery backup. Even they are ready to spread positive reviews and recommend their brands to others also.
- Study found that loyal customer have trust in brand of mobile phones they are using. It is also found out that Samsung Company in mobile segment is one of the top sellers in Smartphone category, but there is a stiff competition with other available smart phone brands. Therefore, companies should understand the value of loyalty towards to face the cut-throat competition in the market.
- Majority of sample users, according to the study, uses the Smartphone for the purposes of fun & entertainment (i.e. games, videos etc.), followed by studies (i.e. Google search, access to MS office etc.).
- It also shows that price is irrelevant factor for majority (i.e. 48%) of loyal customers. That means, loyal customers are ready to pay a little more for their Smartphone brand till the time they are getting quality product, quick after sale-service etc.

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Statements	1	2	3	4	5	Total % of 4 & 5	*Ranking* on the basis of Total %*
	S.D	D	Neut.	A	S.A		
1. Trustworthiness	0	0	2	36	62	98	***2***
2. Quality	0	0	0	57	43	100	***1***
3. Pricing	14	34	8	28	16	44	***8***
4. Status Symbol	2	22	2	54	20	74	***6***
5. Quick after sale-service	4	6	4	63	23	86	***4***
6. Easy accessible to customer service centre.	6	12	8	56	18	74	***6***
7. Strong image in the market	0	2	7	68	23	91	***3***
8. Company is transparent in its dealing	6	28	18	36	12	48	***7***
9. Reviews (Feedback)	0	3	12	62	23	85	***5***
10. Always coming up with new models	14	46	14	20	6	26	***10***
11. Availability in both modes (i.e. Online & Offline)	12	38	18	30	2	32	***9***

Table 14:- Factors Influencing Customer's Brand Loyalty towards Smartphone Mobile Users

*Ranking is taken out by totaling maximum preferences given to agreed and strongly agreed by sample group.

So, it can be concluded on the basis of the study that the most influencing factors in terms of ranking are quality of brand, trustworthiness, strong image in the market, quick after sale-service and reviews.

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The Need for Teaching Writing Skill at the Tertiary Level: A Case study

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Abstract:- Even after 72 years of independence, English continues as a major second language in India. Therefore, there is a need to teach English, and to teach it to suit the needs of the second language learners. The goals of teaching English have shifted, the methods of teaching English also need to be changed today. It is essential to discuss the type of teaching that is desired at the tertiary level. The teaching of English at the university presents an entirely new set of problem. Much time has to be devoted in building the foundations that are necessary for the minimum essential use of this language at the Undergraduate level.

Keywords:- *Writing, Tertiary, Second Language, Teaching, Learner.*

During the last two decades the promotion of regional languages, in preference to English has been a matter of deliberate policy. However, English continues as a major second language all over India. Hence, there is a need to teach English, and to teach it to suit the needs of the second language learner.

I. ELT SITUATION IN INDIA

Language teaching in India can be traced back to ancient times. With the introduction of English education, Grammar-Translation method was employed to teach English and this method was in practice for a very long time. Then Direct Method was used to teach language.

According to Direct method the learners are exposed to a large chunk of language, in the form of literary texts and lectures delivered by the teachers. This exposure, it was believed, helped the learner to acquire the language. This method was employed to teach English, when the goals of teaching English were different from those of today. It was essential to teach the learner listening and spoken skills, because the British rulers required personnel who could work in their offices and understand them. Today, the goals of teaching English have shifted. It is necessary to teach learners reading and writing skills.

Since the goals of teaching English have shifted, the methods of teaching English also need to be changed. Today, the larger emphasis in language teaching rests on Communicative Teaching. Experiments have been conducted in this direction in India and abroad. In order to have a grasp of the teaching situation as it exists in the college today, it is necessary to have a brief knowledge about the students' background –

a) When do they start learning English?
b) How do they learn it?

a) With the adoption of three language formula in principle, all the states have implemented this in practice.Therefore,before entering the college classes ,students will have learnt English for ten years. This period seems fairly long, though the results it yields are not satisfactory.
b) In schools, students are taught English with the help of simplified texts, which are structurally graded. But the teachers who teach English in the primary schools are not suitably trained to handle these materials. Hence, the learning of English remains either inadequate or scanty.

In colleges, the universities which frame syllabi for undergraduate courses do not take cognizance of these inadequacies. They expect the students to be fairly well equipped, and offer courses which are beyond the grasp of the students. Thus, English language teaching fails to establish a continuum. There is a need to remediate the inadequacies of the students at the tertiary level rather than give courses for elaboration or expansion of knowledge.

II. WHAT IS DESIRED –BY WAY OF LANGUAGE TEACHING

It is essential to discuss the type of teaching that is desired at the tertiary level. At the tertiary level, the teaching should primarily be of a remedial type. It is expected that the learners have learnt enough language, but in the course of their learning, they might have either learnt it wrongly or poorly. At the tertiary level it becomes the responsibility of the teacher to correct and strengthen the language already learnt at the secondary level. The teaching of English at the university presents an entirely new set of problem. Much time has to be devoted to repairing the damage done or in building the

foundations that are necessary for the minimum essential use of this language at the Undergraduate level.

The remedial teaching administered should enable the learner to use English which forms a major link language even within the country for internal communication. This leads us to conclude that we need to teach the English language, and that, at the tertiary level it should be primarily a remedial type of teaching that needs to be done. It has also been agreed upon, that we need to teach English to suit the needs of a second language learner.

The main objectives of teaching English course at the degree level are-

1) To enable the students to use English effectively so that he can pursue his studies in humanities, commerce and science.
2) To equip the students with communication skills he is likely to need in the occupation or vocation he will be able to fill.

As part of the writing component of the syllabus:

a) Sub skills relevant to role of English in higher studies; note taking; note making; extracting facts and statements relevant to a given point of view; reporting events and experiments; recording observations, findings and conclusions.
b) Sub skills relevant to employment: drafting letters –official and semi-official; framing instructions; rules and memos; abridging given piece of texts; drafting invitations and their responses, complaints and replies; enquires and answers.
c) These can be in general term called communicative skills. They can also be called functional categories since these skills are largely role based. They aim at preparing the learner to face the world and life at large, immediately after his formal education is completed. Such aims help to build an intrinsic motivation into the course.

Reforms have been made to establish a relation between the syllabus and the scheme of examination. Attempts have been made to streamline students according to the choice of their courses. Thus, students of first year BA and BCOM are offered special courses in English .BCOM students have a course in Business Communication and BA students have a course in Communication Skills. In their second year class, instead of Drama and Poetry texts, BA students have a course in Mass Communication.

The primary function of any language is to communicate. The language communicates through four skills i.e. listening, speaking, reading and writing. These skills can also be called passive and active skills. Listening and reading are passive skills and speaking and writing are active skills.

Skills are factors of language, which can be mastered for an effective communication in the specified language. In order to learn a language thoroughly, and achieve a native like competence, it is essential to master all the four language skills. Since we are learning English as a second language, the essential skills we need are reading and writing.

Writing as a skill can be defined in various ways. It can start with the mechanics of writing which need to be taught at the primary stages. In Maurice Imhoof words, “writing is more rigorously structured than speech. All language productions-speech or writing must of course follow the rules of language; if they do not, the productions are ungrammatical and likely to be unintelligible or misunderstood-writing does not have all communicational; conventions available in speech, for example gestural and facial expressions ,repetition, questions and answers for clarification-writing is just not putting down on paper what one speaks.”(Imhoof, 1977)

Since speaking and writing are productive skills, they can be best learnt by practice. In Peter Elbow’s words, “writing can be best learnt by writing”. (Elbow1973) This statement implies that writing classes should provide the learner with ample opportunities for writing. The teacher should explain the tasks and allow the learners to work on similar tasks either in groups or individually. These tasks which produce letters, paragraphs, reports or essays, help the learner to improve his writing.

III. HOW CAN THE DESIRED OBJECTIVE BE ACHIEVED?

We attempt to make a thorough examination of the system and find out why the desired objective can be achieved. We proposed to analyze the existing system for its components. They are:

1. The syllabus
2. The teacher and his methods
3. The learner
4. The text book
5. The examination

These can be called major components, because they deal directly with the learning process. There are also other components, which influence learning, but not directly .These can be called minor components, and deal with administration and environment.

They are:

a) The Establishment
i) The University
ii) The College
iii) The Classroom

b) The Social Environment
i) The Family Background
ii) The classmates
iii) teacher-taught relations

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c) The Physical Environment
i) The location of the college
ii) The nature of college building
iii) Location of the house

The Teacher: the teacher forms second of the major components. But because of the involvement of human factor in teacher, it is difficult to generalize and state the characteristics essential to make an ideal teacher. It would be very difficult to find any two teachers with identical qualities. While discussing the teacher we may discuss the methods practiced by the teacher. It was also observed that most teachers teach English through lecture method. In order to promote language skills, the teacher has to give practice to the learners in the skill required. In order to give this practice, a teacher has to be resourceful enough to frame suitable exercises .This can be learnt by either formal training or employing one's own ingenuity. The teacher must be for this purpose adaptable to the situation –and manipulate his lessons according to the needs of the students.

The Textbook-materials being used in the present day should be according to the needs of the students. In the absence of such materials, the teacher should be resourceful enough to use the existing material in a useful manner.

The Examination- the main drawback of the existing examination system lies in its being highly subjective. The reforms in examination should aim at making it objective. Besides; the examination should specify its objectives and should be able to assess the learners for their proper understanding of the subjects and level of learning. Attempts to teach writing can be achieved to a large extent by adopting these reforms.

IV. TYPE OF WRITING REQUIRED BY THE STUDENTS AT THE UNDERGRADUATE LEVEL

The right type of language skills can be promoted among the students particularly the skill of writing. The students must have the:

a) Ability to write simple pieces of English of general usefulness
b) Ability to write English for the purposes of study.
c) These specified end behaviors can be taken as the objectives for teaching English at the college level.

Since the learning is unable to do this, it becomes necessary for the college teacher to teach letter writing, note making, report writing, paragraph writing and essay writing, as part of English class exercises in composition.

Writing as we mean here, is the ability of a person to express clearly through writing. Writing should communicate. It has the same functions as speech, though it differs from speech in some aspects. In speech we can use incomplete sentences; we can pause and receive immediate responses. In writing these things are not possible. Writing is basically a thinking process. So in order to teach our students how to write properly, we have to teach them how to think.

The student should know "how to select and organize experiences according to a certain purpose ….a purposeful selection and organization of experience requires active thought .when writing ,students must keep in mind their purpose ,think about facts they will need to select which are relevant to that purpose ,and think about how to organize those facts in a coherent fashion. The process of learning to write is largely a process of learning to think more clearly." (Arapoff, 1965).

This view is supported by later psychologist like Bruner. Cognitive skills already possessed, can help a person to think inductively. This shows that by exposing the students to familiar data, which they need to manipulate and reproduce in a different manner, students can be made to write and also think. In order to help the learners perform these tasks, they can be offered some guidance in the form of suggesting structures, or illustrating how to commence the rewriting of the passage. It is possible to produce similar materials to suit the Indian learners, which can develop the writing skills .In the recent years, course books for teaching writing to Indian students have also been produced by the Indian writers.

V. CONCLUSION

Since the goals of teaching English have shifted, the methods of teaching English also need to be changed. The right type of language skills can be promoted among the students particularly the skill of writing. Writing is basically a thinking process. So in order to teach our students how to write properly, we have to teach them how to think. This shows that by exposing the students to familiar data, which they need to manipulate and reproduce in a different manner, students can be made to write and also think.

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Mobile Governance in India – Development and Challenges

Kayzad Dadachanji

I. INTRODUCTION

➢ *Meaning of Governance*

The word "Governance " attributes its origin to a Greek word " Kubernaein" meaning steering something. Thus, governance can be defined as mode of directing or controlling people or state. In a simpler language, governance is the process of making sound decisions and also the method used for adopting such decisions.

➢ *E-Governance (Electronic Governance)*

For the purpose of providing services to customers communicating and interacting with them, and initiating transactions with the customers, the Government nowadays make use of Information and Communication Technology(ICT). This usage of ICT by government for passing on various benefits and services to customers is known as Electronic Governance or E-Governance.

➢ *M-Governance (Mobile Governance)*

It is a small part of E-Governance enabling government to provide important information and useful services through mobile phones. . In a country like India, M-Governance is surely an option to E-Governance as the number of people possessing mobile phones is significantly more than the number of people having personal computers and internet facility. Hence this option of Mobile Governance or M-Governance can be tapped by the Government for imparting anytime anywhere services and information to citizens and employees of Government. M-Governance offers a great prospective for improving the provision of basic public utility services especially to the deprived and underprivileged poor sections of the society.

II. M-GOVERNANCE IN INDIA

After establishing its footing in the sphere of Electronic Governance, India is making steady progress in the field of Mobile Governance. With the easy availability of cheaper mobile phones, better networking facility, the desire of people to avail all the necessary and important information on their mobile phones has increased considerably thereby contributing to the growth of M- Governance in India. Our society is increasingly getting mobiles and people wanting everything available on their handsets. Approximately, 90% of Indian households own atleast one mobile phone and the number of smart phones with latest features and advanced technology is constantly on the rise , there is undoubtedly an opportunity for telecom players, concerned industries and societies to consider the possibility of using mobile based applications to provide services to the general public.

In February, 2012, the Ministry of Electronics & Information Technology developed and notified the framework for Mobile Governance. This framework aims to utilize the ever increasing reach of mobile phones and also take advantage of the possibility of providing mobile applications for ensuring easy and 24*7 access to public services especially in the rural areas. The main measures laid down by MEIT are as under.

- To make websites of all Government agencies mobile – compliant.
- To ensure compatibility of mobile applications across different operating systems and mobile devices in accordance with the standards framed by Government with respect to Electronic Governance.
- To ensure that Government agencies introduce mobile based apps with a view to provide all their essential services on mobile phones to the extent viable on mobile platforms

The Government of India has also initiated the Digital India Program with the aim of transforming India into a digitally enabled efficient country and a highly knowledgeable economy.

III. RECENT MOBILE APPLICATIONS LAUNCHED BY THE GOVERNMENT FOR GOVERNANCE

➢ **Indian Police on Call App** :- This app provides map based interface for locating police stations across the country. It also contains details regarding the shortest possible route for reaching the nearby police station and also provide phone numbers of Control rooms and office of the Superintendent of the Police.

➢ **E- Pathshala App**:- It is a joint venture of the Ministry of Human Resources Development and National Council of Education Research and Training (NCERT). It is a rich collection of educational material for students, teachers, parents and researchers. The students are exposed to all kinds of educational resources like texts, audio, video, periodicals and publications through ePathshala. The resources can be downloaded for further indepth study in the offline mode.

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- **mParivahan app** :- Developed by National Informatics Centre (NIC) , this app can be used to access important documents like Driving License, Vehicle Registration Certificate, Insurance validity. The app also has a feature to create virtual Registration Certificate and Driving License which is considered as an authentic proof.
- **Startup India** :- This app is primarily developed for entrepreneurs to enable them to acquire useful insights about startups in India. It also frequently updates the users about any new Government Development with respect to startups.
- **DigiSevak app:-** The people who want to willing volunteer for any digital drive initiated by Government and other agencies can download and register on this app. The citizens can perform tasks like creating awareness about the importance of Digital India and digital literacy, collecting data from citizens, submitting feedback and translating documents from English to other languages.
- **GST Rate Finder** :- This app provides complete details about the different rate of GST on different products and services . On downloading this app, the user can cross check about the GST rates that he has been charged with respect to any goods purchased at any store or any service availed at a hotel or restaurant. The rates are updated on the app , the moment change in the rate is declared by concerned Government Agency.
- **UMANG** :-. Unified Mobile Application for New-age Governance or UMANG app is a platform for availing all the important Government services under one common mobile application. It has details pertaining to scholarships, safety of women, health care, e-District, Passport Services etc.. Altogether it provides more than 100 services of the centre and state government on a single platform. This app at present is available in 12 different languages in order to have a wider reach and cover a larger audience.
- **Incredible India App:-** This app enables Indian as well as foreign tourists to get useful information about tour operators, tourists guides, hotels available with respect to a particular tourist destination.
- **mPassport Seva** :- The entire physical process of applying for and obtaining the passport can be undertaken on a mobile phone with the help of this application. This app , in addition to applying for a passport, also provides passport tracking status and general guidelines for obtaining a passport.
- **mAadhar App** :- This utility App has been developed by UPI. This app allows users to carry their Aadhar identity on smartphones. The App enables people to share their eKYC details whenever and wherever they want. This app also enables users to block their biometric details anytime anywhere.
- **Swachh Bharat Abhiyaan** :- This app is concerned with the cleanliness of a city and its nearby surroundings. The app enables users to click and post pictures pertaining to societal issues and forward the same to the concerned officials for further necessary action. All urban local bodies are connected to this application. The users can also post their feedback if their grievances have not been redressed within the stipulated time frame.
- **BHIM** :- Bharat Interface for Money or BHIM is a payments app for making quick and easy transactions using Unified Payments Interface. This application allows people to effectively and easily move funds from one account to another, from one person to another through UPI addresses, phone numbers and scanning QR codes. All renowned and major commercial banks of the country are connected to this app so that they can cater to the needs of a larger audience.
- **IRCTC :-** The app enabling us to book rail tickets, cancel tickets, plan our journey on a smart phone. It also offers various options for payment and also provides facility for insurance at nominal rates
- **Aaykar Setu**:- It provides services linked to the Income Tax Department .This app allows us to compute our tax liability, pay taxes online and also enables us to apply for PAN online. There is also a chatbox for solving queries of tax payers.

IV. CHALLENGES FOR M-GOVERNANCE IN INDIA

- **Cost**:- M-Commerce is one more segment of E-Commerce which is going to create additional burden . This will continue to hold true until M-Commerce becomes the only mode of Government communication.
- **Low Literacy Levels** :- In India, especially in rural areas, the literacy rate is low. At present, most of the mobiles in India are text based making it extremely difficult for people with low level of literacy to read and also information furnished by the Government.
- **Computer Literacy** :- The low level of Computer literacy in some parts is also creating a problem as far as reaching its targeted audience is concerned. This is because mobile phones use the same technology that is used by computer based devices like tablets, I phones etc. Thus computer illiterate users may face few problems and difficulties in using these Government services especially when they are made available on their mobile phone.
- **Lack of knowledge of English Language** :- Only 5% of the Indian population can understand English and most of the mobile applications are in English language . This makes it difficult for the Government to reach out to its rural citizens particularly when information they provide is available on the cell phones of citizen in English language
- **Develop application in multiple languages** :- Another challenge is coming up with a mobile app that can be availed by the users in their respective local language, because in India majority do not understand English .The challenge from app developer's perspective is that India we have 22 national languages making it extremely tedious

for them to develop one application in 22 different languages.

- **Mobile Mindset**:- Mobile devices are particularly seen by many people as tools for enjoyment and entertainment than for serious and important activities. Aligning these two mismatched worlds is a serious challenge.
- **Exclusion of poor and old** :- In India, poor and old people do not have a mobile phone, thereby they are unable to avail the benefits provided by this technology. If there are benefits to be availed from M-Governance then these people will lose out, thus providing another serious challenge.

V. CONCLUSION

M-Governance is a must in today's world of advancing technology to provide better and effective services to its targeted audience (citizens/ employees). The Government's move of Digital India till now has been a success and is progressing in the right direction but still more work needs to be carried out in this regard. The Government should endeavor to make people aware about m-governance initiatives. Cheap and affordable devices to be made available for the poor and needy so that they are not kept away from reaping the benefits of M-Governance..M-governance will help in empowering India by empowering its citizens.

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The Existence of Industrial Psychology in Globalization – the Modern "Samudra Manthan

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Abstract:- The story of "Samudra Manthan", as is detailed in "Bhagavad Purana", "Vishnu Purana" and the "Mahabharata" in Indian mythology required the devas (the divine ones) and the asuras (the bad ones) to come together to churn the ocean to retrieve the nectar of energy. The continuous churning with the help of the "mountain Mandara" as the churning rod alongwith "Vasuki-the king of snakes" resulted in the creation of terrible poison followed numerous valuables from the "Samudra Manthan".

I. GLOBALIZATION VIS-À-VIS "SAMUDRA MANTHAN"

In the current scenario, "Globalization" has led to a similar "Samudra Manthan", where the distance between people and the places where they are located are no longer directly proportional. Further the technological advances are not just forcing people of different cultures to come together physically or virtually in the dynamic business world, they have also forced the creation of several evils like pollution, war, terrorism, separation of loved ones and an almost destruction of many cultures and civilizations. However these have also been accompanied by the growth of businesses and prosperity leading to the development across various countries of the world.

The distance, timezones, cultural differences, government regulations, technological advances and many more factors have all literally had their deep roots being totally shaken up by globalization. Such has been the force of the latter, that none of these could remain the same as yesteryears.

The countries and businesses choosing to survive in this global churning have had to embrace the interaction among people of the world. The technological advances have literally led to exchange of life and or ideas across the earth.

In The *Consequences of Modernity*, Anthony Giddens has correctly summed up all of the above by stating that "Globalization can thus be defined as the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa."

II. THE ROLE OF "INDUSTRIAL PSYCHOLOGISTS"

The "Samudra Manthan" required the Lord Vishnu to take the form of a huge turtle "Kurma Avatar". The role of modern "Industrial Psychologist" is similar to that of "Lord Vishnu". The "Industrial Psychologist have to not just understand the attitudes of the global workforce… they are literally responsible for training the employees, assigning them appropriately assign them to the jobs along with developing job standards and measuring the job performance. This practice goes a long way in helping the progressive organizations of the world to outshine competition in the dynamic business world.

According to Muchinsky's book, Psychology Applied to Work: An Introduction to Industrial and Organizational Psychology, most industrial-organizational psychologists work in one of six major subject areas:

1. *Training and Development:* Determine the skills necessary to perform specific jobs, as well as develop and evaluate employee training programs.
2. *Employee Selection:* Develop employee selection assessment tests for a job position.
3. *Ergonomics:* Design procedures and equipment to maximize performance and minimize injury.
4. *Performance Management:* Determine employee well-being.
5. *Work Life:* Improve employee satisfaction and maximize the productivity of the workforce. Find ways to make jobs more rewarding to improve the quality of life in the workplace.
6. *Organizational Development:* Improve organizations, often through increasing profits, redesigning products, and improving the organizational structure.

III. CONCLUSION

To sum it all, the irreversible globalization opens a plethora of opportunities for the practitioners of industrial psychology.

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Capitalizing on Higher Education the Australian Way

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I. INTRODUCTION:

The OECD[1] defines Human Capital as -"the knowledge, skills, competencies and other attributes embodied in individuals or groups of individuals acquired during their life and used to produce goods, services or ideas in market circumstances."

Under the present circumstances, it is very important for economies to invest in the development of their human capital. Hence, the World Bank launched the Human Capital Project (HCP) in order to address the persistent gaps prevailing in the amount of investment for human capital development. The Human Capital Index is the key indicator of this project which is used to measure human capital of developed as well as developing economies. According to the World Bank[2] "The Human Capital Index quantifies the contribution of health and education to the productivity of the next generation of workers."

The Human Capital Index ranks 157 countries from highest to lowest based on their score, calculated between 0 (lowest) and 1 (highest). It can be observed that the developed countries rank much higher on this index than the developing ones. For instance, the two core countries of this research, India, and Australia, lie immensely apart. India[3], with a score of 0.44, stands 108 positions behind Australia[4], which has a score of 0.80.

Further, this paper studies the crucial role higher education has in the development of human capital. This is owing to the fact that developing countries, like India, can improve their human capital in a number of ways.

[1] *The Value of People*. Education at a Glance 2006. OECD. http://dx.doi.org/10.1787/015830764831. Accessed 20 Nov. 2019.

[2] "Human Capital." *World Bank*, https://www.worldbank.org/en/publication/human-capital.

[3] *Human Capital Index and Components, 2018*. https://www.worldbank.org/en/data/interactive/2018/10/18/ human-capital-index-and-components-2018. Accessed 17 Nov. 2019.

[4] *Human Capital Index and Components, 2018*. https://www.worldbank.org/en/data/interactive/2018/10/18/ human-capital-index-and-components-2018. Accessed 17 Nov. 2019.

However, one of the most significant means for human capital development is improving the quality of higher education. Due to its ability to generate competent experts, higher education stands atop the ways of developing human capital.

Additionally, the focus of this research is to compare Australia and India and highlight the areas where India can do as well as Australia. Therefore, this research studies the two countries, their initiatives taken toward higher education and, indirectly, toward the improvement of human capital.

Lastly, the paper puts forward innovative suggestions on the measures that India can take to improve its stock of human capital.

II. LITERATURE REVIEW

The current global economy demands an extensive study of human capital development. M Woodhall's paper "Human Capital Concepts" provides a brief meaning to the concept of human capital and forms a foundation for our research[5].

In order to understand the increasing relevance of human capital, compared to physical capital, the paper studies two independent growth models. RF Harrod's (1939) essay explained the concept of growth through higher savings, however, it did also highlight its limitations[6]. On the other hand, Paul Romer in his paper explained a theory for growth through investments in human capital (1990)[7]. These works directed our research toward the comparison of physical and human capital. This section of our paper concludes that developing the capacity of human capital over physical capital would better fit the Indian economy.

Following this conclusion, we move on to comparing the disparity in human capital in India and Australia. The World Bank in its 2017 report "The Human Capital Project" introduces the Human Capital Index which aids the primary comparison of human capital in the two countries through a common index. Further, the 2018 report "Human Capital Project: First Year Annual

[5]Woodhall, M. "Human Capital Concepts." *Economics of Education*, Elsevier, 1987, pp. 21–24, doi:10.1016/b978-0-08-033379-3.50011-5.

[6]Harrod, R. F. "An Essay in Dynamic Theory." *The Economic Journal*, vol. 49, no. 193, Oxford University Press (OUP), Mar. 1939, p. 14, doi:10.2307/2225181.

[7]Romer, Paul 11, et al. *NBER WORKING PAPER SERIffi HUMAN CAPITAL AND GROWTH: THEORY AND EVIDENCE*. 1989.

Progress Report" demonstrates the accomplishment of countries during the first full year[8]. Here, the human capital of the two countries was measured, scored and ranked, providing a direct comparison. Despite its comprehensive analysis of human capital development in India and Australia, this report does not highlight the structure and development of higher education and its effect on human capital. These shortcomings of the HCI prompted further study into the higher education systems.

S Kaul (2006), P Agarwal (2007) and L Helslop (2014) in their respective papers help us gauge the situation of higher education in India and the sectors that need to be looked at[9]. A 2007 study by O Hicks proved valuable for studying the Australian system and hence, helped compare it to the one prevailing in India[10].

The government of India published the National Education Policy to meet the changing dynamics of the population in 2019.

This policy focused on quality education, innovation and research. Despite the thorough policies introduced in the NEP, our research recognizes that there is more room for strengthening the existing higher education system in India through innovative solutions.

Andrew Norton and Ittima Cherastidtham (2018) map the Australian Higher education system and highlight its strengths. This report underlines the Australian reforms in higher education, giving way for the development of the same in India through *lessons from Australia.*

III. METHODOLOGY

To analyze the effectiveness of human capital on economic growth and the impact higher education has on human capital, this paper undertakes primary as well as secondary research:

a. **Primary Research** was collected in the form of three online surveys – The first with a sample size of 160, to understand the perspective of Indian students studying in India. The second one to understand the perspective of Indian students in Australia, and the third comprising the views of the

[8] *The Human Capital #INVESTinPeople.* 2018, doi:10.1596/978-1-4648-1328-3.

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teachers in the Indian education system. The details of both surveys are mentioned in Appendix 2.

b. **Secondary Research** was gathered from reports, research papers, articles, journals, the World Bank data, and the government released information.

IV. COUNTRY PROFILES

Before comparing the Higher Education and Human Capital Development systems, this paper conducts a fundamental comparison of the political, social and economic framework prevailing in the two countries.

INDIA

The Republic of India, the world's largest democracy, is the seventh-largest country by area. This country is home to a multicultural population of over 1.3 billion — the second largest in the world. Overcoming its vast history of political turmoil and economic disintegration, India has rapidly industrialized, urbanized, and militarized. It has now established itself as an economic powerhouse and a nuclear-armed state, with enormous influence in the South Asian region. Owing to its expertise in IT services,

India has the world's second-largest labor force at its disposal. With a rapidly expanding middle class, the Indian economy has emerged as the fifth-largest by nominal GDP, and the third-largest by purchasing power parity. As a multi-party parliamentary democracy, India has seen numerous socio- political transitions, marking the cultural fabric with an endless cycle of conflict and cooperation. Even as India continues its unprecedented rise, it must also battle poverty, corruption, economic inequality, social polarity, and other challenges that confront developing knowledge economies in the 21st century.

AUSTRALIA

The Commonwealth of Australia is universally praised for its education, health, and quality of life offered. It is the sixth- largest country by area and is home to a small, but highly urbanized population of million. As a highly developed country with the world's tenth-highest income, Australia's socio-economic system shapes its regional power in the Asia-Pacific. With a stable parliamentary constitutional monarchy, Australia's liberal-democratic setup has encouraged economic freedom and civil liberty. Thus, it is emerging as an attractive destination for ambitious foreign students and immigrants alike.

This influx, coupled with its lack of a national language or religion, has allowed a distinct, yet diverse "Australian" culture to flourish. The developed Australian economy is characterized by the highest average wealth in the world and a subsequently low rate of poverty.

However, despite this, the aging population, increasing pressures on infrastructure, and growing environmental concerns threaten to hamper the stability of Australia's society and economy.

Parameter	***India***	***Australia***
Government Structures	A federal parliamentary constitutional democracy	A federal parliamentary constitutional monarchy
GDP Per Capita	2,041.091 USD	57520.00 USD
Population	1,371,677,477	25,317,949
Number of Public Universities	513	40
Labor Force Participation Rates	49.8%	65.7%
HCI Ranks	115	7

Table 4.1.1: Comparing India and Australia

V. THE ECONOMICS OF IDEAS:

RF Harrod in his work "An Essay in Dynamic Theory"[11] developed an easy mechanism to understand growth in a developing economy. It states:

5.1. The Harrod-Domar Model of Economic Growth

[11]Harrod,GDP R. F. "An Essay in Dynamic Theory." *The Economic Journal*, vol. 49, no. 193, Oxford University Press (OUP), Mar. 1939, p. 14, doi:10.2307/2225181

a. "The level of a community's income is the most important determinant of its supply of savings.
b. The rate of increase of its income is an important determinant in its demand for savings.
c. The demand and supply should be equal."

On the basis of these three postulates, he derived a conclusion that states that there exists a rate of growth in every economy, also known as the warranted growth, the value of which is determined by the average propensity to save and the state of technology.
It states[12],

$$G = \frac{s}{c}$$

Prof. Domar developed a similar conclusion. However, his conclusion was drawn from the supply side, which is the productive capacity of labor. His research recognized the dual role of investment, which is to generate income as well as increase the productive capacity. Following this, his research focused on the rate of change in savings and capital that would maintain full employment.

It states[13], $\Delta I/I = \alpha\sigma$

On corroborating the two theories, the Harrod-Domar model of economic growth was derived. This model states Harrod's warranted rate of growth (Gw) is Domar's full employment rate of growth ($\alpha\sigma$).

Harrod's $G = \frac{s}{C}$ = Domar's $\alpha\sigma$.[14]

Conclusion of the Theory: The theory demonstrates how the transfer of capital to developing economies can lead to higher growth, which in turn will enable a higher rate of savings. An increase in savings will improve the investment and the capital stock of that country making growth steady and self- sustaining. However, there are certain limitations to this theory that prove to be obstacles to growth. These limitations are mentioned in detail in appendix 2.

Relevance of the Theory: This research notices that the Harrod-Domar Theory pays specific attention to the accumulation of physical capital. The theory states that an increase in physical capital can lead to a steadily growing economy. The importance is given to physical capital, therefore, increases the role of investment and savings in a developing economy.

[12] Derived in Appendix 1

[13] Derived in Appendix 1

[14] Derived in Appendix 1

However, it is argued that developing countries face a vicious cycle of low investments, low savings and hence lower rates of growth. **Therefore, this paper uses the Harrod-Domar Model to explain the diminishing need for physical capital in a developing economy.**

5.2 The Endogenous Growth Theory by Paul Romer:

Emerging in stark contrast to neoclassical growth theories, Paul Romer's endogenous growth model places "the economics of ideas" at the heart of economic growth. Through this hypothesis, the theory describes technology-induced economic growth. This growth is the result of the knowledge and expertise of researchers, innovators, and entrepreneurs who respond to economic incentives.

Previous macroeconomic research focused on the role of technological innovation in stimulating economic growth. Instead, Romer explores how situational factors in the economy determine the creation of new technologies. Therefore, by offering insight into the capacity of "ideas" to inspire endogenous technological change, Romer developed a model of economic growth.

This model employs the non-scarcity and non-rivalry of ideas to encourage increasing returns to scale in the process of production[15].

The use of an idea by one set of resources or by one economy does not prohibit the use of the same idea by others, and hence establishes the non-rivalry of ideas. Therefore, while the accumulation of physical capital eventually leads to diminishing returns, ideas are different in nature and can accumulate to yield increasing returns and achieve sustained economic growth[16].

Conclusion of the theory:

Building on the collaborative nature of ideas, Romer's theory presents output as a result of the overall stock of knowledge. These efforts made to increase knowledge through education, research, and technological innovation lead to sustained economic growth.

[15] *Nobel Laureate Paul Romer: The Path To Economic Growth And Innovation*. https://www.forbes.com/sites/katevitasek/2018/11/19/paul- romer-the-path-to-economic-growth-and-innovation/amp/. Accessed 17 Nov. 2019.

[16] Romer, Paul. *Human Capital And Growth: Theory and Evidence*. Nov. 1989, doi:10.3386/w3173.

Relevance of the theory:

As "increasing returns" are equivalent to higher output and higher income per person, this model implies that "**bigger is more productive**" as far as human capital is concerned. Assuming that an economy with more people will have a larger number of researchers, a larger number of ideas and hence, a higher level of output. As the fast- growing economies of countries like India and China simultaneously tackle high growth rates of population, Romer's controversial idea that population growth rates are proportional to economic growth acquires greater significance[17].

The theory also emphasizes the importance of human capital development as the economic growth potential of a country rests on human capital accumulation. Further, it also depends on the closeness to the frontiers of technological innovation, on the efficiency of its education system, and on the prerequisite of a high level of skill and expertise within the population. By linking the economy to society, education to innovation, and human capital to economic growth, Romer, therefore, prescribes "investment in knowledge" as the crucial determinant of economic growth.

This paper attempts to explain the increasing relevance of Human Capital Development in developing economies with specific attention towards technology and innovation as its central indicators.

5.3 Physical Capital v/s Human Capital

The evolution of growth theories from the Harrod-Domar model to the new endogenous growth model specifically highlights the limitations of physical capital in today's developing economies. Given the diminishing returns of physical capital accumulation, the influence of human capital and knowledge in enhancing the production process cannot be ignored. As savings and investments cannot always be increased through policy decisions, the handicap of developing economies is worsened in the physical capital model. Further, as the global knowledge economy expands in size and reach, ideas are placed at the core of all economic structures. Since ideas are endogenous and originate from within the human resource, there is a need to enhance human capital to achieve economic growth. In response to the growing levels and growth rates of the population today, it is imperative to turn the population into a valuable asset, now more than ever.

[17]Barro, Robert. "Comment on P. Romer, 'Human Capital and Growth: Theory and Evidence.'" *Carnegie-Rochester Conference Series on Public Policy*.

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As the stage of human capital development in the country is reflective of its economic growth, in the context of populous, but developing economies, a sustainable model of economic growth can be derived primarily through cross-generational development of its large human capital.

Policy Implications of a "Human Capital Orientation":

The human capital component of production can be influenced through policy action to a large extent. The policy implications are:

- Given that ideas emanate from the overall stock of knowledge, investment in education and research is the key to economic growth — the stock of knowledge essentially being an investment in human capital itself.
- Learning from the success of developed countries like Australia and Japan in this regard, the development of superior human capital must presuppose the existence of a strong higher education framework with research- centric learning.

- Consequently, as innovation is accepted as being "endogenous" to human capital, it is imperative to incentivize investments in research to promote knowledge creation. While public investment has the social incentive of progress and development, private incentives must receive economic motivation.
- Lastly, as the collaborative nature of ideas is exacerbated, knowledge partnerships and the mutual benefits of innovation emerge as the ideal way to affect widespread economic growth.

In an interview, Nobel Laureate Paul Romer, effortlessly explained how Human Capital Development is relevant for developing economies:

"Take some really valuable idea. My favorite really valuable idea is something called oral rehydration therapy, which is this formula, this insight, for how to save the lives of kids who get diarrhea. Many of them will die of dehydration if you don't give them fluids. If you just give them water or even give them just water plus a little salt in it, they'll actually get an electrolyte imbalance and die. But it turns out if you mix in a little bit of glucose, a little bit of sugar, along with the salt and the water, you can save millions of lives — from figuring out just a simple formula to mix some sugar in with the salt and a few minerals with the water.

Now, what's the right price for a discovery like that? Well, society should be willing to pay a huge amount to have somebody go discover something like that because it can save so many lives. But then what's the right price for deciding who gets to use it?"

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Given human capital is greatly impacted through Higher Education and technological change we measure the two indices in India. The measurement of human capital in India is done through the comparative analysis between India and Australia, given the former is a developing economy and the latter is a developed one.

VI. INDICATORS

5.4 Conclusion

As this paper analyses, human capital in comparison to physical capital, the immediate potential of human capital in stimulating and steering economic growth is evident. Even in the complex socio- economic setup of developing countries, human capital brings together several institutional factors, including education and economy.

Having constructed a direct relationship between human capital development through higher education and technological

Four indicators are measured to study the impact of Higher Education on the Human Capital Development of the two countries, India and Australia. They are:

1. Institutional Framework
2. Investment
3. Innovation and Technology
4. Retention Rate

6.1. Institutional Framework: Overview of the Undergraduate Systems in India & Australia:

What is institutional framework?

Higher education refers to all post- secondary education, including both public and private universities, colleges, technical training institutes, and vocational schools[18].

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The framework comprising of undergraduate institutes specializing in higher education is called the institutional framework of a country.

Relevance of institutional framework:

Since the *undergraduate system* is the first university degree that an individual obtains, this is a part of higher education in any country. All policies and plans for the higher education of a country are also applicable to its undergraduate system. **This paper exclusively focuses on the undergraduate system applicable to public universities in India.**

The undergraduate system in India:

In India, the development of basic infrastructure in terms of both planning and policies of higher education is managed by the Department of Higher Education under the Ministry of Human Resource Development (MHRD)[19]. The higher education in India is a shared responsibility between the Centre and the states.

The recent growth of higher education in India is a direct product of the growth of universities. A *university*, here, is established under a Central Act, Provincial Act or a State Act and must be recognized by the University Grants Commission (UGC) according to the requirements of the UGC Act, 1956.

Currently, there are 6 types of universities/ university-level institutions in India: *Central, State, Private, Deemed-to-be, Institution of National Importance and Institution under the State Legislature Act*[20]. The determination of the standard and the coordination of these universities is the responsibility of the *University Grants Commission (UGC)*, a statutory organization which provides grants to eligible universities and colleges, and also advises the Centre and the state governments regarding higher education and its development[21]. It also established an autonomous body called the *National Assessment and Accreditation Council (NAAC)* whose main function is to assess and accredit institutions of higher education. This is done in a two-step process

18 "Tertiary Education Overview - World Bank ...." https://www.worldbank.org/en/topic/tertiaryeducation. Accessed 4 Nov. 2019.

19 "About Department Of Higher Education | Government ... - MHRD." 25 Apr. 2016, https://mhrd.gov.in/overview. Accessed 4 Nov. 2019.

20 "University and Higher Education | Government of ... - MHRD." 19 Apr. 2016, https://mhrd.gov.in/university-and-higher-education. Accessed 4 Nov. 2019.

21 "University Grants Commission - MHRD." 19 Apr. 2016, https://mhrd.gov.in/university-grants-commission. Accessed 4 Nov. 2019.

where, in the first step the institution seeks the 'Institutional Eligibility for Quality Assessment' (IEQA) and in the second step the institution is accredited with grades A, B, C and D[22].

The undergraduate system in Australia:

The higher education in Australia, on the other hand, is made up of universities and institutions that train students to acquire the necessary skills for development[23]. It is divided into 6 levels from level 5 to level 10 by the *Australian Qualifications Framework (AQF)*. The AQF is the national policy in Australia for regulated qualifications in education and training in Australia. This helps to ensure consistency and national recognition of qualifications throughout Australia. The 6 levels starting at Level 5 are *Diploma*, *Advanced Diploma & Associate Degree*, *Bachelor Degree*, *Bachelor Honors Degree & Graduate Certificate or Diploma*, *Master's Degree* and *Doctoral Degree*[24].

The AQF is accredited by the *Tertiary Education Quality Standards Agency (TEQSA)*. This is an independent agency for national quality assurance and regulation of Australian higher education. It uses three basic principles — the necessity, risk, and proportionality — while regulation and is responsible for safeguarding the interests of students and the reputation of Australia's higher education system[25].

6.2. Investment

What is investment?

Investment as an indicator of higher education ranges from the proportion of national wealth spent on higher education to the spending on tertiary education per student.

Relevance of investment in higher education:

To undertake a qualitative and quantitative comparison of the higher education system in the two countries, we need to measure their respective investments. Further, the extent to which financial resources are invested in the development, strengthening, maintenance, and expansion of the system must also be analyzed. Acknowledging that successful outcomes of higher education are largely influenced by the public expenditure policy and the private incentive to invest[26], there is a need to evaluate investment not just from an economic standpoint, but from a policy perspective, too.

22 "University And Higher Education | Government of ... - MHRD." 19 Apr. 2016, https://mhrd.gov.in/university-and-higher-education-1. Accessed 4 Nov. 2019.

23 "Higher Education | Department of Education." 8 May. 2018, https://www.education.gov.au/higher-education-0. Accessed 4 Nov. 2019.

24 "Australian Qualifications Framework (AQF)." https://www.aqf.edu.au/. Accessed 4 Nov. 2019.

25 "About us | Tertiary Education Quality and Standards ... - TEQSA." https://www.teqsa.gov.au/about-us-0. Accessed 4 Nov. 2019.

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Investment in higher education in India:

In the formative years of India's education network, the "universalization of primary education" was recognized as the foremost socio-economic target. With this objective left unfulfilled, the relevance of India's attempts to expand tertiary education through directed investment comes into question. This idea is exacerbated through the trends in public spending on education in developing countries, which reveal the extent to which public spending on primary education exceeds public spending on tertiary education[27].

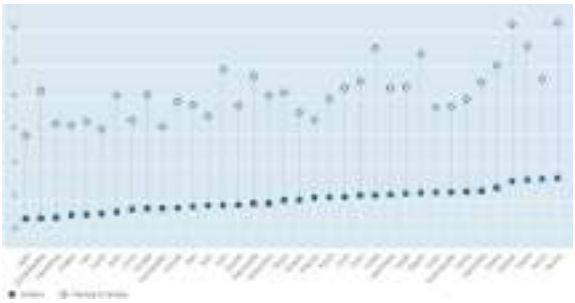

Figure 6.2.1: Public Expenditure on Tertiary and Primary Education. Source: OECD database, 2016.

Currently, the need for investment created by India's growing demographic of the tertiary-age population is undeniable. With the OECD predicting India's young population outpacing that of China by 2020, and the relative success of boosting primary enrolments and increasing access to secondary education; the demand for higher education is set to increase drastically[28].

Over the last decade, India's public expenditure on higher education settled at an average of 1.47% of total budgeted expenditure, evidently lower than the budgetary allocations of its contemporaries such as Japan and China[29]. Owing to this shortfall in investment and the lack of tangible outcomes of investment, the higher education system is plagued with chronic issues. Some of them being a shortage of qualified faculty, curricula that are disconnected from the realities of the job market, and a weak ecosystem for innovation[30]. **These statements are further be proved by our primary data that states 63.8% of our sample thinks the government can have better utilization of funds and investment.**[31]

[26] *Human Capital - Econlib.* https://www.econlib.org/library/Enc/HumanCapital.html. Accessed 11 Nov. 2019.

[27] "Documents & Reports." documents.worldbank.org/curated/en/337771468765265752/pdf/multi-page.pd.

[28] "Demography - Young Population - OECD Data." *TheOECD*, data.oecd.org/pop/young-population.htm. [29] Uis. *Education : Government Expenditure on Education as a Percentage of GDP*, data.uis.unesco.org/index.aspx?queryid=3373#.

Through the National Education Policy 2019, the government has reiterated the need to increase public expenditure on higher education, with the multi-pronged aim of encouraging R&D, increasing administrative autonomy, and improving the quality and capacity of existing institutions[32]. The evolving dynamics of today's job market, along with India's intent to emerge as the largest source pool for global talent, demand a transformation in the education system. These transformations can be about infrastructure, curriculum, pedagogy, and assessment, that perhaps public funding alone may not be sufficient for.

This idea acquires unique significance when contextualized by the higher education expenditure portfolio of Australia, which is characterized by a nearly equal public- private structure.

Investment in higher education in Australia:

The OECD has repeatedly highlighted the low levels of public funding in tertiary education in Australia, thereby granting it the rank of second-lowest (by public funding) in its 2016 report[33]. On the other hand, as compared to the national average of USD 12,600 in Spain and USD 11,800 in Portugal, Australia's expenditure per tertiary student is comparatively higher, resting at an average of USD 20,300. A realistic representation of the finance received by the Australian higher education system thus demands greater consideration given to private investment. Australia's education system derives significant finances from private institutions, with higher education being the largest beneficiary. Even though recent government plans show an intent to increase public funding on higher education, the existing infrastructure, faculty training, research inclination and exposure, and innovative curricula are almost entirely outcomes of greater private funding through loans, grants, and scholarships. To justify the claims of quality and capacity, a dominant role of private investment in Australia must be recognized[34].

[30] *Understanding India: The Future of Higher Education and Opportunities for International Cooperation UNDERSTANDING INDIA-THE FUTURE OF HIGHER EDUCATION AND OPPORTUNITIES FOR INTERNATIONAL COOPERATION*. 2014.

[31] Primary Data Appendix

[32] *Committee for the Draft National Education Policy Members of the Drafting Committee*. 2019.

[33] *Education at a Glance 2016 (Summary in English)*. 2016, doi:10.1787/033aaa9d-en.

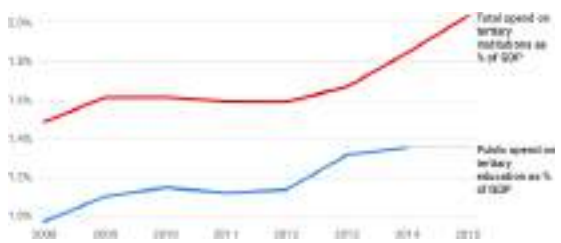

Figure 6.2.2: Public spending and total spending on tertiary education. Source: Education at A Glance, 2016. OECD.

However, the budgetary allocations of the government are also indicative of the path that public investment is likely to take in the near future. Recognizing the need to prepare students for an increasingly globalized world, the 2018 budget showed directed funding of $42 million to enhance accessibility for rural and regional students through the establishment of 1000 Commonwealth-supported bachelor and sub-bachelor places, as well as the creation of up to eight regional study hubs[35].

The 2019 budget continues this policy through the investment that focuses on increasing opportunities in regional Australia, upgrading infrastructure to meet demand, and strengthening the Tertiary Education Quality and Standards Agency (TEQSA)[36].

The most noteworthy characteristic of public funding in Australia, however, is the high productivity of investment, owing to the clear allocation of funds and transparent policy for review.

Australia's public investment in tertiary education is at 0.7% of gross domestic product or GDP, while India's is 4.6% of GDP**[37].**

[34]OECD. *Private Spending on Education (Indicator)*. 2015, doi:10.1787/6e70bede-en.

[35]*Budget 2018-19: Supporting Australian Students to Meet the Demands of the Modern World | Department of Education*. https://www.education.gov.au/budget-2018-19- supporting-australian-students-meet-demands-modern- world. Accessed 11 Nov. 2019.

[36]*Budget 2019-20: Delivering Better Education and Training Outcomes for All Australians | Department of Education*. https://www.education.gov.au/budget-2019-20. Accessed 11 Nov. 2019.

[37]*Higher Education Spending among World's Lowest – OECD.* https://www.universityworldnews.com/post.php?story=20170913140128375. Accessed 11 Nov. 2019.

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6.3. Innovation and Technology:

Meaning of innovation & technology:

Following the conclusion of the Harrod Domar model studied previously in the paper, "Innovation and Technology" is analyzed as an indicator for higher education below.

Relevance of innovation & technology:

The aim of innovation is to improve the scope of education in the countries in any way possible. Therefore, they should be treated as improvements in the education sector. However, innovation in education is a highly disputatious issue. The education sector is regarded as the most resistant sectors, but it simultaneously also faces the problem of productivity and efficiency.

Here, efficiency means the balance between the investments made in the resources and the results in terms of students' performance and value. The problem of productivity and potency in education is even concerning when education is compared with different public policy sectors. In other sectors like health, technology has been a major driver of increased efficiency and productivity, even though the costs might have gone up. However, no similar improvements were seen in the education sector. Therefore, the governments have been investing in Digitization and Information and Communication Technology (ICT) for schools.

Educational innovations can lead to better learning outcomes, and enhanced educational provisions and equity.

The comparison between India and Australia provides insights regarding the new innovative policies in the higher education sector planned by the government of India and lessons that can be adopted from the technological framework of Australian higher education. This is further corroborated using our primary data collected, which states 74.3% of our sample believes that our education system should be modified to have more room for innovation and technology.

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Innovation in higher education in India and Australia:

India:

Various new innovative policies, as well as technological updations, have been adopted by the Ministry of Human Resource Development (HRD), Government of India which include ICT, Innovation Cell and so forth.

1. **Information and Communication Technology (ICT)**: Digitization and adoption of ICT are progressively rejuvenating the conventional way of classroom learning. It has increasingly helped in bridging the gap between student drop out and teacher shortage. "*According to the 11th five-year plan, the government has invested USD 16 billion on ICT, out of which USD 9 billion were for setting up ICT labs for computer- aided training and the remaining for the National Skill Development Program for training through virtual centers through vocationalization.*"[38]

2. **Innovation Cell:** The Ministry of HRD has introduced Innovation Cell and Atal Ranking of Institutions on Innovation Achievements (ARIIA). The primary mandate of the Innovation Cell is to uplift, inspire and nurture young students by exposing them to new ideas and processes, leading to innovative activities in their initial years. This is envisioned to be fostered through a network of innovation clubs in higher academic establishments; whereas ARIIA will encourage healthy competition among Higher Education Institutions (HEIs). "*India has already been improving on the global stage in terms of Innovation ranking from 86th place, 5 years ago, to 57th place this year.*"[39]

The ministry is not only planning to **encourage the use of digital learning resources** among students and teachers but also focusing on the Induction Training of the newly recruited teachers and strive for the smart campus. This is imperative since the quality of education leads to the enhancement in the output and increased efficiency of not only students but also teachers through innovative training methods.[40]

3.

[38]IBEF. "Education Sector in India." (2016). [39]*Innovation Cell and Atal Ranking of Institutions on Innovation Achievements (ARIIA) Launched by M/o HRD to Foster Culture of Innovation in Higher Education Institutions*. https://pib.gov.in/newsite/PrintRelease.aspx?relid=183177. Accessed 17 Nov. 2019.

Australia:

Australia has a comparatively different outlook on innovative solutions to enhance their efficiency in the higher education sector. Technology is globally revolutionizing the way education is practiced, absorbed and funded. Therefore, Australia has adopted Education Technology or EdTech, which is a provision of technology solutions for education purposes. It supports and improves the provisions of online learning, increases student engagement and retention, enables personalized and adaptive approaches to learning, and moreover, facilitates lifelong learning. It also supports efficiencies in administrative functions. *"In its most recent analysis of the industry, Frost & Sullivan found that the Australian edtech market is expected to grow to $1.7 billion by 2022. The market is expected to grow significantly amidst increasing student demand for education services and technology innovation, competition amongst institutions and decreasing acquisition costs."*[41]

6.4. Retention Rate:

What is retention rate?

Retention rate can be defined as the proportion or ratio of a country's students that continue to pursue higher education at an institution to the total number of students.

Relevance of retention rate:

The cumulative retention rate of educational institutions of an economy measures the impact on its academic, social and economic forefronts as a result of students' persistence and commitment.

A correlation study can be undertaken to demonstrate the effect of retention rate on higher education on a country. However, it is to be noted that every economy has definitive preconditions impacting its student retention or attrition rates.

[40] *Three-Day VCs' Conference on Research & Innovation in Higher Education Ends;* https://pib.gov.in/newsite/PrintRelease.aspx?relid=181153. Accessed 17 Nov. 2019.

[41] *Australian Education Technology Report. 2017, www.austrade.gov.au/edtech/australian-education- technology-report-2017.pdf* .

Retention rate is a suitable instrument to gauge the correlation between higher education and human capital as it is not an end in itself like the Gross Enrolment Ratio. The retention rate is also a viable tool because an efficient comparison can be carried out between the two countries based on their retention rates, provided that the comparison between the two stands reasonable.

Calculation of the retention rate:

The retention rate of an economy can be measured by collecting data for the number of students who enrolled at the beginning of any academic year and the data for the number of students from an incoming class who remain enrolled for that particular academic year and then dividing the two.[42] Thus, in the holistic view, retention rate can be measured by dividing the total enrollments for a specific academic level by the remaining enrollments for a higher one than the specific academic level.

In this paper, we use the Gross Enrolment Ratios as given by the World Bank. This section of the paper will take into account two ratios that can be equated to find the student retention rate of an economy.

1) Gross Enrolment Ratio in Tertiary Education (GER_{TE}):

In order to define the Gross Enrollment Ratio in tertiary education, a distinction should be made between Secondary and Tertiary Education as two different levels of education. We can define secondary education, the second stage traditionally found in formal education, beginning about age 11 to 13 and ending usually at age 15 to 18.[43] Notwithstanding, tertiary education can be defined as the third-level or stage of academia. Tertiary education can also be expressed as 'post-secondary' education. Thus, GER_{te} can be defined as the proportion of total enrollments in post-secondary or tertiary level of education.

2) Gross Enrolment Ratio in Secondary Education (GER_{SE}):

Previously, this paper has defined secondary education. Hence by stating the Gross Enrolment Ratio in Secondary Education, this paper implies the number of students enrolling for education on a secondary/higher level of education. The GER_{SE} can be used to denote the rate of students enrolled at a particular level of academia.

[42] *What Are Graduation, Retention, and Transfer Rates?, fafsa.ed.gov/help/fotw91n.htm.*

[43] *The Editors of Encyclopaedia Britannica. "Secondary Education." Encyclopædia Britannica, Encyclopædia Britannica, Inc., 27 Mar. 2018, www.britannica.com/topic/secondary-education.*

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The calculation of the following data has been shown in Appendix 2.

DATE	*GER SE*	*GER TE*	*RR* [44]
2004	51.6	11.0	21.31
2005	54.2	10.7	19.74
2006	55.1	11.5	20.87
2007	57.5	13.2	22.95
2008	60.6	15.1	24.91
2009	59.8	16.1	26.92
2010	63.3	17.9	28.27
2011	66.4	22.9	34.48
2012	69.2	24.4	35.26
2013	68.9	23.9	34.68
2014	74.3	25.5	34.32
2015	74.0	26.9	36.35

Table 6.4.1: Retention rates of India calculated

One of the two countries - India's - data has been depicted in columns 2 & 3 in table

6.4.1 Thus, using the equation given previously, this paper calculated the Retention Rate for the Indian Education System.

DATE	*GER SE*	*GER TE*	*RR*
2004	149.9	71.7	47.83
2005	148.4	72.3	48.71
2006	127.4	71.5	56.12
2007	126.4	72.5	57.35
2008	128.0	72.9	56.95
2009	130.3	76.8	58.94
2010	132.5	80.9	61.05
2011	134.3	83.5	62.17
2012	136.9	85.4	62.38
2013	137.6	86.6	62.93
2014	137.6	90.3	65.62[45]

Table 6.4.2: Retention rates of Australia calculate

[44] *"India Gross Enrolment Ratio in Secondary Education, 1970-2018." Knoema, knoema.com/atlas/India/topics/Education/Secondary-Education/Gross-enrolment-ratio-in-secondary-education.*

Similarly, the second country of our study - Australia - has a retention rate as calculated by its data shown in table 6.4.2 and the equation mentioned in Appendix 2.

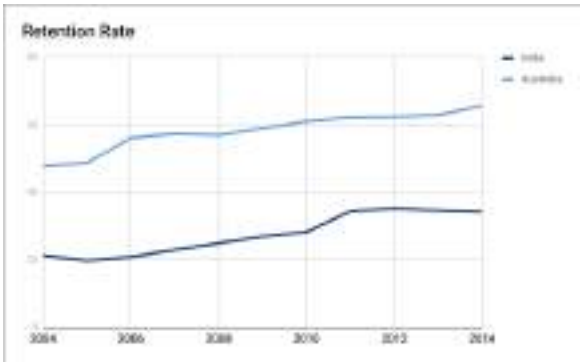

Fig 6.4.3: Trends for the retention rates of two countries

VII. CAN INDIA AND AUSTRALIA BE COMPARED?

Having examined the two nations across the above socioeconomic indicators, it is necessary to also review certain key aspects of both countries. This is done with a view to gauge whether India and Australia are comparable to the extent that a law or policy that was successful in Australia, would also find success in India.

To that end, the profiles of both countries are compared along with the following relevant parameters.

Population size and density - At over 1.3 billion, India's population is 55 times larger than Australia's, and has a density of over 415 per km^2. In contrast, Australia's population of 24.6 million boasts a low density of just 3.28 per km^2. Thus, the implementation proficiency of Indian governance is understandably lower than that of Australia.

Demographics - While the median age in Australia is 37 years, over 50% of India's population is below 25 years of age. 67% of India's population is still categorized as rural, and the social fabric of the country is far more culturally diverse than that of Australia.

Higher Education Structure - Indian higher education has a greatly fragmented structure, with 402 state universities, 334 private universities, and over 39,000 colleges. Australia, on the other hand, has 43 consolidated universities that derive nearly half their funding from private sources.

[45] *"Education Statistics." Education Statistics (EdStats) | Data Catalog, 14 June 2017, datacatalog.worldbank.org/dataset/education-statistics.*

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Stage of Human Capital Development - India ranks 115th on the HCI and reports a healthy growth rate of 0.62%, per capita GDP of 2,041.091 USD, and merely 5.8 learning-adjusted school years. With an HCI ranking of 7, a healthy growth rate of 98%, per capita GDP of 57520.00 USD, and 11.6 learning-adjusted years of quality education, Australia's human capital is far more developed than that of India, and hence has different requirements and expectations that are reflected in policies as well.

Policy priorities - Perhaps the most important determinants of a policy's relative success are the driving force behind it and the objectives it wishes to achieve. Owing to its demographic, India's policies mainly seek to cope with the massive rise in student demand, to improve the quality of teaching/ program delivery, to increase equity and access through universalization, and to enhance capacity, performance, and output to better cater to the labor market. Functioning at a different level of development, Australia's policies seek to promote diversity and innovation through technology and social media, to enhance global competitiveness through better research output, to achieve internationalization by attracting high- caliber overseas talent, and to achieve social and economic sustainability through higher education collaborations. Given that their policy priorities are complementary but different, the idea of Australia's practices being able to serve as an efficient benchmark for India comes into question.

As these differences limit the possibility of a direct comparison between India and Australia, simply selecting an Australian policy and applying it unequivocally to the Indian system is not feasible. A more nuanced approach, therefore, would demand acceptance of the complementarity of the objectives of the two countries. While India struggles with the challenges of rising demand and the need for quality assurance, Australia must also attempt to overcome stagnation through the infusion of superior global talent into its resource pool. Recognizing the fact that the Australian higher education and human capital framework is unwavering in terms of quality, capacity, and performance, this paper will approach policy recommendations from Australia, with the following dual perspective:

a) **Reconstructing Australian policy to be congruous with the Indian system** - This requires the identification of aspects within Australian policies that are relevant to India, so that they may be modified to align with India's needs and expectations.

b) **Adopting a collaborative approach to allow both countries to achieve their respective goals** - This entails making a collaborative effort to use India's widening talent base and Australia's infrastructural strength to Facilitate mutual benefit and development.

8. Learning from Australia's Major Reforms:

The last major reforms to the higher education system in Australia have been in 1990. Since then, there have been a number of constant and extensive changes to higher education. They are:

Australian Policy	Central Idea	Relevance to India
Increased higher education sustainability through an increase in higher education funding	Focus on sustainability of higher education	To keep the higher education model well-founded, it is imperative to introduce funding projects that maintain the viability of the system
The choice for students by improving support for regional higher education	Expansion of regional higher education	To bridge the urban-rural divide and to provide every student with the platform to excel, the introduction of pertinent policies supporting regional higher education is needed
Increased transparency and accountability through contingent funding for universities	Increased accountability for universities	To keep corruption and leakages in check and to ensure consistency of quality of education, increased accountability from institutions is required
Transparency for teaching and research expenditure	Support for research expenditure	With the rising need for research-based programs and funded research projects, an increase in public funding for research can revamp the higher education system in India

Fig 8.1: Majors reforms in Higher Education in Australia and their relevance to India

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VIII. POLICY SOLUTIONS:

The primary data collected states that 75.7% of our sample believes that the current degree courses in India would not suffice to get them enough opportunities in this globalized, and innovation orientated world. This calls for innovative reforms in the higher education system of India. The six solutions prescribed in this paper aim to make higher education in India more oriented toward the development of skills, entrepreneurial abilities, and employability of individuals.

9.1 Teacher Exchange Program:

This policy tackles the issue of the urban- rural divide between educators in India. This problem can simply be dealt with by the rotation of teachers between urban and rural areas. In order to decentralize the education system, teachers should have regular "rotations" between institutions located in urban and rural regions. This solution is pertinent to the Indian context as the higher education system is concentrated only in the urban areas. Further, the diversity of experience in educators is non-existent as well.

I] Legislative Framework:

Rotation implies following a system of regular and moderated exchange between the teachers in urban and rural institutes.

Implementation can be conducted through a Regulatory Impact Analysis (RIA). The variables that to be controlled are area and language. The results of this should be calculated with respect to the exposure received by the students across this RIA and the experiences of the teachers. This paper suggests that rotation begins with a single state and then be expanded. These rotations under this policy should be held every three years, for one semester or six months, whichever is finished first.

Upon systematic implementation, this policy will increase the educators' exposure to varied groups of students as well as classroom environments. Such exposure not only leads to diversification of a teacher's abilities but would also make them more equipped with dealing with heterogeneous groups of students.

We suggest further research be done on this solution so as to strengthen its implication.

Problem identified: difference in diversity, experience and exposure to educators in urban and rural areas
Solution advised: rotation of teachers between urban and rural areas

9.2. Incentivize Pedagogical Change:

The NEP (2019) highly recommends changes in the higher education system of India through pedagogical changes. At the core of any pedagogical change lies the initiative and willingness on the part of the stakeholders in the system. This paper offers solutions that incentivize pedagogical changes and make their implementation smoother.

I] Legislative solutions:

Incentives to boost pedagogical change can mainly be categorized into monetary and non-monetary incentives:

1. *Monetary Incentives* such as improving the threshold for the minimum salaries or increasing room for promotions. Further, increased access to research grants and monetary rewards can be introduced. Such incentives have a direct effect on the productivity of those at the center of the change.
2. *Non-Monetary Incentives*[1] can prove to be equally beneficial. This paper suggests motivators with a significant impact such as awarding with recognition or having an evaluation system in place.

Recognition and support from students as well as their parents can also prove to be a motivator for teachers.

II] Behavioral Solutions:

The behavioral framework of the incentives offered to teachers would be best substantiated by giving them a 'nudge' in the right direction. The Nudge theory, given by Richard Thaler, explains how an indirect suggestion can influence the behavior of individuals. In this case, if teachers are 'nudged' in the direction of improving the structure or curriculum, it would greatly impact the overall education system. Further research, case studies, and applications of

Problem identified: insufficiency of will in making pedagogical change as suggested by the NEP
Solution advised: monetary and non-monetary incentives along with Richard Thaler's "nudge"

this theory are mentioned in Appendix 4.

9.3 Project Bridgital:

India broadly has two problems affecting human capital, the translation of jobs in terms of employment opportunities and access to technological resources. There is a critical shortage of access to vital services across the nation, like healthcare and education, rendering them unavailable to millions of Indians.

As earlier mentioned in the paper, the endogenous theory of growth suggests that the development of human capital through the use of technology would be most beneficial.

Thus, this paper proposes to build a 'bridge'. A bridge that closes this skill gap, by enabling the existing unskilled labor force by enabling them with technology. **The Bridgital Project** addresses access challenges and restructures a typical job by enhancing its basic roles with technology. This solution is one where machines and men don't compete with each other but rather complete each other.

This policy suggests augmentation of tech to unskilled human capital, enabling both to

solve greater problems. India needs a solution that doesn't disregard the existing unskilled and meager human capital scenario, but one that essentially makes the best of it.

I] Institutional Framework

The implementation would detail the investment of basic augmented technology to workers from the ground up, enabling them to take on bigger tasks and responsibilities, and freeing up skilled labor to allow them to work more effectively. It would go about to set each Ministry in concern here with the fore mentioned technology, and its mandatory application to ground level public sector units that have scope for improvement. This technology would be tailored to each specific industry, automating manual processes by enabling the workers to control it, via predefined, uniform systems, and solving basic problems halfway through the supply chain.

II] Behavioral framework

A decentralized behavioral framework here would clearly propagate how the detailed deployment of technology from the ground up here would not threaten jobs. In order to supplement their skills, help them create more value and protect their jobs while maximizing efficiency, technology can be helpful, all at economically dispersed costs.

Hence, during the deployment of this system, the existing workforce must be given the rudimentary training needed, which will further be implemented in the education required to get to the position in question.

9.4 Industry Participation Initiatives:

As the human capital in India is characterized by poor employability and productivity, there is an evident inequality between the demand and supply of talent to the labor market. The standard curriculum is rapidly losing relevance, and the demands of the industry evolving constantly. This leads to the skills and learning opportunities offered by tertiary education institutions becoming increasingly disconnected with the current needs of the economy.

Problem identified: shortage of access to technology for human capital enhancement
Solution identified: restructuring the role of technology such that workforce can be kept up to date with modern skills

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Therefore, in order to reconcile the gap between learning and employment, there is a need to create an economy-led higher education framework. This implies increased participation of the industry in transforming pedagogy and curriculum, to enhance the employability of graduates.

I] Institutional Framework

Given that curricula are often outdated and irrelevant, industry-led curriculum design would facilitate a dynamic learning curve that meets the skill requirements of the economy. Further, as professional experience has acquired equal significance as theoretical knowledge in today's labor market, industry engagement can help make work experience a seamless extension of higher education. This may be done through a 3+1 industry-based learning structure, whereby students must devote certain semesters to hands-on training. It is also advisable to set up an industry-funded scholarship and "service bond" system that allows students to afford better education with the added benefit of an employment guarantee while giving companies a space to nurture and recruit the best talent.

II] Behavioral Framework

On one hand, India's public higher education system is noticeably wary of industry participation, and on the other, there is a clear inclination of the industry towards private institutions. To truly integrate education and economy, it is imperative to "nudge" both sides towards a collaborative effort. Public universities must be made aware of the competitive advantage of industry participation and its ability to create a dynamic student body, thus freeing the system from its bias against industry involvement. Further, much like any government-driven service that demands private intervention, education too must offer a social and economic incentive to industries to encourage their participation. Whether this is achieved through subsidies and tax benefits, or through increased

ownership in the overall learning process, the aim is to allow industries to view themselves as valuable stakeholders in the higher education system.

Problem Identified: insufficient industry participation in higher education, leading to inferior human capital

Proposed solution: active industry participation in the form of scholarships, skill training and apprenticeship opportunities

9.5. India-Australia Higher Education Merger:

This paper suggests a bilateral alliance between India and Australia in order to obstacles that both countries are facing in maximizing the available resources for the development of higher education and human capital. The higher education system, on one hand, is looking for a serious boost when the one Australia needs to gain momentum out of its stagnant position. The higher education and human capital system in India, following the NEP, is more open to international partnerships that benefit India as well as the partner country.

The **primary research** conducted states that 77.6% of our sample prefers Higher Education in India. However, when given a choice without determinants, 73% preferred studying in Australia. This demonstrates how the collaboration would be appropriate.

To maximize the benefit of the collaboration for both countries as per their own long term objectives, the following propositions can be worked upon by a **bi-national body** with representatives from the fields of academia and policy-making as well as industry experts that will focus on the execution expansion of the collaborative efforts. This body can work on the implementation of the following initiatives under the partnership:

I] Institutional Framework:

a. **Setting up campuses of Australian universities in India:** Given that the demand for foreign education in India has led to massive brain drain, the establishment of reputed foreign universities in the country can solve the problem. Since nine of the world's 50 most internationally diverse universities are now Australian the collaboration will lead to the development of qualitative higher education in India along with boosting the Australia education system.

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b. **Capacity Building for Educationists**: Through this collaboration, India can directly benefit from Australia's expertise by training workshops, courses, and diplomas provided by Australian institutions. Australian teachers go through rigorous assessments with respect to qualifications, language and criminal records, governed by each state separately, resulting in well-equipped teachers and high- quality education. Such assessments along with vocational training will not only have positive effects on the educators in India but also improve the employment opportunities of Indian Students at a lower cost.

II] Behavioral Framework

Firstly, a collaborative effort can also be beneficial to both countries from the perspective of developing cultural understanding and diplomatic ties, as facilitated by student exchange programs, bilateral scholarship funds, and joint degree programs.

Further, by altering the rigid Indian higher education system to allow the transfer of credits for completion of courses across different universities. This will alter the outlook of students that carry a preference for education abroad.

It must be noted that while there are great opportunities to be explored through institutional collaborations between India and Australia, there are several complications, too.

Problem identified: Need to revamp the education systems of both India and Australia
Proposed Solution: Bi-national government collaboration to best suit the goals of both countries with regard to higher education

9.6 Suggestions for Strengthening the National Education Policy, 2019:

The most recent transformation in policy culminated in the **draft National Education Policy 2019**, which represents a departure from the previous approach to education. However, a closer look at the provisions of the policy through the lens of the indicators studied for this paper reveals several uncertainties and shortcomings that must be corrected.

The uncertainty of how the policy will be funded, the lack of direction in investment, and the ambiguity of implementation strategies, however, emerge as key flaws. Even though the use of technology is indicated, there are clear operational challenges at the grassroots level. Although the policy recognizes the need to promote "liberal education", it neglects the need to link education and employment, thus inhibiting the enrichment of human capital. Building on the vision of the NEP 2019, the following **legislative solutions** are highlighted:

a. **Setting up dedicated committees:** Recognizing that governance and implementation given India's population is an inevitable challenge, individual **state- level committees** may be introduced to implement and encourage the core principles of the NEP through a decentralized format, with better adaptation to local needs. To immediately address the needs of areas with poor outcomes, or institutions with low- performance levels, a **crisis committee** must be established. The purpose of this body would be to assess the status of such institutions, identify the best alternative for development, and implement corrective measures.

b. **Merging HEIs to achieve consolidation:** To implement the NEP's goal of reducing fragmentation in the higher education system, the merging of institutes or the placing of weaker institutes under the supervision of relatively successful institutes must be encouraged. Besides the benefits of consolidation, this will also promote the standardization of education quality and capacity across institutes, thus leading to better outcomes.

Problem Identified: lack of cohesive solutions in the NEP
Proposed Solution: liberalization, standardization and decentralization of education by strengthening the NEP

IX. WHAT VALUE WILL THIS PAPER ADD?

This paper is of relevance in the larger conversation of Human Capital Development in India as well as Australia. This research demonstrates how developing countries should invest in human capital. Further, it highlights the areas where India can do better in the field of human capital through higher education. Lastly, it explores how India can build its ranking on the HCI through various suggestions from Australia. Coordination suggestions are unique and therefore can be further studied

X. LIMITATIONS

Due to the lack of a universally accepted definition of higher education and human capital development, the scope of the study was very vast. Even though attempts were made to keep the scope of the research focused, the following limitations were encountered:

- There are no appropriate indices that can measure Human Capital in a country. The HCI comes close, however, the government of India has rejected its findings, stating it does not reflect the key initiatives that are being taken for the development of human capital in the country, such as Samagra Shiksha, Ayushman Bharat Program, Swachh Bharat Mission, Pradhan Mantri Ujjwala Yojana, Pradhan Mantri Jandhan Yojana and the Aadhaar identification system-enabled direct cash transfer, that have improved governance and social protection.
- Investment: Although the investment patterns for the higher education of the two countries can be studied, we cannot be sure about how much of it has been implemented correctly.
- Technology: This paper compares the technology of the two countries through their various innovations. However, there is no common index to do so.
- Retention Rate: The retention rates of Australia are higher than those of India, however, they show no sign of further improvement.
- Institutional Framework: The narrow time-period post the New Education Policy, permits a very short-term study of the legislation in India, hence posing as a disadvantage.
- Policy Suggestions: Although well researched, there are no results for the implications the policies will hold.

XI. CONCLUSION

This paper attempted to answer two questions, through a qualitative as well as quantitative study. The first one being, **"How does higher education impact the economic development of a country"**. The conclusion to this question was drawn with the help of a comparative study between the Harrod-Domar Model and the Endogenous Growth Theory. The differences found in the two theories proved as a precedent for the argument of human capital's role in the growth of a developing country. Higher education, a key index in the development of human capital, thus was proved imperative for developing countries.

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The second question was "**What is the difference between higher education in India and Australia**?" A comparative study between the two countries was conducted using four indicators namely, Institutional Framework, Investment in Higher Education, Innovation & Technology and lastly the Retention Rates for Higher Education. These indicators illustrated that India was lacking in higher education both in terms of the legal framework as well as the practical implementations. The superiority of the Higher education system in Australia is evident. However, with the vast differences in the two countries, that comparison cannot be held valid.

Therefore, the Lessons from Australia were suggested more holistically, with respect to the major reforms made by Australia that could be implemented in India. Apart from this, a *regular reassigning of teachers* between the urban and rural areas was also a proposed solution. Several other policies were suggested too, all of them having a separate *institutional and behavioral framework*. They are, bridging the digital gap through *Project Bridgital*, incentivizing teachers towards *changes in the pedagogy* and an *increase in industry participation.* These were suggested to enhance the skill development, employment opportunities and entrepreneurial abilities of an individual through Higher Education. Improvement of the current National Education Policy (2019) and a collaborative effort of the Indian and Australian governments are also solutions towards a better quality of education.

Therefore this paper concludes, although India is underperforming on the HCI and Higher education, there still is room for further development. Furthermore, looking at Australia as a precedent is deemed helpful, however, not optimal given the vast differences between the two countries.

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APPENDIX 1: DERIVING THE RELEVANCE OF HUMAN CAPITAL

❖ Explaining the formula:

As given by R. F. Harrod,

"Warranted Growth: Let G stands for the geometric rate of growth of income or output in the system, the increment being expressed as a fraction of its existing level. G will vary directly with the time interval chosen - e.g., 1 percent. per annum = l percent. per month. The equilibrium is, for reasons to be explained, a highly unstable one. Thus, even in the most ideal circumstances conceivable, G, the actual rate of growth, would diverge from time to time from G, the warranted rate of growth, for random or seasonal causes. Let s stand for the fraction of income which individuals and corporate bodies choose to save."

"Let C stand for the value of the capital goods required for the production of a unit increment of output. The unit of value used to measure this magnitude is the value of the unit increment of output. The value of C is inversely proportional to the period chosen. The value of C depends on the state of technology and the nature of the goods constituting the increment of output. It may be expected to vary as income grows and in different phases of the trade cycle; it may be somewhat dependent on the rate of interest."

❖ Domar Model:

According to an article by Smriti Chand explaining the Harrod-Domar Model, Domar Model is derived as "This can be indicated as 1Ϭ, where a (sigma) represents the net potential social average productivity of investment (= ΔY/I). Accordingly, la is less than

I.s. 1Ϭ is the total net potential increase in output of the economy and is known as the sigma effect. In Domar's words, this "is the increase in output which the economy can produce," it is the "supply side of our system."

Required Increase in Aggregate Demand. The demand side is explained by the Keynesian multiplier. Let the annual increase in income be denoted by AY and the increase in investment by ΔI and the propensity to save by a (alpha) (=ΔS/ΔY).

Then the increase in income will be equal to the multiplier (1/α) times the increase in investment: ΔY = ΔI 1/α

Equilibrium: To maintain the full-employment equilibrium level of income, aggregate demand should be equal to aggregate supply.

Thus we arrive at the fundamental equation of the model: ΔI 1/α = Iα

Solving this equation by dividing both sides by I and multiplying by a we get: ΔI/I = αϭ

This equation shows that to maintain the full employment growth rate of net autonomous investment (ΔI/I) must be equal to αϭ (the MPS times the productivity of capital). This is the rate at which investment must grow to assure the use of potential capacity in order to maintain a steady growth rate of the economy at full employment.

Similarity:

The Domar Model

$$\sigma = \frac{\Delta Y}{I} \qquad \frac{\Delta I}{I} = \alpha\sigma$$

$$\alpha = \frac{\Delta S}{\Delta Y} \qquad \frac{\Delta I}{I} = \frac{\Delta S}{Y} \times \frac{\Delta Y}{I}$$

$$\frac{\Delta I}{I} = \frac{\Delta S}{I}$$

or or $\Delta I = \Delta S$

The Harrod Model

$GC = s$ $\qquad G = \frac{\Delta Y}{Y}$

or $\frac{\Delta Y}{Y} \times \frac{I}{\Delta Y} = \frac{S}{Y}$ $\qquad C = \frac{I}{\Delta Y}$

$= \frac{I}{Y} = \frac{S}{Y}$ $\qquad s = \frac{S}{Y}$

or $I = S$

”

There are, however, important **differences in the two models:** (1)Harrod looked at the level of income as the most important determinant while Domar regards the key role of investment in the process of growth and its dual character. (2) While Domar illustrates the relationship between

capital accumulation and full capacity growth in output, Harrod shows the relationship as well as the behavioral relationship between the rise in demand and capital accumulation.

❖ **Aforementioned in our research, the Harrod-Domar Model of Growth explained how higher investments can lead to higher growth, however, there are certain limitations:**

a. It is difficult for developing countries to increase savings at this rate. Saving ratios in developing countries can hardly increase when there is a struggle for basic needs.

b. There are examples of countries that have experienced rapid growth rates despite a lack of savings, such as Thailand.

c. It has unrealistic assumptions such as the existence of a reliable finance and transport system, absence of government interference and so forth.

d. It gives increasing importance to physical capital and none to human capital

e. The scope of this model is restricted because it is only applicable to the process where saving income ratio and capital-output ratio remain constant. However, this model is not applicable in a case where the growth can tend to be unbalanced and discontinuous.

❖ **Similarly, the limitations of the Paul Romer theory are:**

a. In a world where education leads to the convergence of countries and ideas flow across borders, Romer's inference that economic growth is intimately tied to a country's own population, highlights many questions, such as - should the economy of Germany be richer than that of Luxembourg, since it has a larger population?

b. As the theory reduces economic growth to a function of human capital accumulation, the insufficiency of available human capital proxies emerges as an issue.

c. The theory's emphasis on the role of technological innovation and human capital development in stimulating growth clearly favors the developed world. It contextualizes why populous, but underdeveloped economies like India, fail to achieve the exponential rate of growth that Romer describes.

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APPENDIX 2: PRIMARY DATA APPENDIX

SURVEY 1 - QUESTIONNAIRE FOR INDIAN UNDERGRADUATE STUDENTS:

Sample for the survey:

This survey was conducted to understand the perspective of students about higher education. Whether the preference is to pursue their higher studies in India or abroad & what in their view needs to be done to improve the current educational system of India. The data for the sample has been collected specifically from Indian Students pursuing different degree courses.

Questions:

Q1. What are the pros of pursuing degree courses in India itself? (Any 3)

a. In-depth theoretical knowledge
b. Affordability
c. Quality Education
d. Career Opportunities
e. Cultural Diversity
f. Developing Economy
g. Well ranked Universities

Q2. Would you prefer studying abroad (Australia) over India for your further education?

a. Yes
b. No

Q3. What do you think are some of the flaws of our education system? (Any 3)

a. Lack of practical learning and skill development
b. Improper use of government aid and investment
c. Lack of use of technology
d. Lack of Qualified teachers

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e. Chalk and Talk system of teaching
f. Being more examination orientated and less classroom for research

Q4. What challenges are faced when a student who is well equipped with theoretical knowledge and not enough practical learning? (Any 3)
a. Wastage of time and money over training newly recruited employees
b. Lack of job opportunities in the global market of employment
c. Lagging behind in the field of research and development
d. No scope for innovation
e. Less efficient and knowledgeable

Q5. Do you think that the current degree courses will suffice to get you good employment opportunities in this multitude, globalized, and innovation orientated world?
a. Yes
b. No

Q6. What do you think should be modified in our education system? (Any 3)
a. Proper use of available resources
b. More room for research and innovation
c. Use of technology
d. Skill development and training programs
e. More diverse process for grading students

Q7. Do you like the grading system for your education?
a. Yes
b. No

Q8. What initiatives the government can take to better our higher education system? (Any 3)
a. More investments
b. Proper utilization of Funds and Investment
c. Setting up institutions and Programmes for skill development and training

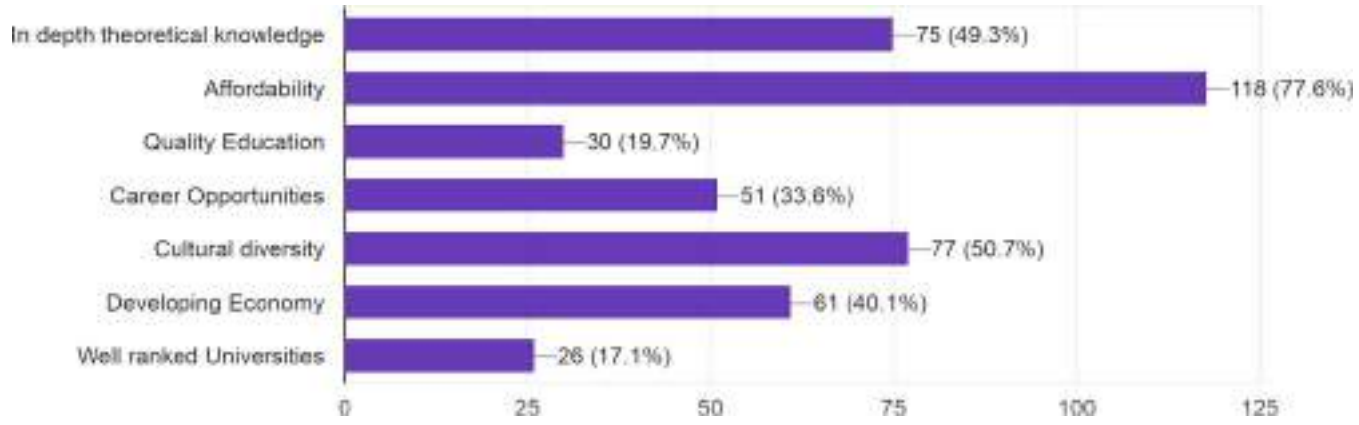
d. Maintaining education infrastructure
e. Setting stringent standards for teacher's qualifications
f. Making higher education accessible to all

Q9. Do you think more private institutions for higher education should be set up over public education institutions?

a. Yes
b. No
c. Maybe

Analysis:

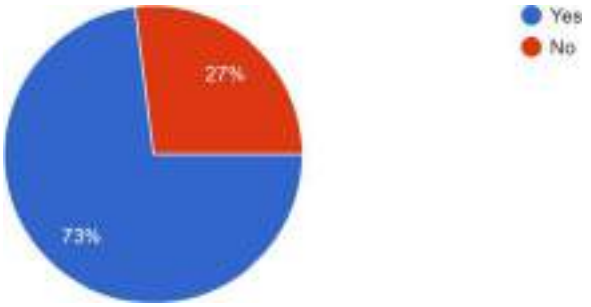
Q1. What are the pros of pursuing degree courses in India itself?



Summary of response-

'Affordability' has come out as the most positive factor with (77.6%) in deciding whether a student wants to pursue higher studies in India or abroad. Following affordability, cultural diversity (50.7%) is the second most important factor. Quality of education and Well Ranked Universities are the least preferred factors for the students here.

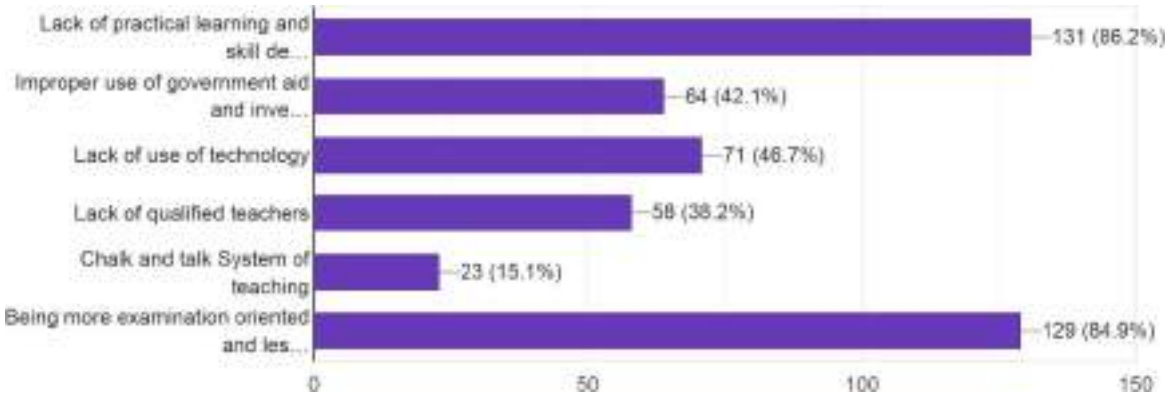
Q2. Would you prefer studying abroad (Australia) over India for your further education?



Summary of response-

We can see that (73%) of students want to pursue their higher studies abroad (Australia) and (27%) want to study in India itself.

Q3. What do you think are some of the flaws of our education system?



Summary of response-

Top 3 of the major flaws being- The majority of the sample population (86.2%), believes that the major drawback of the Indian education system is giving emphasis to theoretical knowledge over practical training. Also about (84.9%) of students find the current education system devoid of research and exploration another major flaw. With changing times many respondents (46.7%) feel a lack of use of technology is also a major flaw.

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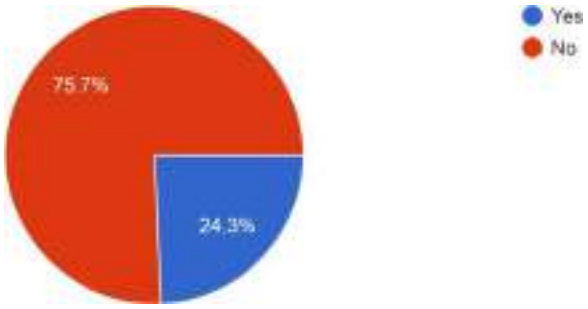
Q4. What challenges are faced when a student who is well equipped with theoretical knowledge and not enough practical learning?

Summary of response-

This question is in continuation with the previous one. The majority of students (75%) believe that lagging behind in the field of research is a major challenge, about (69.1%) believe that lack of practical experience impacts their chance at better job opportunities in the global market. (61.2%) students believe that students and companies alike have to shell out more from their pockets to garner on-field training, after college.

Q5. Do you think that the current degree courses will suffice to get you good employment opportunities in this multitude, globalized, and innovation orientated world?



Summary of response-

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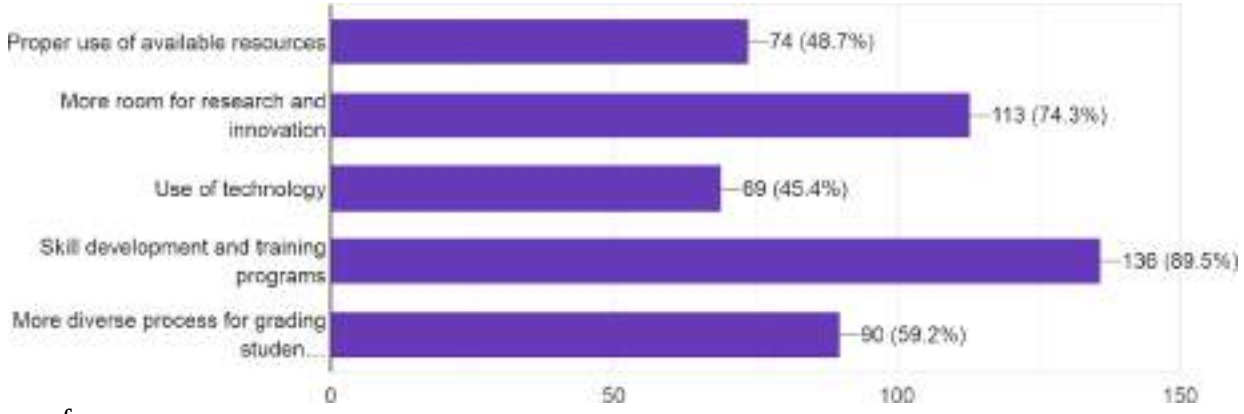
The majority of the students (75.7%) believed that the current education scenario would not help them achieve their goals while only (24.3%) agree that the higher education system of India is sufficient for them.

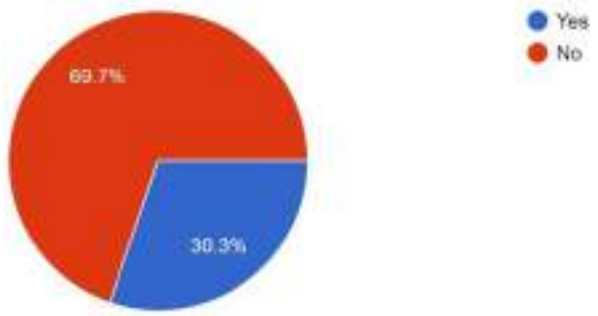
Q6: What do you think should be modified in our education system?



Summary of response-

We can see skill development and training programs is one of the most important modifications that students (about 89.5%) want in our Indian education system. More than 70% want research and innovation to be an integral part of the curriculum. Technological advances and available resources are the least of their concerns.

Q7. Do you like the grading system for your education?



Summary of response-:

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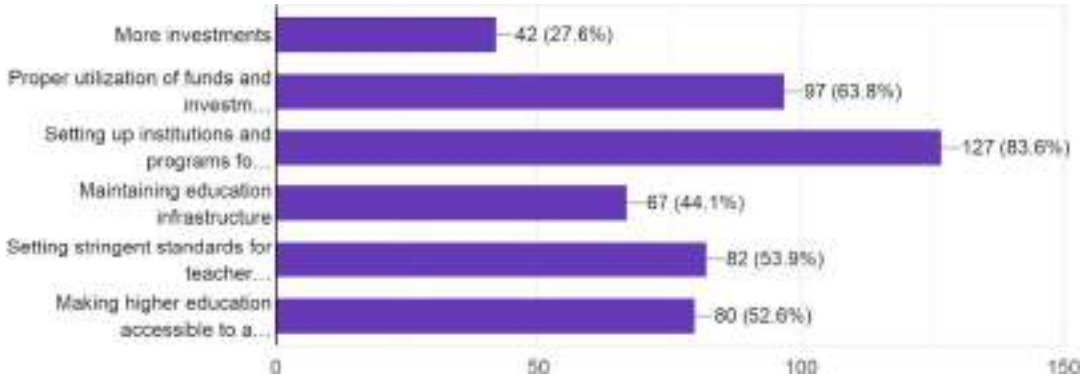
Approximately 70% of students didn't like their current grading system and the remaining 30% are satisfied with the grading system.

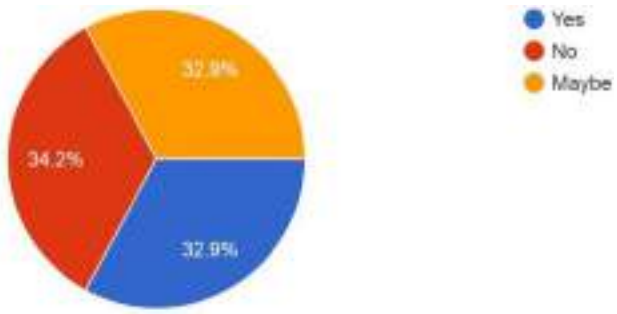
Q8: What initiatives the government can take to better our higher education system?



Summary of response-

From the survey, we can derive that the majority of respondents (83.6%) people think that the most required initiative to be taken by the government is to develop skill hubs and institutions. Many (63.8%) believe that the main initiative that the government can take is to start making proper use of existing funds and resources in an optimum manner. While there is a marginal difference between the numbers of people who think raising the qualification standards for teachers and making it accessible to all is equally important. There are hardly a few respondents about (27.6%) who feel that the government should make more investment.

Q9. Do you think more private institutions for higher education should be set up over public education institutions?



Summary of response-:
Students are indifferent to the fact that the institution is private or government-owned.
As we can clearly see that there is less than a 2% gap between the students who want more private institutions and those who want more public institutions.

SURVEY 2 – SURVEY FOR INDIAN STUDENTS IN AUSTRALIA

Sample:
The given survey was conducted to study Higher Education in India and Australia and the differences exist between the two. The sample for the survey consists of Indian students who are studying in Australia.

Questions:
Q1. What made you choose Australia over Indian Higher Education System?
a. affordability
b. quality education
c. career options
d. well ranked universities

Q2. What are the pros of pursuing degree courses in India itself? (Any 3)
a. In-depth theoretical knowledge
b. Affordability
c. Quality Education
d. Career Opportunities

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e. Cultural Diversity
f. Developing Economy
g. Well ranked Universities

Q3. What do you think are some of the flaws of the Indian education system? (Any 3)
a. Lack of practical learning and skill development
b. Improper use of government aid and investment
c. Lack of use of technology
d. Lack of Qualified teachers
e. Chalk and Talk system of teaching
f. Being more examination orientated and less classroom for research

Q4. What are some of the flaws of the Australian Higher Education System? (Any-3)
a. Lack of private institutions
b. Lack of diversity in the education system for migrants and international students
c. Not accessible to all the classes and masses
d. Lack of qualified teachers
e. Need for integrating technology

Q5. What challenges are faced when a student who is well equipped with theoretical knowledge and not enough practical learning? (Any 3)
a. Wastage of time and money over training newly recruited employees
b. Lack of job opportunities in the global market of employment
c. Lagging behind in the field of research and development
d. No scope for innovation
e. Less efficient and knowledgeable

Q6. Do you think that your current degree courses will suffice to get you good employment opportunities in this multitude, globalized, and innovation orientated world?
a. Yes
b. No

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Q7. What do you think should be modified in the Indian education system? (Any 3)

a. Proper use of available resources
b. More room for research and innovation
c. Use of technology
d. Skill development and training programs
e. More diverse process for grading students

Q8. Do you like the grading system for your education?

a. Yes
b. No

Q9. What initiatives the government can take to better the Indian higher education system? (Any 3)

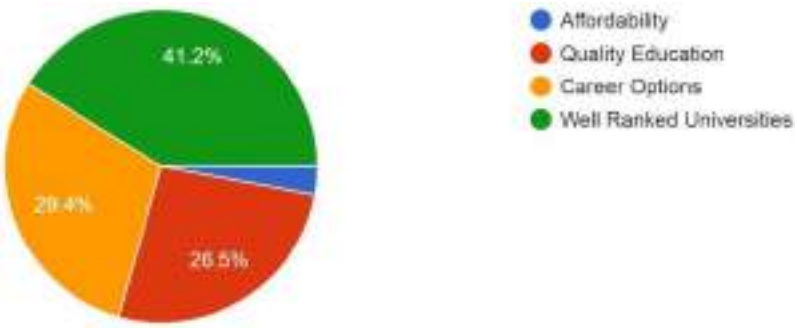
a. More investments
b. Proper utilization of Funds and Investment
c. Setting up institutions and Programmes for skill development and training
d. Maintaining education infrastructure
e. Setting stringent standards for teacher's qualifications
f. Making higher education accessible to all

Q10. Do you think more private institutions for higher education should be set up over public education institutions?

a. Yes
b. No

Analysis:

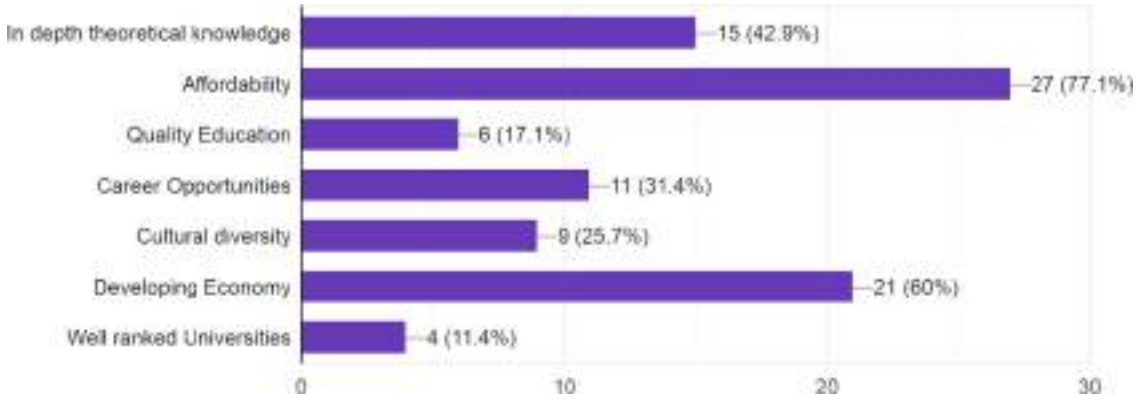
Q1. What made you choose Australia over Indian Higher Education System?



Summary of response:

The above pie-chart shows the reasons why Indian students prefer degree courses in Australia over India. 41.2% of students prefer Australian universities as they are better-ranked compared to Indian institutions. Around 30% of students choose the availability of better career choices as a major reason and 26.5% of students chose the level of quality education as their reason to study in Australia. Only 2.9% chose affordability as their key reason for studying there.

Q2. What are the pros of pursuing degree courses in India itself?



Summary of response:

The above survey shows why the respondents feel that Indian education is well-suited. The top three reasons they choose are affordability (77.1%), the developing nature of the Indian economy (60%) and a high focus on developing a strong theoretical base (42.9%). The respondents also consider better career opportunities as a reason for pursuing degree courses in India. However,

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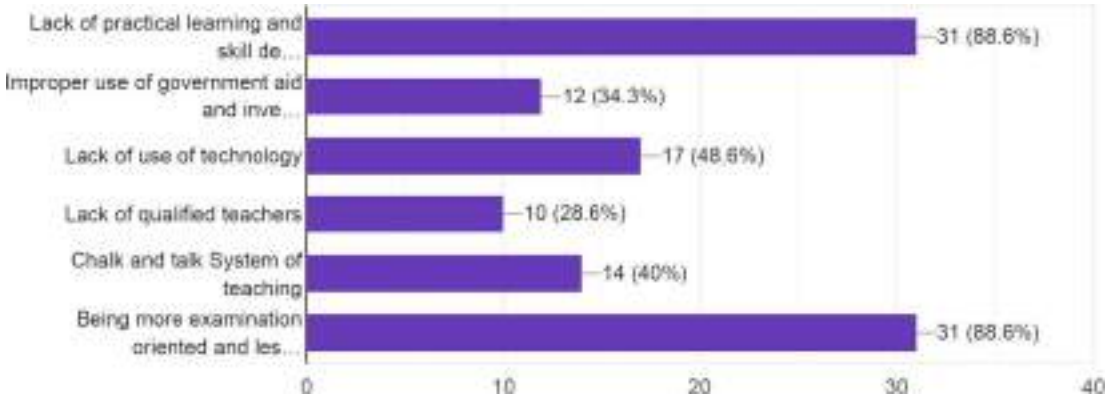
the respondents don't feel that the Indian universities are well-ranked or of good quality to be a benefit for your career.

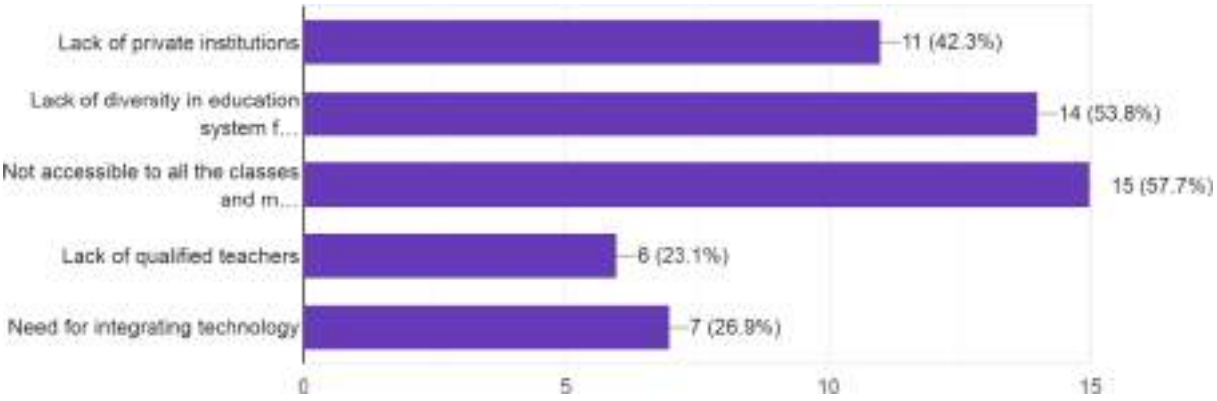
Q3. What do you think are some of the flaws of the Indian education system?



Summary of response:

The above question from the survey answers as to what flaws respondents find in the Indian education system. Top 3 being- (31 respondents) think that more impetus to exams and lack of practical learning is a major flaw in the Indian higher education followed by a lack of application of technology(17 respondents) and chalk and talk system of education(14 respondents). 28% of respondents felt the lack of qualified teachers, whereas 34% of people suggested the inefficiency of government functioning as a flaw in the Indian education system.

Q4. What are some of the flaws of the Australian Higher Education System?

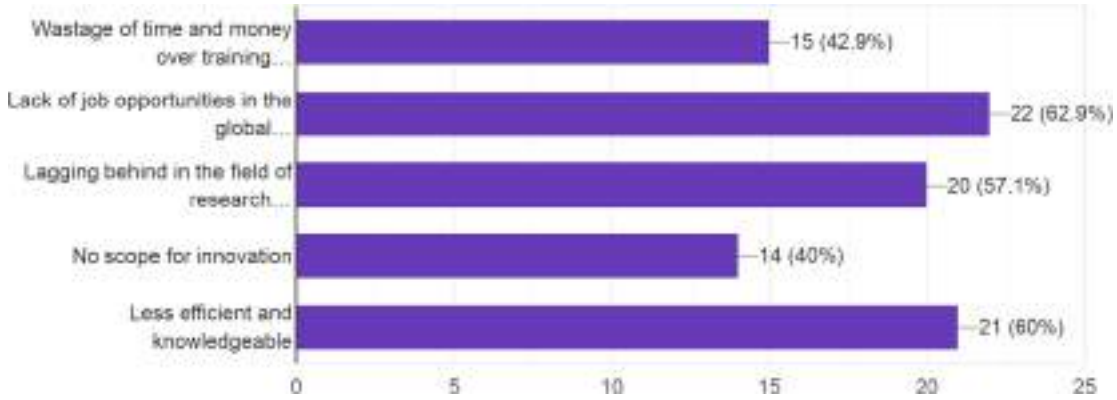


Summary of response:

This question asks the respondents what flaws they find in the Australian education system. Top 3 reasons were (57.7%) think that the Australian education system is not accessible to all while (54%) think that there is a lack of diversity in education to cater to all student's needs in the classrooms (42%) of people think that there is a lack of private institutions in Australian education system whereas only (23%) of people think that the flaw is of qualified teachers.

About (26%) of people think that technology and the lack of it is a flaw.

Q5. What challenges are faced when a student who is well equipped with theoretical knowledge and not enough practical learning?



Summary of response:

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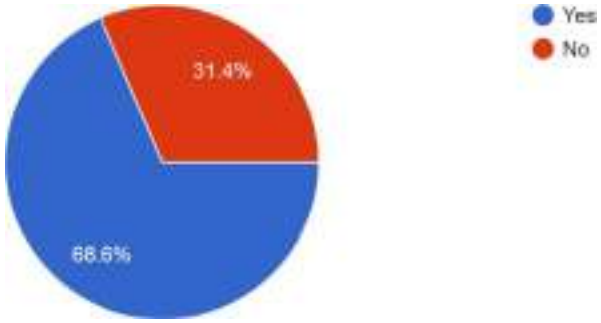
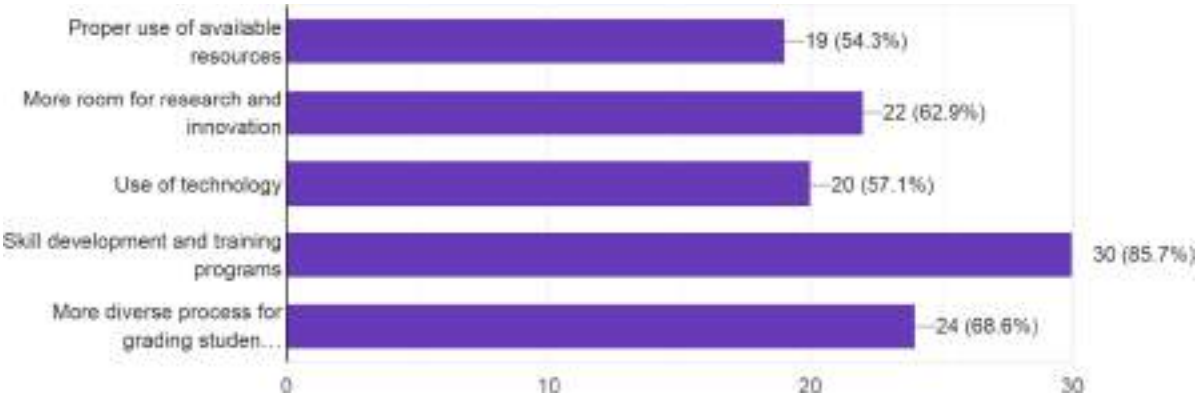
The above question answers what challenges students face if their education system is more theoretical than practical basically like the Indian education system. Top 3 reasons were (63%) of respondents feel that such students may have difficulty in getting a job at a global level. (60%) of respondents felt that they have less knowledge and (57%) thought that they lag behind in the field of research. (40%) of respondents felt that there is no scope for innovation and (43%) of people feel that more money needs to be spent on training for newly recruited employees as the Indian education system lacks the practical element.

Q6. Do you think that your current degree courses will suffice to get you good employment opportunities in this multitude, globalized, and innovation orientated world?



This question answers what the respondents feel regarding their ongoing career choices and how that will allow them to stand on their own in the future. (68.6%) of people are satisfied with their current degree course while (31.4%) of people don't think so.

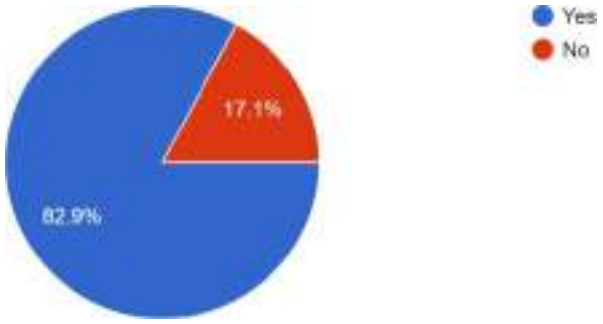
Q7. What do you think should be modified in the Indian education system?



Summary of response:

The above question from the survey asks the respondents what things should be modified from the Indian education system. Top 3 suggestions were about (86%) of respondents feel that there should be modifications made in skill development programs whereas about (69%) of people think that the grading patterns should change. (57%) of respondents felt that more technology patterns should be adopted in education whereas (63%) of people think that impetus should be given to research and innovation.

Q8. Do you like the grading system for your education?



Summary of response:

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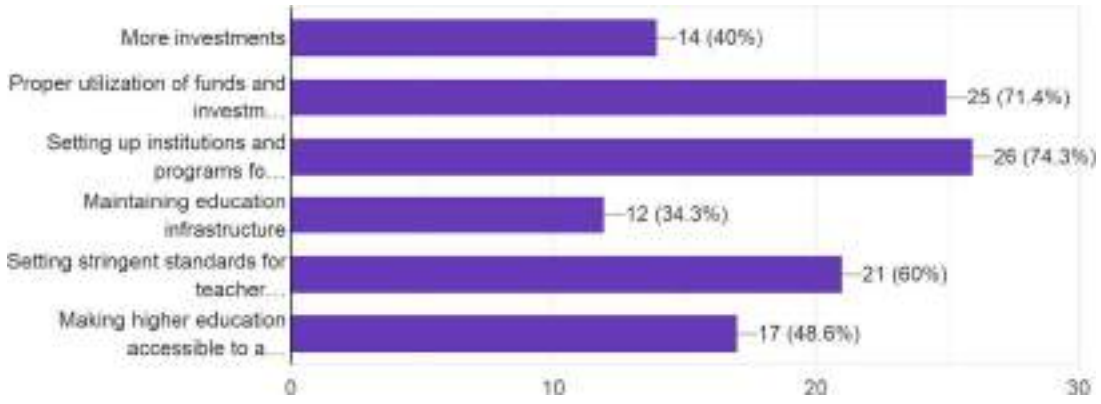
The above question asks respondents whether they like their grading system in education. (82.9%) of respondents said yes that they like their grading system forming a majority while 17.1% of people answered in the negative.

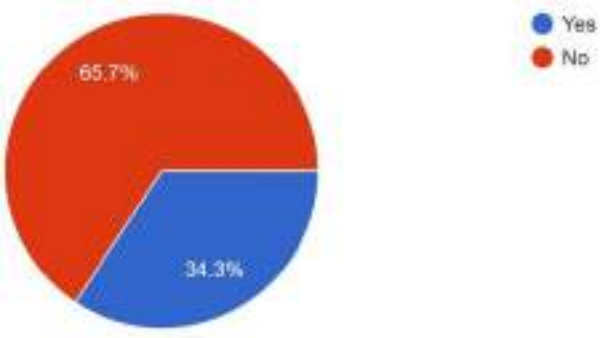
Q9. What initiatives the government can take to better the Indian higher education system?



Summary of response:

The above question from the survey gives various recommendations from the respondents' side to better the Indian education system. Top 3 reasons were maximum respondents i.e. (75%) of people think that more institutions should be set up which focuses on skill development and training to the students. Around (72%) of respondents think that there should be proper utilization of funds allotted for education while (60%) of people think that more qualified teachers are required for raising the bar of Indian education. About (40%) of respondents feel that more investment is required in Indian education while about (34%) of people think that more infrastructure is required.

Q10. Do you think more private institutions for higher education should be set up over public education institutions?



Summary of response:

The above question answers that what the respondents feel about private universities been set up. (34.3%) of people said that private universities must be set up while (65.7%) of people said that they should not be set up.

SURVEY 3 – SURVEY FOR TEACHERS IN HIGHER EDUCATION IN INDIA:

Sample:

This survey was conducted to understand the perspective of teachers about higher education. What according to them, should be the necessary changes that the higher education system in India needs? The data for the sample has been collected specifically from different Indian teachers of various degree courses.

Questions:

Q1. What are some of the major flaws or problems of India's higher education system? (Select 3)

a. Lack of funds
b. Lack of technology innovation
c. Lack of Qualified teachers
d. Lack of Practical Learning
e. Lack of government aid and initiatives
f. The traditional method of Teaching

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Q2. Why do many Indian students prefer studying abroad (Australia) over India for degree courses?

a. Better job guarantees
b. Wide choice of subjects
c. Practical Learning
d. Recognized degree
e. Ranked University
f. Integration of technology

Q3. Australian higher education system gives importance to practical learning and skill development through research work and projects over exams, should that be inculcated in India's education system?

a. Yes
b. No

Q4. Is the Indian Higher Education System's process of measuring a student’s knowledge and learning appropriate?

a. Yes
b. No

Q5. Are Indian students with minimal practical learning and skill training at a disadvantage over those who possess them in the global market of employment?

a. Yes
b. No

Q6. What suggestions and modifications would you recommend for India's Higher Education System?

a. Raising qualification standards of teachers
b. More room for research and innovation
c. Use of technology
d. Skill development and training programs

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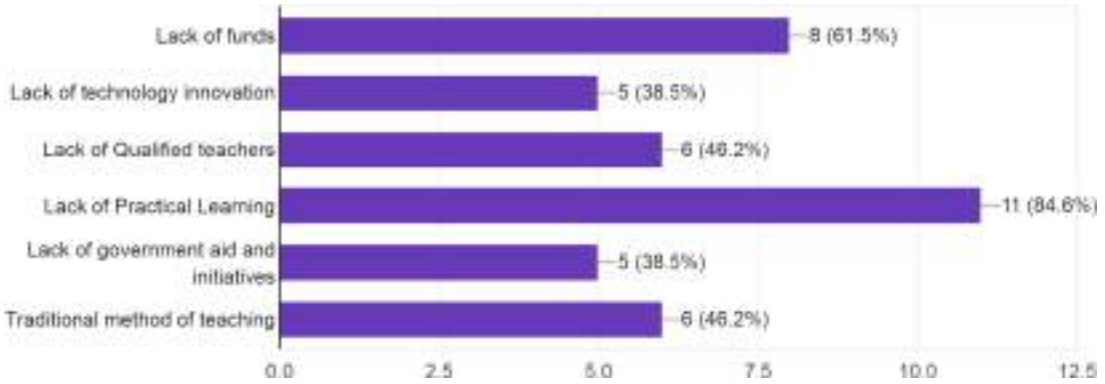
e. Making it more accessible to all classes and masses
f. Proper use of available resources

Q7. What aid in the form of government support, tools and investment should be provided to the teachers to help them teach students better?
a. Incentives
b. Better technology
c. Autonomy

Q8. Should rigorous use of technology be inculcated in imparting education to students?
a. Yes
b. No

Analysis:

Q1.What are some of the major flaws or problems of India's higher education system?



Summary of response:

The above graph shows the flaws in the Indian education system considered by teachers. 84.6% of the teachers consider a lack of practical learning as the major flaw, along with a lack of funds (61.5%). While only 38.5% of the teachers consider lack of technology innovation and lack of government initiatives and aids as major flaws.

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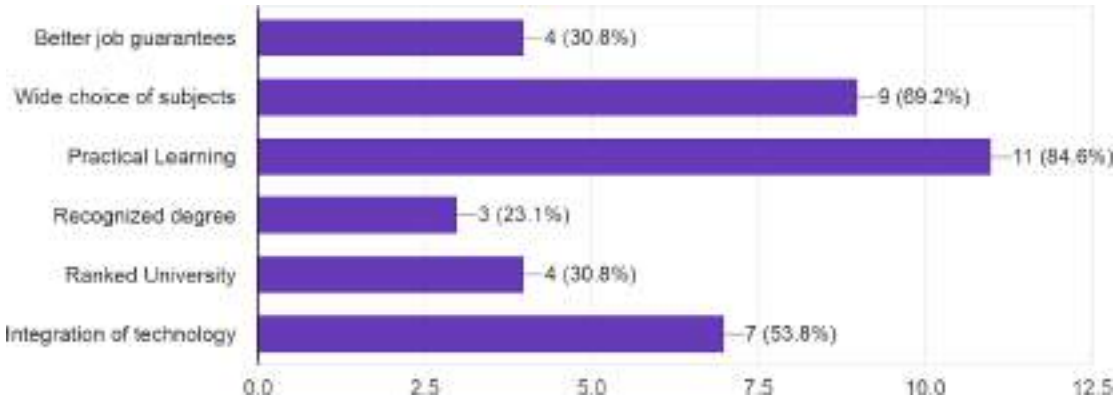
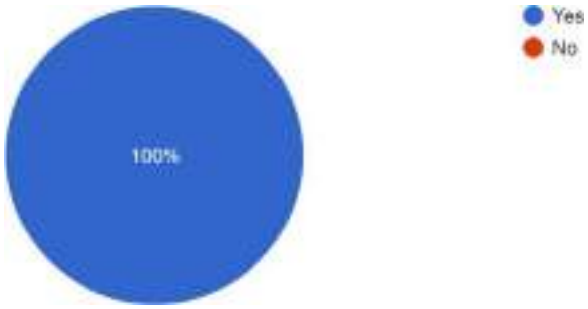
Q2. Why do many Indian students prefer studying abroad (Australia) over India for degree courses?



Summary of response:

Practical learning (84.6%) and a wider choice of subjects (69.2%) were the two main reasons according to teachers, why students want to pursue their higher education in Australia. Whereas, students, preference does not rely much on ranked universities and better job opportunities.

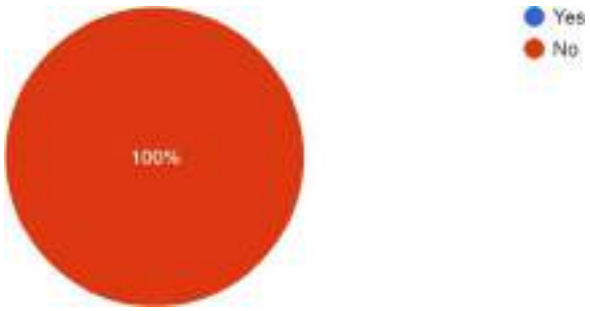
Q3.Australian higher education system gives importance to practical learning and skill development through research work and projects over exams, should that be inculcated in India's education system?



Summary of response:

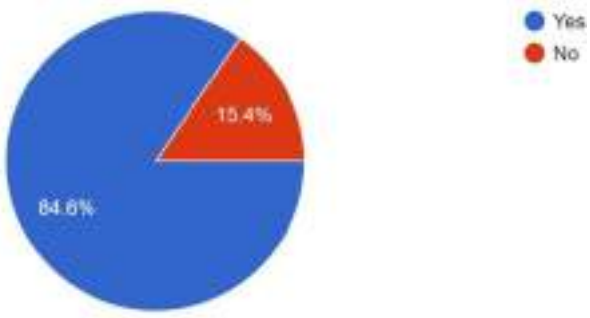
As we can clearly see in the above pie chart, that every teacher (100%) feel practical learning and skill development needs to be inculcated in our education system & to be given importance over theoretical examinations.

Q4. Is the Indian Higher Education System's process of measuring a student's knowledge and learning appropriate?



Summary of response:
Each and every teacher (100%) found measuring a student's knowledge and learning in our education system inappropriately.

Q5. Are Indian students with minimal practical learning and skill training at a disadvantage over those who possess them in the global market of employment?



Summary of response:
Almost 85% of teachers think that our students are at a great disadvantage as they lack practical learning and skill development. Remaining 15% are satisfied with our skill development programs.

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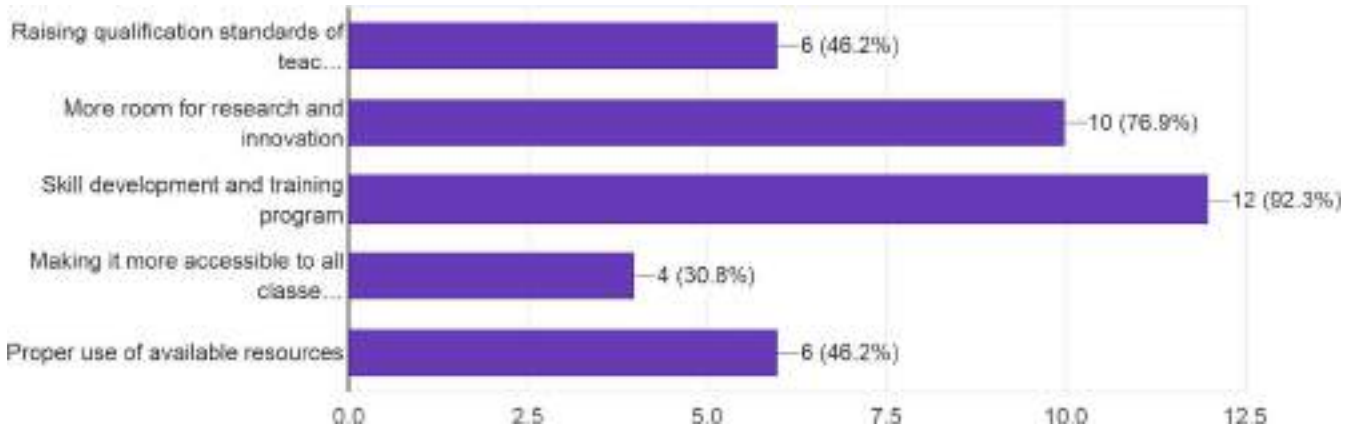
Q6. What suggestions and modifications would you recommend for India's Higher Education System?



Summary of response:

Most teachers around (92.3%) believe that the most relevant solution is to develop skill development and training programs. Many teachers around (76.9%) also feel that having a system which engages students in research and innovation will help them to do better. Around (50%) teachers also feel that raising the standards for the qualifications of teachers will be of great aid. Teachers agree to the fact that education today is accessible by large masses and so it does not enjoy strong support of teachers in terms of reformations

Q7. What aid in the form of government support, tools and investment should be provided to the teachers to help them teach students better?

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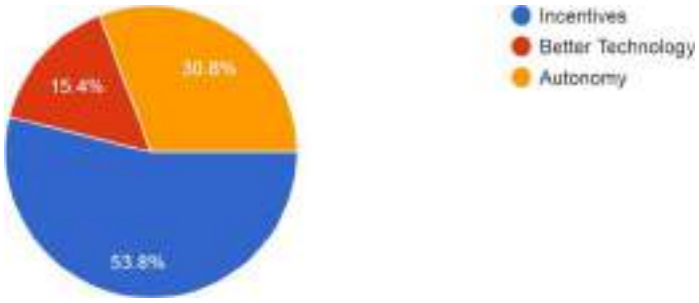

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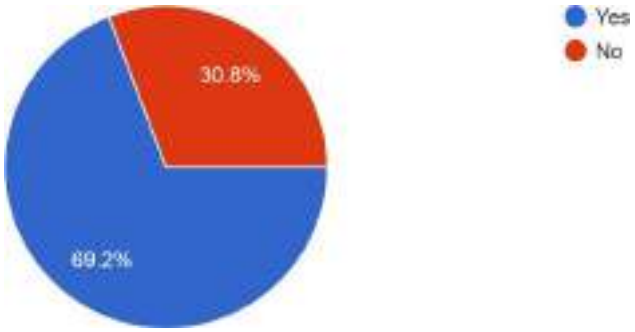
Summary of response:

The most important way in which teachers can be encouraged to work more efficiently is by granting them various incentives in the form of healthcare benefits, recreational benefits, financial benefits, etc. Around 30.8% of the teachers felt that giving autonomy where the courses and methods of imparting knowledge are based on teachers discretion should be encouraged as they know what is best for their students rather than having a centralized system as it may not work the same for all

Q8. Should rigorous use of technology be inculcated in imparting education to students?



Summary of response:

Majority of the teachers around (69.2%) of the teachers believe that there is a need to increase the use of technology for imparting education. Whereas near around 30% of the teachers feel that technology should not be used rigorously as students might become too dependent on it.

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APPENDIX 3: EXPLAINING INVESTMENT AND RETENTION FURTHER

❖ **Investment:**

Internationalization of the higher education system is accorded high priority, thereby directing funding towards the promotion of onshore and borderless education delivery. Given that the international higher education sector's contribution to export earnings in Australia is expected to exceed $33 billion by 2025, the government seeks to incentivize investment from public and private sources to affect internationalization. In order to achieve this aim, and to support the growth of higher education, the government has also allocated $93.7 million towards the "Destination Australia" scholarship program.

❖ **Retention Rate:**

In terms of the definition of retention rate, it is the rate of remaining students that enrolled at a higher level of education. This paper uses data for the GERte of India and Australia between the years 2004-2014 to calculate their respective retention rates. The World Bank offers data of the GERse for the years 2004-2014. Similarly, for the GERse of Australia, we refer to the World Bank data for 2004-2014.

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APPENDIX 4: POLICY SUGGESTIONS EXPLAINED [NUDGE, TEACHER ROTATION & PROJECT BRIDGITAL]

❖ The Nudge:

The Nudge theory popularized by the 2008 book, 'Nudge: Improving Decisions About Health, Wealth, and Happiness', written by Richard H Thaler and Cass R Sunstein. The book is based on the Nobel prize-winning work of the Israeli-American Daniel Kahneman and Amos Tversky. Nudge theory is a highly innovative, effective model for change management.

The Nudge theory now provides implications and applications much more vast than it did before. These applications are indirect and do not have a direct impact. An example or case study of the Nudge theory is the 'BookASmile' initiative by BookMyShow. At the end of every transaction on the application, there comes a small, already ticked, checkbox that asks whether the client would like to donate a minimal amount towards a charity.

This initiative is a perfect example of 'nudging' people in the right direction. Similarly, with respect to incentivizing teachers, we can 'nudge' them in the right direction, which is toward pedagogical change.

❖ Teacher Rotation: China:

By 2020, about one million teachers and principals in China will be swapped between good and poor schools annually, if the nation's new strategy for easing education inequity goes as planned. This policy recommended that at least 10% of the total teaching staff should be reassigned between urban and rural areas. Further, to avert the institutes from sending lesser qualified teachers, they have a rule that states 20% of the teachers should be what is called the "backbone" or high-quality teachers. However, this policy does not specify how this will be implemented and leaves it to the autonomy of state/local governments. This is also an idea the Indian Government can implement.

❖ **Bridgital:**

An attempt at redefining the necessities of servicing a problem needs to be developed, prioritizing people with a dearth of access, and keeping them in mind during the process. (Formalising informal activity), and rethinking the value chain and its beneficiaries.

Jobs - 90 Million of India's youth will attempt to enter the workplace between 2020 and 2030, this stupendous figure, normally an exciting figure that harbors growth and development is actually more of a liability for the economy is predicted to not have the ability to meet this demand with opportunity. There also lies great untapped opportunity in the field, it is reported that even if half of the unemployed women who have secondary education joined the workforce, they could add $440 USD to the economy in GDP output. This policy proposes a better way to harness this.

Access- It will take 600,000 more doctors, 2.5 million nurses, 1 million teachers, 1.7 million commercial drivers just to meet the basic needs of India. The country also has only three-quarters of the judges it needs.

❖ **Institutional Framework- A case study on the healthcare system:**

The book in reference here, tells a story of a taxi driver named Nikhil, who drives patients from a small village to a faraway hospital to help them gain medical treatment, fuelled by the dearth of hospitals, access. This driver, in conversation with these patients for a long period of time, took to gaining a great spectrum of medical knowledge, which greatly benefited the patients to get a speedy recovery. This was because Nikhil, a driver with no medical skills, was able to help them navigate their health problems and help alleviate basic medical concerns, allowing only serious and required cases to the limited skilled professionals.

This example shows how basic, standardized frameworks when implemented can bridge great inefficiencies in the system when combined with human capital. The technological

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interface here would be to augment the basic healthcare workers with such technology, to help them navigate, common and rudimentary, previously addressed issues that can be solved without the investment of the time of a skilled professional who will be enabled to deal with complex cases and hence improve efficiency. This software/data management system can supplement rudimentary human capital like a hospital clerk, to a professional surgeon, who receives this data electronically, organized and presented.

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Role of Education in Canadian Human Development

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Students

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CHAPTER 1:
INTRODUCTION

1.0 Overview

Dating back to the late 1900s, Human Capital as a concept has seen a dynamic and drastic transformation in its meaning and approaches. Seeing its change across the wide spectrum of public policies one can clearly note that human capital is one of the most crucial factors affecting economic issues at all levels of society.

Back in 1961, it referred to the value of life lost due to wars and death (William Betty). With time, other economists suggested the use of Human Capital as a measure of earnings to determine compensation. Influence of mortality statistics and the concepts of human capital helped to develop approaches for insurance policies.

Adam Smith referred to human capital as the wealth, training, knowledge, talents, and experiences for a nation. He suggested that improving human capital through training and education leads to a more profitable enterprise, eventually adding to the collective wealth of society.

The modern definition, however was explored much recently by Harvard economist Richard Freeman, who considers human capital to be a signal of ability and talent. The business-oriented approach calls for effective investment of the institution's resources in training and developing the human capital employed in order to increase productivity. Such varied approaches to the concept of Human Capital have led to numerous definitions, a few of them as below,

"Human Capital is the knowledge and skills which individuals create, maintain, and use."

- M Armstrong

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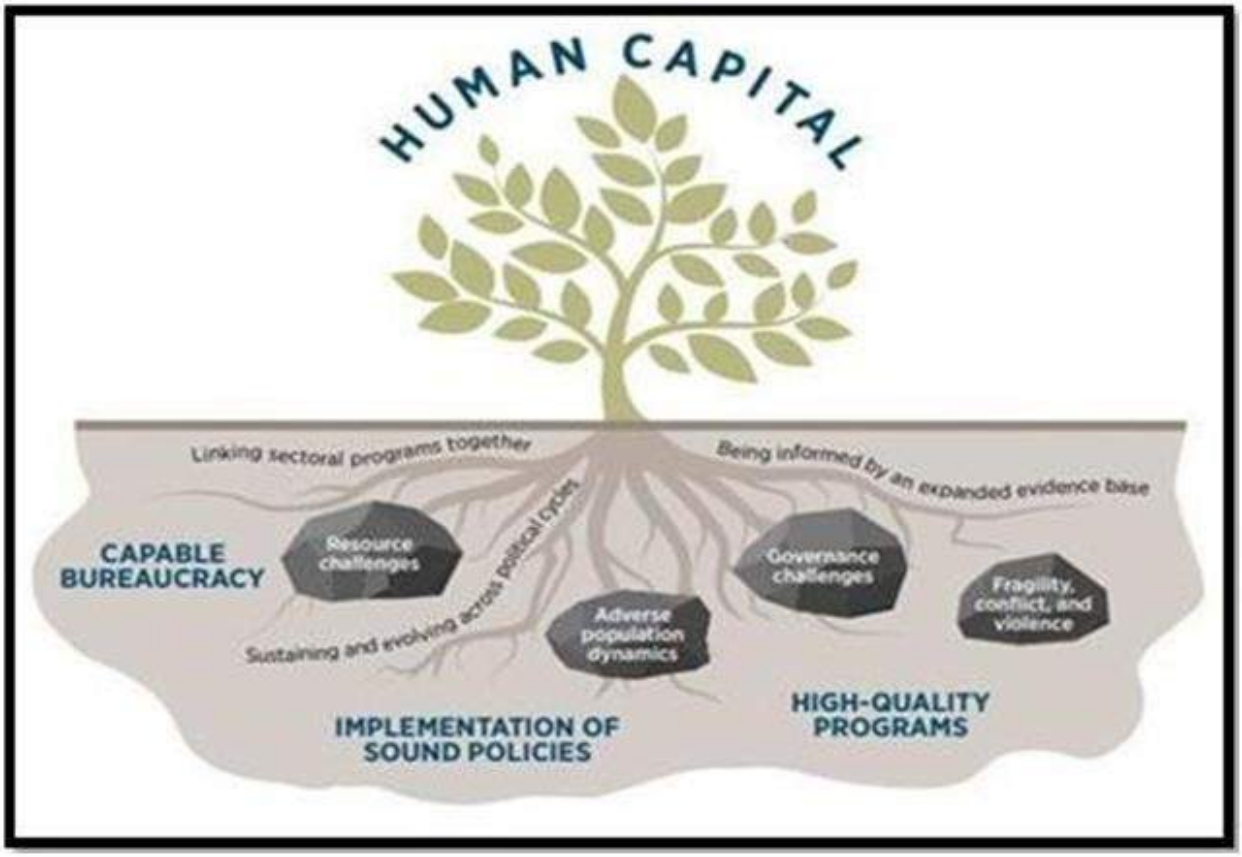

Figure 1: Nurturing Human Capital (Source: World Bank)

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OECD states human capital as 'the knowledge, skills, competencies and other attributes embodied in individuals or groups of individuals acquired during their life and used to produce goods, services or ideas in market circumstances.'

All of these definitions clearly depict that human capital is one of the most important resources for any economy's growth. Also, it is worth noting that human capital is not just a uni-dimensional concept, but is quite multi-faceted and diverse with respect to every economy.

With the confluence of rapid changes like globalization and liberalization across the world, economies have now started to realize the importance of skill-based learning and the reasons to priorities human capital development as a strategy to economic growth and competitiveness.

1.0 Definition - Human Capital Development

For a more clearer and definitive approach to the research the team deliberated and worded a comprehensive and multi-dimensional definition to the important terms used across the research.

"**Human Capital** is the collection of skills, knowledge, competencies, social attributes and personality traits embodied in an individual, with reference to his EQ, leading to societal development and eventually, economic prosperity.*"*

"**Human Capital Development** is the process of creating a productive environment for the enhancement of Human Capital, resulting in the achievement of individual, social and economic commitments, towards the economy, in a tangible manner."
With reference to,

(a) Competency: Competence talks about the efficiency or ability of an individual to perform a given task. It further branches into behavioral competence (soft skills) and functional competence (technical skill).
(b) Attributes: Characteristics or the merits of a person.
(c) Skills: The loaned ability that one possesses to carry out pre-determined results, often with the minimum outlay of time, energy or both.
(d) Knowledge: It is a clear or certain mental apprehension involving creation, utilization and dissemination of specific information as and when required.
(e) Economic Prosperity: It talks about transforming the investment in human capital and their needs into effective measures leading towards economic development at all levels.

1.1 Importance of Human Capital Development

Human Capital does not exist in a vacuum. It is a source of both increased productivity and technological advancement. The difference between the developed and developing countries is the rate of progress in human capital. The process of change from a conventional or traditional to a modern society requires proper development of human capital. In order to remove economic backwardness of the underdeveloped countries as well as to instill the capacities and motivation to progress, it is quite necessary to increase the level of knowledge and skills of the people. Thus, in the absence of proper methods and reforms to improve the quality of human factor, underdeveloped countries shall not be able to attain the desired rate of progress.

1.2 Human Capital Index (HCI) as a measure of HCD

Considering the importance and relevance of strategizing schemes for appropriate human capital development, the World Bank introduced the Human Capital Index in the year 2018, which measures the amount of human capital that a child born today can expect to attain by age 18. It conveys the productivity of the next generation of workers compared to a benchmark of complete education and full health. It is constructed annually for around 157 countries. It is made up of 5 indicators:

(a) Probability of survival up to age five,
(b) Expected years of schooling,
(c) Harmonized test scores to determine quality of learning,
(d) Adult survival rate, and
(e) Proportion of children who are not stunted.

These 5 indicators together comprise the HCI which currently stands as a universal measure for the status of Human Capital Development in economies around the world.

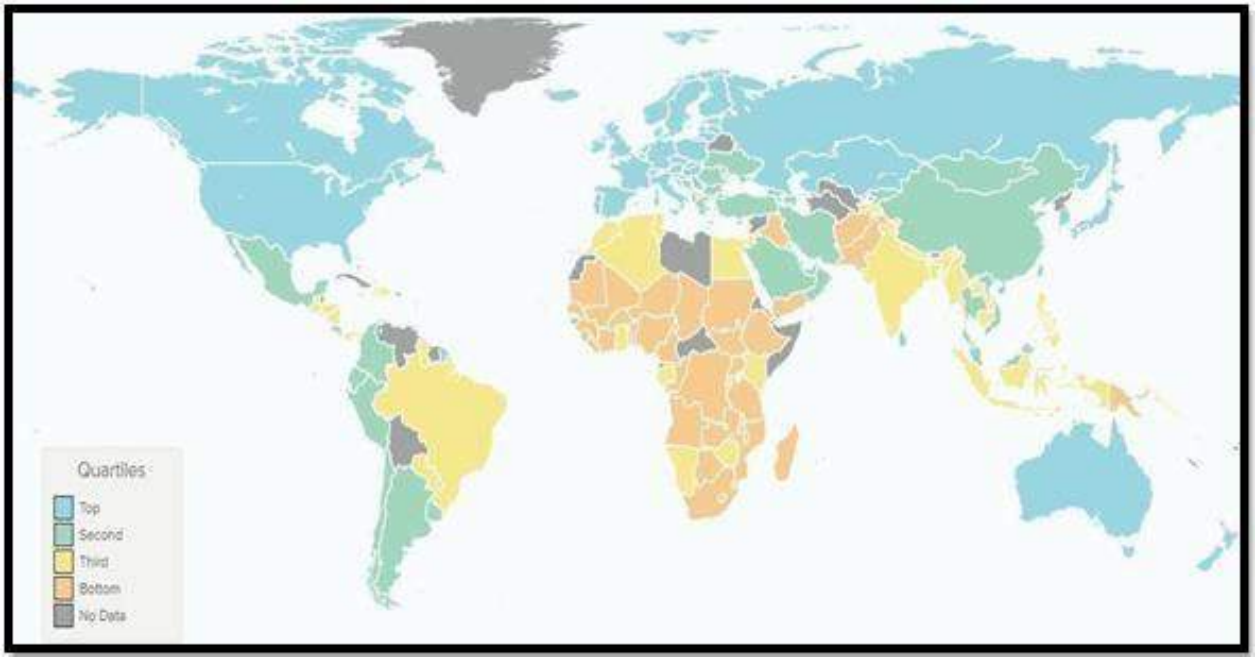

Figure 2: A choropleth map depicting HCI rankings of 157 economies (Source: World Bank)

1.3.1 Human Capital Development in Canada

Canada is a developed economy that pays major attention to the development of its human capital and aims towards polishing their skills through a variety of methods, thereby ensuring an efficient and educated work force in the future. Many recent empirical studies have shown that public expenditure in Canada on skills formation and increasing knowledge competencies has taken priority over other economic issues. The economy's vast bounty of natural resources coupled with a rational and well-trained human factor provides for a decent standard of living and maximum participation of society.

The socio-economic factors of the country clearly indicate a strong base for the economy's progress in the direction of increased production, better opportunities and social mobility.

Policies of Canada have been focused on bridging the gaps between educational attainments and skill sets among the key subsets of their human capital for efficiency and equity reasons.

The effects of such reforms are clearly evident in the high global ranking of Canada in Human Capital Index, where it leads the OECD group of countries, standing at a glorified Rank 10 out of 157 economies covered under the study.

The table below depicts its overall index values.

Most Recent Estimate **Indicator**	Male + Only	Male	Female Female	Only
HCI Component 1: Survival				
Probability of Survival to Age 5	0.995	0.994	0.995	
HCI Component 2: School				
Expected Years of School	13.7	13.7	13.7	
Harmonized Test Scores	537	535	539	
HCI Component 3: Health				
Survival Rate from Age 15-60		0.941	0.929	0.953
Fraction of Children Under 5 Not Stunted				
Human Capital Index (HCI)	**0.80**	**0.79**	**0.81**	
Uncertainty Interval	[0.79,0.81]	[0.78,0.80]	[0.80,0.82]	

Table 1: HCI Standing of Canada (Source: World Bank)

1.3.2 *Human Capital Development in India*

India, an underdeveloped economy, can be considered to have a blessing when it comes to human resources. India boasts about having a huge human capital base (second-largest in the world). Despite this, the rate of development of such capital is very low in our economy because of stifling strain on our resources which are employed in other sectors. This is caused mainly due to the low investment in training of our population and the strenuous acceptance of new ideas in the social fabric of our country. The standard of living, though growing day-by-day, still remains lower to other developing economies worldwide and focus on skill improvement through education seems to be a far-fetched idea. Though standards of education are pretty high, the system of learning in India is subject to a lack of practicality and severe brain drain when it comes to employability of skilled labor. Unemployment plagues the current market scenario of our economy, clearly reflecting on the low human capital development. The government has been taking sincere efforts in the past few years to rectify this situation by issuing multiple grants to promote quality education and utilize modern methods to develop skills amongst individuals at a young age.

India stands at Rank 115 out of 157 economies in the Human Capital Index, the details of which are provided below. *(Based on World Bank Report on Human Capital Development)*

Indicator	Most Recent Estimate		
	Male + Female	Male Only	Female Only
HCI Component 1: Survival			
Probability of Survival to Age 5	0.961	0.961	0.960
HCI Component 2: School			
Expected Years of School	10.2	10.1	10.3
Harmonized Test Scores	355	347	362
HCI Component 3: Health			
Survival Rate from Age 15-60	0.825	0.790	0.864
Fraction of Children Under 5 Not Stunted	0.621	0.617	0.626
Human Capital Index (HCI)	**0.44**	**0.43**	**0.45**
Uncertainty Interval	[0.43,0.45]	[0.42,0.44]	[0.44,0.46]

Table 2: HCI Standing of India (Source: World Bank)

1.3 Education and HCD

Human Capital is said to be most productive and capable to provide modern competitive advantages, when it is driven towards innovation, hi-technology and creative activities. Orientation of human capital towards intellect, skills and training is a significant component in its process of development. This is where education plays a major role. The educational potential of human capital is believed to be extremely important, since education serves as a base for knowledge, abilities and skills, develops professional capabilities and consequently generates conditions for economic growth.

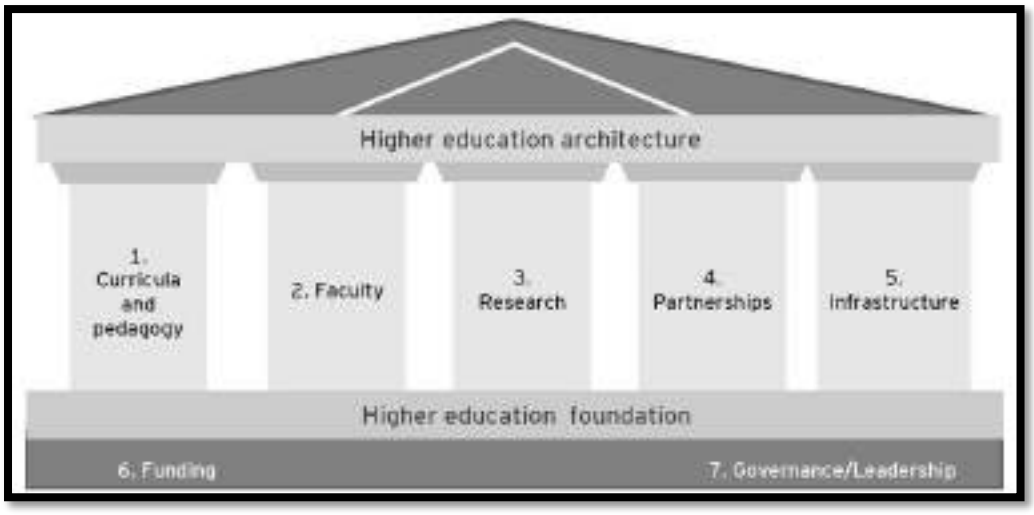

Figure 3: Basic Structure of Higher Education (Source: World Bank)

Education is one of the cornerstones of the welfare society. In this context, it is necessary to note and record the influence of formal, ongoing and applied education on the human capital of an economy. The effects of the educational structures are clearly visible in the overall development of the human capital. Education is the comprehensive output of learning through varied sources including vocational and

technical superiority. The parameters such as study for an academic degree, self- improvement and advanced training are often considered as the standard of gauging educational status. However, it is important to observe the effects of practical experience as well.

1.4 *Improving Human Capital through Better Education:*

One of the key factors behind low quality of human capital is lack of focus on education system and clear strategies to develop the education system. Integration of Human Capital Development plan with economic master plan is needed for the development of Human Capital. Better educational facilities tend to develop human capital to its full potential.

1.5 *Relationship between Capital Development and Economic Growth:*

Human capital Development and Economic Growth have a strong correlation. Human capital affects economic growth and can help to develop an economy by expanding skills and knowledge of its people. Human Capital Development provides economic value since a knowledgeable workforce can lead to increased productivity. Also, the quality of work can be improved by investing in people's education. Human Capital Development is positively correlated to economic growth since investment tends to boost productivity. The process of educating a workforce is a type of investment and that investment is in human capital.

1.6 *Investing in People to Build Human Capital:*

Scientific and Technological advances are transforming lives; but still many countries face tremendous challenges as far as Human Capital Development is concerned. In fact, more than 260 million children and youth all over the world are receiving no education at all. Human Capital- 'the potential of individuals' is going to be the most important long-term investment any nation can make for its people's quality of life and future prosperity. Countries need to gear up to prepare their human capital for major challenges and opportunities that are being driven by technological changes. A focus on human capital is essential for all nations at all income levels, since the frontier for skills is continuously moving and the demand for better education and health is increasing everywhere.

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CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

Education as a component of human capital development has been an important subject matter in the academic circle. A great deal of research work has been done on the role of education in developing and enhancing the productivity of human capital. Following is a brief of such research papers reviewed by the team.

2.0 Papers Reviewed

The Research Paper Published by Conference Board of Canadian "Gender Equity, Diversity and Inclusion"- Jessica Edge, Eleni Kachulis and Matthew Mckean (2017): The research paper reports insights of the meeting held on February 2017, wherein gender equity, diversity and its inclusion in Post-Secondary Education (PSE) were discussed. It emphasizes on the advisable practices and shared steps that PSE institutions and other organizations can take to aid their students reach their full potential. Shift in culture will help in forming and sustaining inclusive campuses whereby multiple perspectives and familiarities can be sought out. The author believes that these contributions will add significant value to the educational enterprise. Transparency, identification of issues as well as tracking of progress can be achieved by reporting diversity data on faculty, staff and students at universities.

"Higher Education in India: Challenges and Opportunities" -Younis Sheikh (2017): Higher education system in India is the world's third largest in terms of students. Owing to the involvement of the private sector, India's Higher Education sector has witnessed a stupendous upturn in the number of Universities/University level Institutions & Colleges. The private sector stimulates almost 60% of higher education institutions in India. Over the last decade, multiple institutes have been accelerated; making India home to the largest number of Higher Education institutions in the world, with student enrolments at the second highest. Despite these, India continues to face stern challenges. Still, 25 percent of its population is illiterate; and just 7 per cent graduate. To knock off these challenges, there are lots of opportunities available. If these opportunities are clutched at the correct time, India has the competence to make its identity at an international level.

"Present Scenario of Higher Education in India" by Dr. Kirti Matliwala (2016): It intended to recognize concerns and challenges in the field of higher education in India. Appropriate education is a very important factor for the development of a country. Some of the issues discussed in this paper were brain drain, lack of large number of high-quality educational institutions and low foreign investment in education in India. To cater to such complications existing in the system of Indian education, an effective solution includes strengthening research and development, allocating more budget for development of quality educational institutions and creating awareness about the importance of education.

"Canada 150 and Beyond": "The Role Of Human Resources In Canada's Prosperity" - Published By CPHR Canada (Chartered Professional In Human Resources, 2016): CPHR Canada commissioned a research study to outline Canadian Human Resources and their efficiency and productivity. The study is grounded on publicly available information published by Statistics Canada, The Organization for Economic Co-operation and Development (OECD) and The World Economic Forum (WEF). In 2011, the employment rate in Canada for the population aged 25 to 64 years was 75.3%. Within this group, 30.8% held university

credentials while 12.7% held no certificate, diploma or degree. The employment rate for those having university credentials held at 81.6% compared to 55.8% for those having no certificate, diploma or degree. The paper believes that prosperity and global competitiveness of any economy can be sought by educating and training the country's human
resources. The quality of human resources determines how well the country's economy will do. So, it is utmost important to enrich the quality of human resources which can be done by grabbing ample opportunities available.

"Human Capital and Economic Growth in India: A Co-integration and Causality Analysis" published in 2015 by Preeti Sharma: This paper studies the relationship between the human capital investment in education & health and economic growth of the Indian economy using various tools. The Granger Causality Test confirms the presence of two-way causality between education/health investment and GDP. This proves that investment in education and health is very important and has a significant positive long-term effect on the per capita GNP growth. This paper indicates that the components of human capital - education and health, are key variables that affect economic growth in India, or any economy for that matter, and economic growth, in turn provides a platform for the growth of human capital.

"The Impact of Human Capital Development on the Economic and Social Development of a country" by Jeļena Lonska and Iveta Mietule (2015): The paper aims to verify the existence of a bidirectional link: one runs from human capital development to economic growth whereby human capital helps increase national income and societal development; whereas the other runs from economic growth to human capital development wherein the resources from national income are allocated to activities contributing to human capital development. A correlation analysis carried out by the team demonstrated a strong link between the human capital development and the country's economic ($r = +0.944$, $p = 0.000$) as well as national development ($r = +0.882$, $p = 0.000$). This means that highly developed human capital and a country's national economic performance have a symbiotic relationship, both proving to be advantageous for the other.

“Overview of Higher Education in Canada” a research paper by Glen A Jones (2014): It emphases on structure of higher education in Canada. Under Canadian system of education, accountability for higher education has been allocated to diverse provinces under Canada’s constitutional federation. Albeit, it is highly decentralized, still federal government has a role to play by accompanying university research and student funding. Canada is the country which has highly accessible public system as it brags highest participation rates in the world and has one of the most educated populations. This paper has scrutinized the pros and cons of decentralized education and studied present developments and issues.

“Advancing Teacher Education through Faculty Development” by Darlene Ciuffetelli Parker and Julian Kitchen (2009): The paper highlights that teacher education is a specialized field of scholarship and practice in which there is both a core body of knowledge, ongoing research and innovative practice. Attempts need to be made to prioritize the professional development of teacher educators as it is crucial for enhancing the profile of teacher preparation programs. Effective teacher education programs involve an initial preparation, ongoing professional development, practitioner research, and dissemination of teacher educator reforms. This helps harness the true potential of teachers, thus solving the problem of under-skilled teachers and ultimately poorly educated students.

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CHAPTER 3:
RESEARCH METHODOLOGY

3.0 Introduction

The paper aims at understanding the undergraduate education structure of both India and Canada and what strengths they possess in their respective education system. The paper focuses on the impact of education and various other factors on Human Capital Development with reference to undergraduate students. Attempt has also been made, to understand the reasons for major differences seen in the two undergraduate education structures of both Canada and India and to draw lessons from Canada for betterment in India.

3.1 Research Objective

(a) To study undergraduate education structure of both Canada and India.
(b) To demarcate the significant similarities and differences between the Indian and Canadian education system.
(c) To identify the viewpoints of students, teachers and placement officials in respect to undergraduate education system in both India and Canada.
(d) To examine the inclusiveness of the Indian system of education.
(e) To formulate policies and reforms that should be adopted by India for advancement in its higher education system.

3.2 Research Design

The design used for research is mixed method. Both primary and secondary data have been used for the purpose of research. While significant information was extracted from published journals, magazines, internet search engines and other government websites, three structured questionnaires for students, teachers and placement agencies respectively were drafted by the team to gather realistic information pertaining to the undergraduate higher education structure of both economies. While collecting primary data, consideration has been given to the financials capitals of India and Canada viz. Mumbai and Toronto respectively. Responses were collected and assessed with reference to secondary data collected during the research in order to reach valid conclusions and inferences. Thus, a proper balance was maintained between both the data sources.

3.3 Data Sources

Structured questionnaires were used to obtain responses from students, teachers and placement agencies of both Canadian and Indian undergraduate education system. The questions included in the questionnaires were both open-ended and close-ended to understand the undergraduate education system of both countries in a diligent manner. Several sources were tapped including contacting Universities through Education Fairs.

3.3.1 Primary Sources

Respondents	Technique	Description	No. of Respondents
Indian Students	Questionnaire	Responses were collected from students who are currently pursuing Undergraduate Education.	258
Canadian Students			63
Indian Teachers	Questionnaire and Interviews	Responses were collected from teachers who are currently teaching at Undergraduate Level	54
Canadian Teachers			29
Placement Agencies	Questionnaire	Responses were collected from Agencies who provide required student data to Companies that have Vacancies	09

Table 3: Details of Data Collected from Primary Source

3.3.2 Secondary Data

(a) Published Reports from International Institutions
(b) Published Research Journals and Magazines
(c) Reports of high ranking executes

3.4 Data Cleaning/Refining for Analysis

Once these responses were collected, they were checked for completeness of response and only these responses were utilized for the analysis. This raw data was then compiled and refined to be used - appropriately in the analysis.

3.5 Limitations of Study

Given the size of population and expanse of both the countries, the sample size is very limited. However, efforts have been taken to consider a representative sample. The extent of our data collection was restricted to the financial capitals of both the countries i.e. Mumbai and Toronto. Further, various industry representations could have been considered. The study focuses on some of the core problems in the Indian Education System.

3.6 Further Scope for Research

(a) Study focusing exclusively on the problems of Disabled students can be conducted.
(b) Impact of Quality of Primary education on Quality of Undergraduate Education.
(c) Implications of Various other problems on the performance of the Education System.

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CHAPTER 4:
KEY ASPECTS OF EDUCATION SYSTEM IN INDIA AND CANADA

4.0 Introduction

According to Britannica, the term 'education' refers to the "methods of teaching and learning in schools or school-like environments as opposed to various non formal and informal means of socialization (e.g., rural development projects and education through parent-child relationships)... Education can be thought of as the transmission of the values and accumulated knowledge of a society." Education is imparted through an organised structure called an education system. An 'education system' is a formal institutional arrangement which forms the foundation for the growth of students in a particular region, such as a nation, state, or a district. Education is pivotal in the formation and development of human capital. And, human capital is necessary to ensure sustainable economic growth. Hence, a number of countries across the world are prioritising education and diverting their resources towards developing sophisticated and holistic education systems.

4.1. Outlook

The chapter is designed to provide a comparative analysis of two unequivocal economies and educational systems by providing a common base of factors on which the analysis stands validated while including substantial information about the policy profile and development of individual countries. The following description has been laid out for each country and its educational system:

(a) Analysis of Individual Nation's Educational Context
(b) Highlights of Overall Profile of Education
(c) Challenges Faced on Multiple Levels
(d) Policy Responses & Reforms

4.2 Tableau of Canadian Educational System

4.2.1 Canada's Educational Context

Education is laid out to be the responsibility of a province/territory under the Canadian governance system. Simultaneously, Canada has adopted policies and schemes that indicate that the country has realized the significance of education. Everything that has made Canada unique, especially with regard to topography, political administration, economic conditions, language and culture has played a direct role in the evolution of higher education in Canada. The Canadian government has shown its commitment towards ensuring accessibility, affordability, relevance, and quality in the education system. It has created a state-funded, subsidized educational network which has ensured that education is a right instead of a privilege, a mission instead of a secondary goal.

The Human capital development is a prerequisite for Canada to realize its potential and to ensure sustainable, long-term prosperity for all Canadians. The economic stability of a country depends on the quality of human resources rather than the abundance of human resources. The two main attributes of high quality human resources are 'Efficiency' and 'Productivity'. Hence, efficiently deployed productive human resources are of vital significance in building the wealth of a nation. And, the wealth of a nation can be

increased through investment in innovation, infrastructure, trade, education, and healthcare. A major determinant of a nation's economic health is education. In general, educated and well-trained workers are more productive than workers who are uneducated. In Canada, the development of value- added industries, such as manufacturing and software development is the direct result of the availability of skilled labour.

Attainment of Post-Secondary Certificate, Diploma or Degree				
	Males		Females	
	Number of persons	Percentage of persons	Number of persons	Percentage of persons
Selected demographic characteristics	*2016*	*2016*	*2016*	*2016*
	Persons	*%*	*Persons*	*%*
Total, persons aged 25 years and over	7,138,955	48.4	7,608,955	51.6
25 to 34 years	1,455,610	45.9	1,714,800	54.1
35 to 44 years	1,467,115	46.1	1,718,350	53.9
45 to 54 years	1,536,380	47.9	1,670,425	52.1
55 to 64 years	1,362,325	50.4	1,342,005	49.6
65 years and over	1,317,525	53.1	1,163,375	46.9
Non immigrants	5,013,750	48.2	5,392,390	51.8
Immigrants	2,007,745	48.9	2,100,770	51.1

Table 4: Canadian Enrolment Details (Source: Statistics Canada)

Canada spends about 7% of its GDP on education. Further, per student spending average is around 17,879 CAD at the college level. Canada has the highest stock of human capital in the OECD, in terms of educational attainment. Educational attainment is higher among 25-34 year olds with around 50% having acquired a higher level of education in comparison to the OECD average of 28%. A majority of the personnel in the specified age group have university qualifications, while the rest hold college diplomas.

According to the 'Labor Force Survey' conducted in January of 2019 in Canada, the number of people employed has increased by 67,000 and this newly employed workforce consists of youth aged between15-24. Most of the employment has been generated in the service-producing industries. The unemployment rate increased by 0.2% and is currently at 5.8% as more people look for work. The data gathered in 2016 revealed that there are 96 undergraduate universities in Canada into which around 1.8 million students are enrolled. Further, enrolments in Canadian public colleges and universities totaled 20,51,865 in 2016-17, up by 1.2% (+24,186) from the previous academic year. And, enrolments of international students rose by 11%

(+24,315), thereby significantly accounting for the increase in overall enrolments.

4.2.2 Highlights of Canadian Higher Education Structure:

- **Full autonomy to post-secondary educational institutions:** The education system in Canada is decentralized. There does not exist a Ministry of Education at the centre, but a CMEC (Council of Ministers of Education) to coordinate provincial educational policies. Most of Canada's colleges and universities are provincial and public. Hence, most of the funds are supplied by the provincial governments. However, the provincial governments do not directly interfere into the academic activities of post-secondary institutions. They play a supervisory role by monitoring and directing these activities and programs, instead of completely controlling them. Hence, these institutions have a higher degree of autonomy and academic freedom to explore a wider range of courses.
- **Trained teachers with high aptitude for research:** The higher education structure in Canada has ensured that students can communicate with trained teachers who possess a high research aptitude
- **Vocational Education and Apprenticeship System:** This form of education is primarily offered at the post-secondary level in public as well as private technical and vocational institutes, colleges, and universities in Canada.
- **Community Colleges:** Students in Canada can join community colleges after obtaining a high- school diploma to prepare for a vocation, or to prepare for further university education by obtaining transferable credits that can be utilised once they join the bachelor's programme.
- **Low Fees:** The tuition fees of Canadian universities are much lower in comparison to other international foreign universities. This is a major reason for Indian students to prefer Canada as their career destination.
- **Internship Programs:** Internship programs have been conducted by Canadian universities to enhance the work experience and practical knowledge of students.
- **'Work while you study':** Students in Canada have the advantage of being able to work while studying. Among other benefits, this allows them to manage their finances without incurring enormous debt. To gain the right to work off-campus, students must have a valid study permit, be a full-time student, be enrolled in a designated learning institution at the post-secondary level studying in an academic, vocational or professional training program that will result in a degree, diploma or certificate that is at least six months in duration.
- **Focus on Research:** Most study programs delivered by Canadian universities focus a lot on research and students get to engage in intriguing experiments and projects that are designed to provide a complete study experience based on innovation and forward thinking. Further, the research that has been conducted in the universities in Canada has produced fascinating theories, distinguished discoveries, and even some life-changing inventions.
- **Facilities for Differently-Abled Students:** Many post-secondary educational institutions in Canada have a department of access or disability services to provide specialized services to differently abled students for their particular needs. Additionally, 'Disability Awareness Training' is provided to the entire faculty and staff in order to make them aware of what constitutes a disability and to develop solutions aimed at enhancing the academic experience of disabled students. Some post-secondary institutions offer scholarships for disabled students of which some are specific to physical disabilities, whereas other scholarships focus on learning disabilities. Further, academic accommodations such as providing study material in an alternate format, private exam space for students with ADHD, providing note-takers for students with hand or wrist injuries helps disabled students to overcome disability-related challenges that hinder their academic success.

- **Vibrant and lively Campus life:** Apart from education, there are a number of events happening in the university. Every university has its own events which ensure that students participate in cultural activities that help them socialise, converse, and engage with a diverse set of people. Universities provide an array of extracurricular activities for students' all round development. Students belonging to various ethnic groups with different cultural backgrounds, cuisines, mannerisms, and perspectives exist in Canada.
- **Hub of top-ranked universities:** Universities in Canada have a positive reputation in terms of academic performance and graduate employability rate. In fact, many of the Canadian higher educational institutions compete with reputed universities in the U.S. and the UK.

Some of the top-ranked Canadian universities:

1. University of Toronto
2. University of Montreal
3. University of Alberta
4. McGill University

4.2.3 Challenges Faced By Canada's Education Structure:

- **Inaccessibility For Minority & Aboriginal Students:** Though Canada has recorded positive indicators and better performance than OECD averages across parameters of equity & equality, there is a widening gap between accessibility at OECD for minority-language students and aboriginals when compared to Canada.
- **Rough Transition To Higher Education/Labour Markets:** Canadian 16-65 year-olds performed at the average in literacy and below the average in numeracy compared to other participating countries. Compared to their peers in other countries, young adults (16-24 years- old) have below average literacy skills and average numeracy skills. At upper secondary level, a challenge shared by many countries is to provide relevant education that will prepare young adults for work and, at the same time, develop capacity for further learning.
- **Teacher Supply Imbalance:** Certain provinces in Canada face imbalance in demand and supply of trained & qualified faculty. This, however, has been countered by appropriate policy development & implementation.
- **Underdeveloped Apprenticeship System:** The apprenticeship system in Canada is comparatively underdeveloped as compared to OECD nations. 7.8% of men & 1.6% of women hold an apprenticeship certificate. The number of women holding apprenticeship certificates have decreased significantly since the last decade while there is only nominal growth observed in the category of men.

4.2.4 Policy Responses & Reforms

1) The CMEC Early Learning and Development Framework (2014) presents a pan-Canadian vision for early learning, to be adapted to the needs of each province and territory, to support development of policies and initiatives to enhance quality and continuity of the learning experience in the early years and beyond.
2) To strengthen links between education and the labour market, for example, New Brunswick launched the Labour Force and Skills Development Strategy (2013) to strengthen student pathways, support learning and skills development and retain or attract skilled individuals to participate in the New Brunswick labour market. In part, the strategy aims to align kindergarten to Grade 12 and post-secondary education with labour market needs so that students can gain the knowledge and skills needed

for an easier transition into the workforce.

3) Improving and adapting teacher education is a common policy priority for several Canadian jurisdictions. For instance, Prince Edward Island's Professional Learning Report 2013 defined areas of improvement in teachers' learning, and the Ontario government recently announced a modernisation of teacher education in the province.
4) Through intergovernmental agreements, the Government of Canada supports the work of provinces and territories to improve outcomes for official-language minorities by supporting initiatives in areas such as the provision of programmes, student performance, enriching the school environment and support to educational staff. A multilateral multi-year Protocol for Agreements for Minority Language and Second-Language Education with the Council of Ministers of Education, Canada (1983, re-structured in 2013) sets the parameters for this intergovernmental collaboration.

4.3. Tableau of Indian Educational System

4.3.1 India's Education Context

With a rapidly increasing population, India has the demographic edge: a young talent pool which is estimated to become the world's largest by 2030. India's education system has undoubtedly supplied some of the world's best talent and the boardrooms of multiple Fortune 500 corporations are occupied by individuals who are the products of the Indian education system. Apart from a unique structure that encompasses many different educational structures around the globe, Indian education system continues to place an emphasis on the values of individualism, secularism, rationality and to a lesser extent, cosmopolitanism. Ultimately, its vision of progress continues to mimic Western traditions of knowledge creation and dissemination. Even as India enjoys one of the fastest growing economies in the world, and a major contribution in this feat via knowledge-intensive services, there are concerns regarding the deterioration in the quality of Indian universities and colleges. Higher education in India commences at the undergraduate level. A student is eligible to pursue higher education in India after completion of two years of junior college. The duration of higher education is between 3-5 years, depending on the course chosen. During these years, a student receives streamlined and advanced education in the field of his choice. The knowledge gained is then tested through biannual examinations in order to record the progress of the student. The performance of the students in these tests determines the final grades or marks awarded. Once a student completes the required number of years of training and passes all the assessments, he is eligible to receive a degree from the college at which he was pursuing the course or from the university to which the college is affiliated.

In India, there are 47 Central Universities, 371 state public universities, 305 state private universities, 124 deemed universities, 127 institutions of national importance and around 39,931 undergraduate colleges.

Type of university	Number of Universities
Central University	46
Central Open University	1
Institution of National Importance	127
State Public University	371
Institution Under State Legislature Act	5
State Open University	14
State Private University	304

State Private Open University	1
Deemed University- Government	34
Deemed University- Government Aided	10
Deemed University- Private	80
Grand Total	**993**

Table 5: Classification of Universities in India (Source: AISHE 2018-19)

Only affiliated and constituent institutions of Central and State Public Universities have been counted as colleges. Constituent units of deemed/private universities, Off-campus centers and Recognized centers have not been counted as Colleges. There are 298 affiliating Universities and they have 39931 colleges.

Range Number of Colleges	Number of University
0-100	168
100-200	59
200-300	36
300-400	12
400-500	10
500-1000	13
Grand Total	**298**

Table 6: Classification of Colleges in India (Source: AISHE 2018-19)

College density, i.e. the number of colleges per lakh eligible population (population in the age-group 18-23 years) varies from 7 in Bihar to 53 in Karnataka as compared to All India average of 28.The highest number of students are enrolled in Arts courses. Total enrolment in higher education has been estimated to be 37.4 million with 19.2 million male and 18.2 million female. Female constitute 48.6% of the total enrolment. The total number of students enrolled in Arts courses are 93.49 lakh out of which 46.96 % are male and 53.03% are female. Science is second major stream with 47.13 lakh student out of which 49% are male and 51% are female. Commerce is third major stream with 40.3 lakh students enrolled. The share of male students enrolled in Commerce is 51.2% whereas female enrolment is 48.8%. *(Based on All India Survey on Higher Education 2018-19)*

Vocational courses are courses which provide work oriented training for specific professions. The structure of the Indian undergraduate education system has limited opportunities for those who wish to pursue education in vocational fields. Mostly, vocational courses in India are pursued by students as an added skill with their primary degree. Further, there seems to be a skewness in the available opportunities- Performing Arts and Designing are two vocational fields for which formal education is widely available. Accounting and Auditing constitutes another popular vocational course in India. There are certain recognised courses for skill development such as plumbing, tailoring, repairing and maintenance of automobiles, maintenance of cell phones, masonry, carpentry, welding etc. However, the courses are scarce despite the high demand for technicians.

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4.3.2 Highlights of Indian Education System:

- **Improving Enrolment:** Estimated Gross Enrolment Ratio (GER) in Higher education in India is 26.3%, which is calculated for 18-23 years of age group. GER for male population at all India level is 26.3% whereas GER for female population at all India level is 26.4%.

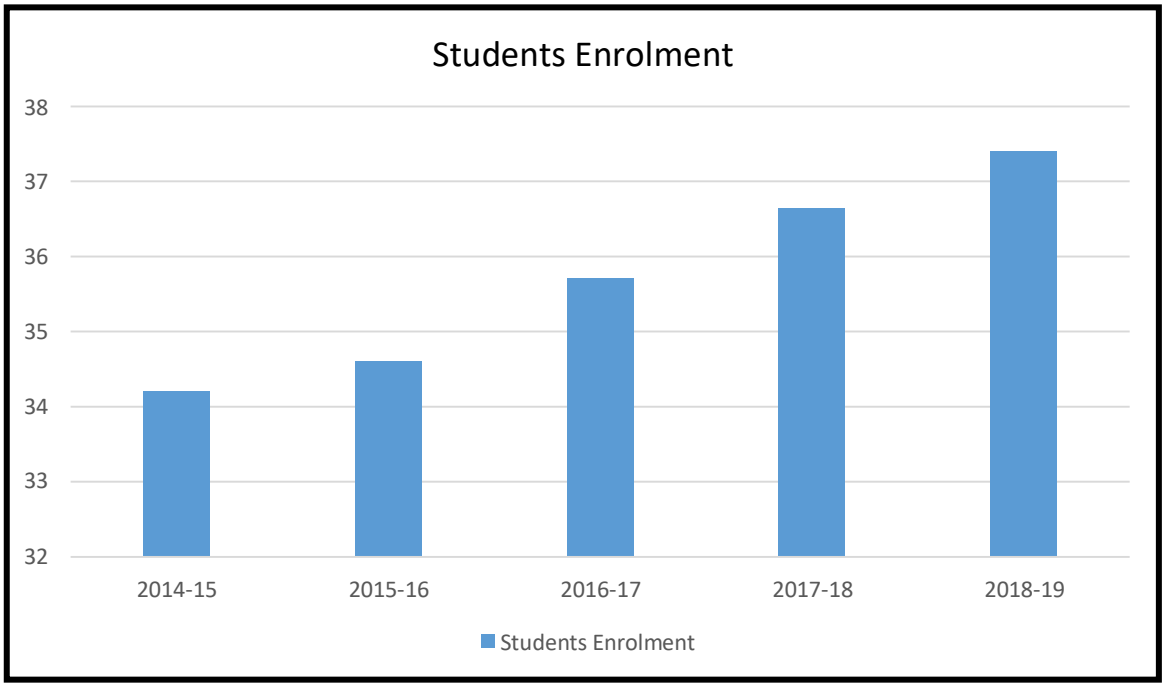

Figure 4: Students Enrolment (In Millions) (Source: AISHE 2018-19)

- **Distance and Open Learning**: Distance courses and open learning is one of the important characteristic of Indian higher education system and is looked upon by 'Distance Educational Council of India'. Distance enrolment constitutes about 10.62% of the total enrolment in higher education, of which 44.15% are female students.
- **Policy framework**: Policy framework is carefully planned at the level of Planning Commission, Ministry of Human Resource Development (MHRD) and University Grants Commission (UGC) which leads to centralization of policy making process and these policies are implemented for proper management of the institutes of higher education in India.
- **University Rankings**: It is used to measure, compare and assess institutional quality based on numerous indicators related to reputation, research, teaching, academic rigour and various other factors that assist in fulfillment of academic, infrastructural and developmental needs of students. Indian educational institutions flounder in comparison to major universities around the world with substantial ranking agencies describing India's show of educational development as poor across major parameters
- **Scholarship Programmes**: There are various scholarships provided by the central and state government in India. Some of the scholarships provided by the central government are as follows:

(a) Central Sector Scheme of Scholarship for College and University Students.
(b) Top Class Education Scheme (for person with disabilities)
(c) Prime Minister's Scholarship Scheme

Through these scholarship programmes, both central and state governments aim to provide financial assistance to the students belonging to low-income group.

- **Subsidization of Education:** Education in India is subsidized through government aids. India spends an estimated 4% of its annual GDP towards the educational system. This creates a contrast to other education systems around the globe where there is limited state funding towards the betterment of system.
- **Accreditation**: As per the data provided by the NAAC (National Accreditation and Assessment Council) as of June 20, not even 25% of the total higher education institutes in India were accredited. Out of those ranked, only 30% of universities and 45% of colleges were found to be ranked at A Level.

4.3.3 Challenges Faced By Indian Education System:

- **Quality of Education:** The quality of education imparted in Indian classrooms is still not at par with international standards. There are gaps between industry expectations and what students are being taught in the classrooms. Though there is growth in the levels of Indian faculty available for imparting education, there is no consideration whether the quality matches the desired output .
- **Accountability:** The system of accountability in India for education is highly disproportionate. There is minimal accountability for the flaws that persist and takes higher than usual time to plug the leakages or drawbacks.
- **Inclusiveness:** In India, not only the availability of educational services, but also the availability of inclusive infrastructure in educational institutions is scarce. India is a country with around 22 million people who suffer from a disability. This forms around 2.1% of the total population of the country. The availability of education for disabled children is a major concern. Students with disabilities have a lower rate of enrolment into schools and a higher probability of dropping out of school. With the social stigma around disability, enrolment for primary education is very low. Consequently, enrolment for undergraduate education is poor.
- **Quality & Quantity of Research:** Research remains a highly valued factor of measuring the quality of education. The number of publications from India has increased steadily but it still lags behind the likes of developed nations such as Canada.
- **Lack of Funding Alternatives:** The only significant inflow of funds for public institutions is government grants & aids. Insufficient funding has been identified as the top concern among institutions of learning. A need for alternative sources of funds is necessary to be established in order for institutions to improve their academic & infrastructural facilities.
- **Higher Pupil Teacher Ratio:** The Pupil Teacher Ratio for India stands at 29 as per the All India Survey on Higher Education 2018-19. However, when compared to other nations it is of magnanimous proportions such as Canada where it stands at 9.

PTR for Regular Enrolment		
Year	**University & Colleges**	**University & its Constituent Units**
2014-15	22	15
2015-16	21	16
2016-17	25	19
2017-18	30	20
2018-19	29	18

Table 7: Pupil Teacher Ratio In India (Source: AISHE 2018-19)

4.3.4 Policy Responses & Reforms

The government of India has introduced various policies over the years in order to promote education and skill development. Here are some of the integral policies related to education that was introduced recently.

1) **Compulsory Gender Education**: The government of Telangana made gender education compulsory at graduation level. It became the first Indian state to do so and has also introduced a bilingual textbook.

2) **Yoga Education:** Directed by the Council for the Indian School Certificate Examinations (CISCE), all ICSE and ISC schools will now have compulsory yoga classes.

3) **New Education policy for Girls**: The government is planning to put in place a "modern education policy". The focus of the new education policy (NEP) will be on girls' education. It's planning to eradicate the inequality in education.

4) **Diksha Scheme:** The government of India will soon launch the learning portal 'DIKSHA' to upgrade the teaching skills and will initiate the integrated B.Ed programme.

5) **Sports Education**: The government of India is planning to make sports education a part of the Fundamental Rights and to promote it nationally.

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CHAPTER 5:
ANALYSIS AND INTERPRETATION OF DATA

5.1. Analytical Interpretation of Responses To Questionnaire

5.1.1 Introduction

The team has conducted primary research in order to get an in depth view of the prevailing situation in both the countries. The findings yielded from our primary research show a distinction in the overall situation in Canada and India. All these distinctions can be narrowed down to three major factors that show stark contradiction. These three factors are analysed in depth in this chapter.

5.1.1 Analysis of Data

I. Teaching Methodologies:

61.5% of student respondents from India stated that the teaching method used is more teacher-centric whereas 78.9% student respondents from Canada stated that the teaching method used is student- centered.

It was observed Indian teachers focused more on traditional teaching techniques whereas Canadian teachers make more use of innovative teaching pedagogies. Indian students adopt rote learning to succeed in marks based approach of examination. Hence, 76.4% of Indian students opined of conceptual learning for better performance.

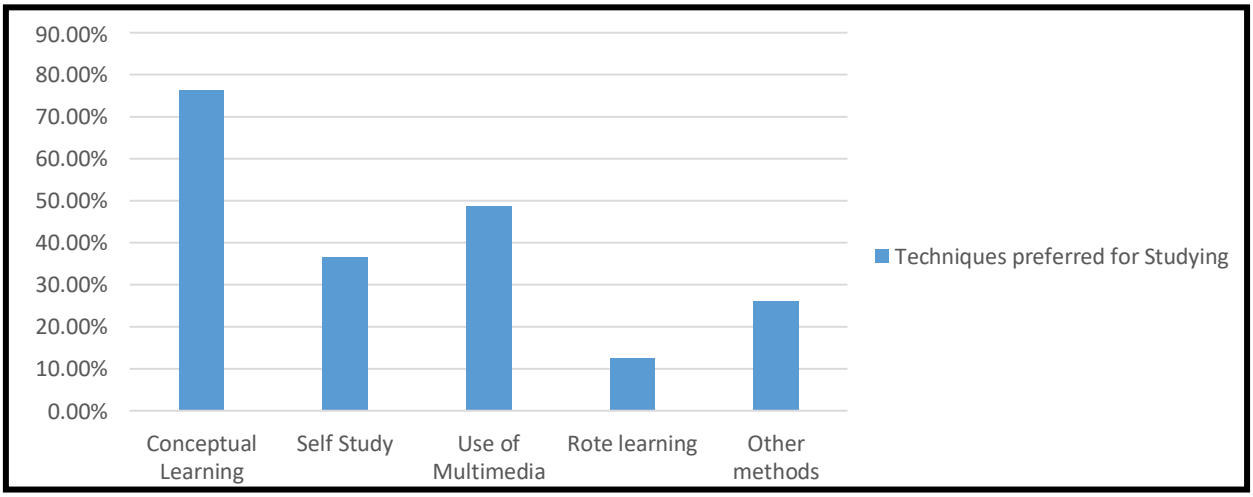

Figure 5: General Preference of Techniques for Students (Source: Primary Data Source)

Respondents in Canada are of the opinion that the teaching methods are much interactive because they are personalized, use of inquiry based learning and are student friendly due to inclusion of games and other activities in teaching .Students are of the opinion that the teachers indeed use student focused techniques and their system gives relevance to individual culture, language and student capability.

Majority of the Canadian teachers place value on individualistic growth by encouraging independent thinking and emphasising on research based education. Teachers experienced that virtual classrooms helps students to grasp and revise the study material at their convenience and approach teachers online as well as offline.

Indian Teachers mentioned that they wish to teach students using interactive methods but there is either lack or improper functioning infrastructure - like mics, projectors, laptops and internet facilities which results in wastage of lecture time. Sometimes students also are not co-operative and show resistance to such techniques due to lack of seriousness and value for degree.

One of the major issue faced by Indian teacher is high student-teacher ratio (1:120) where as in Canada there is a lower student-teacher ratio (1:40). This acts as a major hindrance for adopting modern teaching-learning methods.

II. Availability of Courses:

Around 90% of Indian students were influenced to choose the degree they are pursuing because of lack of variety of courses, dominance of conservative attitudes and peer pressure regarding career choices. This leads to a loss of interest in academics. Further this has a significant impact on employment since 88% of placement agencies state that Indian students lack employable skills.

On the contrary, 83.4% of Canadian students on the other hand say that the motivating factor for them is their interest and passion towards the course that they are pursuing. While finance does act as a barrier for undertaking certain courses, student loans and public colleges provide a helping hand. Easy availability of student loans in public colleges provide a solution to the financial problems faced by students. Further, students have a wider variety of courses to choose from.

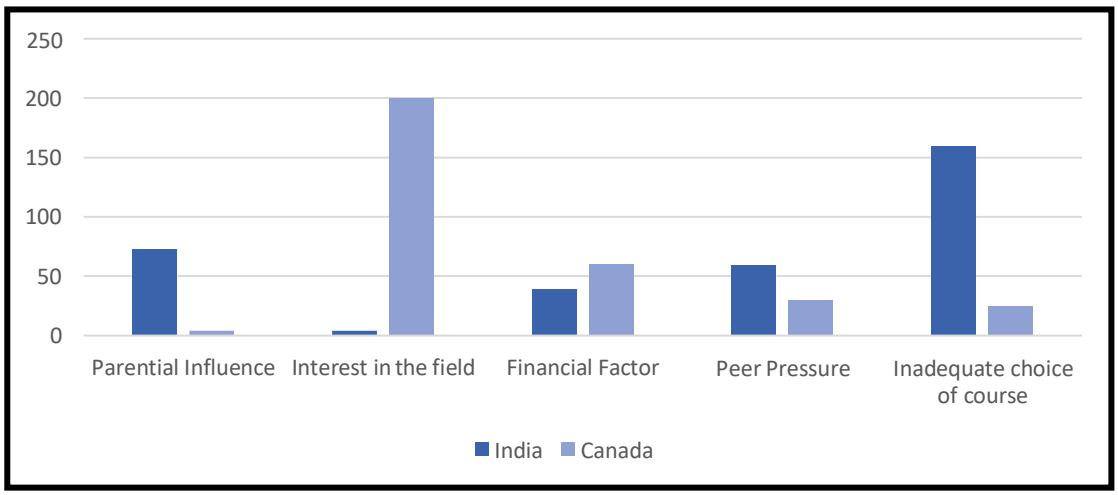

Figure 6: Reason for Choice of Degree (Source: Primary Data Source)

III. Disparity in choices for Differently Abled Students:

As stated earlier that, choices offered to Indian students are insufficient and at the same time the situation for those students who lie on the spectrum of being differently abled is much worse. They are forced to pursue that degree which Institutes find suitable for them as against that degree which they want to

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pursue. 89% of respondents in this category answered that when it came to deciding the course for under graduation, they simply took that course in which the Institute readily admitted them. The limited choice gets further reduced for differently abled students and they are left with close to no choice.

On an average, 35.2% of Indian students admitted that there are facilities for students with special requirements. 48% of the physically handicapped students admitted that they have adequate facilities like ramps and specialized washrooms for those who have physical impairments. However, resources such as teaching using Braille system for visually disabled or teaching using sign language for deaf learners are sparsely available. Hardly any colleges have specifically trained teachers for those with Cognitive or Learning disabilities like dyslexia. However, approximately 10% respondents acknowledged having facilities for students with invisible disability or psychological disorders like Autism, Obsessive Compulsive Disorder, Attention Deficit Hyperactivity Disorder etc. Even the teachers are not sensitized and many a times not aware about the needs of special children.

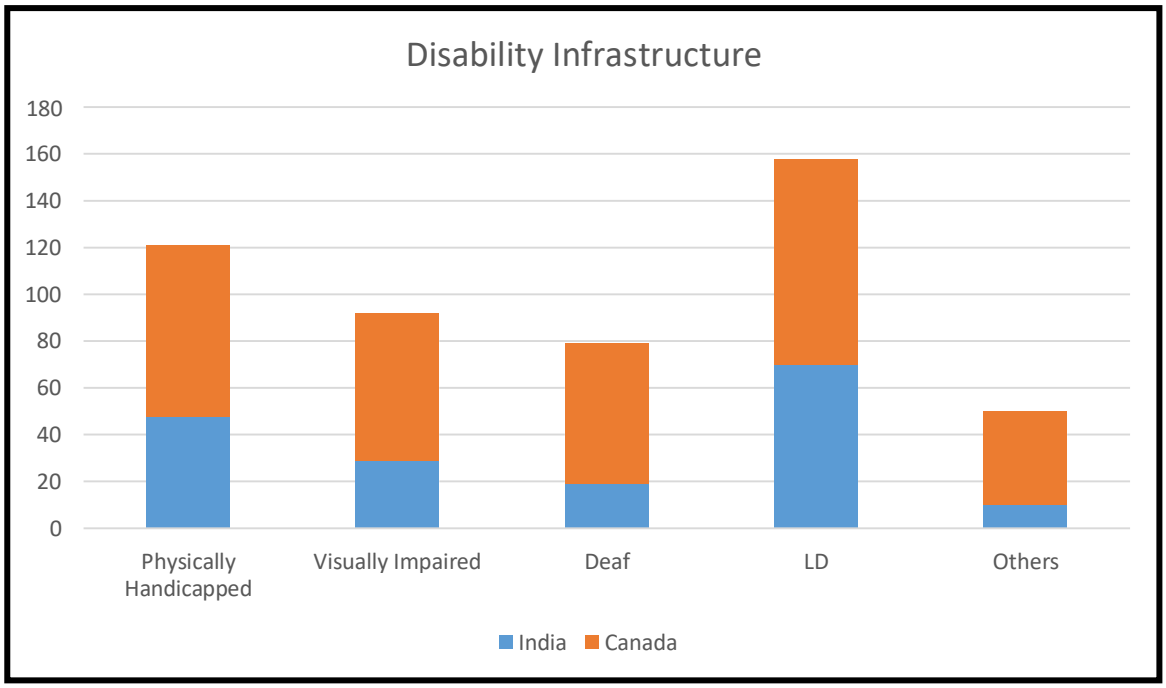

Figure 7: Graph showing Disability Friendly Infrastructure Available For Special Children

On an average, 64.8% of Canadian students admitted that there are facilities for students with special requirements. Students seemed to be satisfied with what they were pursuing and those who were dissatisfied did not blame lack of choice for their dissatisfaction. They felt that most of the Institutions were either adaptive for disabled students or were at least trying to cater to their needs.

The teachers from almost all universities felt that their Institutions were capable to handle students with any kind of disability, and said they constantly try to update themselves with the ability of fulfilling the needs of such students. The National Education Association of Disabled students in Canada constantly provides the required guidance to the students so as to impart inclusive education.

5.2 Parenthetical Citations of Personal Interviews

5.2.1 Introduction

In order to gain better insights into the system of education in the Indian sub-continent along with a panoramic view of the ground level realities, the team undertook interviews with personnel who have been a part of India's educational scenario. Our interviews consisted of a well-designed questionnaire which aimed at learning the respondent's point of view through a structured formulation of inquiries. The responses so received were then compared on an overall basis for common parameters.

The findings were established after an in-depth discussion with the interviewee on an individual basis on various aspects of the Indian system of education. These parameters were further inculcated into an opinion matrix which establishes the observable characteristics between Canadian and Indian way of education. The interviewees were selected on a very careful basis and amongst individuals who demonstrated an understanding of the Indian education.

5.2.2 Analysis of Data

1. *Syllabus:*

Currently the syllabus is being designed centrally which is applicable to all the institutions affiliated to that University. When the university is planning the portion it has to keep in mind its reach and the area when the portion is being taught. The problems in a particular area, the overall situation and scenario also contribute to the process of syllabus determination. Syllabus updation takes place frequently but its implementation gets delayed. The **new education policy** in India stresses on the importance of designing and crafting syllabus in a manner which is student friendly/centric. However, the sad reality is that, we still aren't implementing the policies which are aimed at reforming the education system in India. More subject choices should be given to students to attract their attention. Restricting the subjects based on streams hampers with students creativity and drive. The combination of subjects offered also needs to be improved.

2. *Faculty:*

Most of the teachers wish to inculcate interactive teaching methods but time constraint, huge class strength, inappropriate infrastructure and lack of student participation act as barriers. They have to cover ample of portion in limited time hence limited scope exists for practical teaching. Also, students show hesitation to give extra time to teachers for such practical training. The teachers are willing to register themselves in the Teacher Training/ Development programme or additional courses but they are not willing to bear the cost of such programs. They want such programmes or courses to be sponsored by the institutions in which they work, but institutions do not have such grants. Free Programmes organised by government do not attract interest of the teachers as they feel that they are already aware of the matter. Mandatory teaching programmes have the same effect as free programmes.

3. *Examinations:*

When testing students, question papers are set in a student friendly manner. Interest of both average and intelligent students are kept in mind. The focus of the exam is not to 'know what a student does not know, it is rather to gauge what a student knows'. Whenever internals are conducted the student will be evaluated from the guidelines provided by the university. Entrance exams in colleges follow quantitative aptitude

rather than more holistic personality intake. Exams are just marks-based rather than skill building.

4. *Infrastructure:*

The incumbent institutions in India show a fair amount of inclusiveness of students belonging from various socio-economic backgrounds as well as with those having various disabilities (physical & mental). In fact the UGC has given a mandate, to be followed by the various institutions in showing inclusiveness while providing admissions. Many aided institutions show such inclusiveness but still there is a scope to broaden the extent. The physical disabilities is are taken care of well but however quality education to other special students in terms of alternative methods of teaching, learning and evaluation is gearing up very slowly. The **grants and infrastructure** for disabled people are **very insufficient to cater their needs**. The vastness of the nation and ignorance makes it very difficult to reach towards those who need it, in adequacy**.**

5. *Autonomy & Centralization:*

Currently all the colleges are trying to improve the quality of education that they are imparting. They wish to have best graduate students when compared to other colleges. This is one of the reason colleges prefer to be autonomous. When a college becomes autonomous it can set a separate syllabus based on the level of students enrolled. Also it can focus more on overall education instead of just book based learning. Different geographical locations have different requirements where the student body has different needs and dissimilar capacities which creates the importance of **decentralization and autonomy**. These two factors proves to be successful in catering the needs of students. Taking this into consideration, this is where the Importance of **decentralisation & autonomy** come in. When these two factors are in place the implementation of any Institution's idea become a success and thus they prove to be successful in catering to the needs of various students.

6. *Employability***:**

The Indian education system is oriented towards **employment and employability**. The focus is mostly **on "getting a job",** which creates a **lack of interest t**owards quality education. The Indian undergraduate education system is not perceived as undervalued, however the **attitude towards it is very myopic**. The approach towards education and teaching-learning methods is very **teacher centric**, with limited focus on the needs of the students.

7. *Vocational Training:*

The **vocational skills** in the current scenario aren't being addressed well. Attempts are being made in some pockets of the country to bring in such skills, however it lacks a formal structure. Due to absence of homogeneous application of universal set of guidelines by Indian institutions, the skills development and vocational training, knowledge, leadership, and emotional intelligence **do not bridge the gap between industry requirements and academic scenario**. The focus of education is very **subject centric and not knowledge oriented**, which makes it very difficult to impart these skills properly. There is a lack of awareness among the students regarding the availability and importance of such skills in industry. A general consensus among the interviewees was all the vocational skills should be integrated with the current education system in the form of **core subjects, electives and value added subjects**.

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6.3 Matrix Representation of Parameters

The matrix below lists out the similarities and dissimilarities of each system of education and represents them side-by-side with the other system of education. This makes an analysis of the said parameters and their individual characteristics easier by providing a comprehensive insight.

	Indian System of Education	Canadian System of Education
Syllabus	• Centrally Designed • Rigid Implementation • Stream-wise Stratification	• Independently Designed • Flexible Implementation • Student Centric Approach
Faculty	• Higher Student – Teacher Ratio • Lack of Infrastructural Facilities required for quality teaching • Lack of Flexibility	• Lower Student – Teacher Ratio • Adequate Infrastructural Facilities • Flexibility for Faculty
Examinations	• Marks Based Approach (Quantitative) • Memory Oriented • Strict Guidelines • Restrictive Pattern	• Case Study Based (Qualitative) • Knowledge Oriented • Flexible Approach • Inclusive Pattern
Infrastructure	• Limited Inclusivity • Redundancy in Support Systems • Funding Availability • Lack of Infrastructure for Research	• Inclusive • Technological Support • Funding Availability • Prime Focus
Autonomy & Centralization	• Hierarchical Structure • Limited Autonomy • Centralised Structure	• No Formalised Structure • Higher Autonomy • Decentralised
Employability	• 'Getting the Job' Attitude • Employment Focused Choices • Orthodox Focus on Employment	• Interest Focused • Panoramic View of Choices • Development Focused
Vocational Training	• Under Developed • Excluded from Curriculum • Not skill-based	• Knowledge Oriented • Holistic Approach • Industry Centric
Students	• Limited Participation • Unaware About Career Choices	• Higher Participation • Aware About Career Availability

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CHAPTER 6:
THE WAY AHEAD FOR EDUCATION IN INDIA:

6.0 Overview

The analysis of data gathered about both the distinct higher educational systems crystallizes the observable differences and form changes that are required at all the three stages of the Indian Education System, that is, Central Governance (UGC), universities, and the affiliated colleges. Along with this, the team has also suggested implementation of a model.

6.1. Recommendations:

6.1.1 Policy Makers:

- **Increase in the number of Vocational courses:** The vocational courses should be specifically developed for easy inclusion in the curriculum, so that the void to enhance student's skills in non- academic areas gets filled. The team believes that there is a need for them to introduce a more diverse and varied range of courses thereby offering a plethora of options to students.
- **Market-oriented courses:** Courses available to the students should be updated in accordance with the requirements of the market. The market and its requirements should be studied extensively before deciding the content that is to be taught under a particular course in the colleges. The future potential needs to be recognized by them and they should design courses that produce professionals to meet the needs of tomorrow.
- **Consideration towards current trends:** The syllabus needs to be revised continually, so that the matter incorporated is in line with the on-going trends in the profession that the students wish to practice after completion of their degree. This kind of a distinct identification will ensure that students are not learning primitive concepts.
- **Practical training:** Internships and practical training should be made an integral part of the curriculum. When the students work in the industry, they will understand the technicalities of the vocation. They will be in a better position to take decisions regarding their career. Also, it will help the students to be mentally prepared before they start working. Hence, career shocks can be avoided. In addition to the advantages available to students, even companies can save funds that they usually spend on fresh employee training.
- **Introduction of a specialized wing to offer streamlined undergraduate education for disabled:** Throughout the course of research, the team sensed a broad gap between the education available for general students and students with special needs. To bridge this gap, the team recommends that specialized wings of educational sections be set up across the country that would fulfil all the parameters that guarantee a seamless education experience to disabled students. These wings will have their sole focus on curation and implementation of educational policies for the differently abled.
- **Inauguration of statewide academic competition between specialized sections of colleges:** In order to induce higher investment for the purpose of developing specialized infrastructure, competitions that would create an optimum foundation for differently abled students need to be introduced and promoted. The idea of achieving excellence and increased reputation would prove to be an effective tool to guarantee that facilities provided by institutions do not just meet the bare minimum requirements, but also extend to the specific and primary needs of students.
- **Virtual Learning Platforms:** For teachers to be able to share new developments and additional details

with the students as and when required, virtual learning platforms need to be made available to the students. With the help of this platform, they can maintain communication with students beyond the classroom and consequently, extend the process of learning. This will give the teachers the convenience of teaching the students from the comfort of their home by using means like video conferencing and satellite lectures.

6.1.2 Institutional Heads:

- **Customization of Courses:** The Institutes need to allow the students an opportunity to personalize or modify courses as per preference by combining subjects of their choice to induce maximum dedication and motivation of the students in the degree they are currently pursuing. This will allow them to pursue subjects that they have an avid interest in without compromising their future prospects and thereby broadening their prospective and overall knowledge reach.
- **Awareness Creation:** The students will be able to make a well informed decision regarding the path of their career, if they are made aware about the available job opportunities in their field of choice. While there are institutes that do this, it is observed that their scope of awareness is limited to only to those courses that are provided by them. All institutes should strive to give their students as much information as possible regarding all the available options.
- **Better Implementation of Credit System:** A credit system would provide for a more flexible and liberal environment, thereby assisting students to make appropriate decisions about their study schedule and helping them develop a responsible conscience towards their course.
- **Regular Maintenance and Updating of technological Infrastructure:** For teachers to make use of the available infrastructure, facilities provided should function properly. A monthly exercise should be carried out by the institute's authorities to check the functioning of such infrastructure. The teachers should be trained and educated about the ways to use this infrastructure or a technician should always be available on campus.
- **Interactive skills training:** The colleges need to organize attractive courses that are aimed at personality development. These kind of courses are necessary to groom the overall personality of students. This development of students is necessary for them to fare well when competing across the globe.
- **Training workshops**: Teachers should be provided financial support, either by their institutes or by the government, to pursue reputed courses related to the subjects that they are teaching. They can remain up to date with the recent developments and impart better knowledge to their students.
- **Disabled centric modifications:** With a view to have better and fulfilling facilities for disabled students, the following points can be brought to practice:

(a) Extensive courses and tests in Braille that are designed and conducted exclusively for blind students. An alternative is to invest in computers designed specifically for the visually impaired;
(b) Assigning well trained and informed teachers so that students with psychological disorders will be able to study in a better, safer, and more efficient manner;
(c) Facilities made specifically for the disabled categories must be maintained, developed and updated just as frequently as the facilities for regular students are;
(d) Equal importance should be given to every category of disability;
(e) Inclusion of courses for the mentally challenged in order to boost their academic and employability;
(f) There should be no discrimination in the number and quality of courses offered;

- **Use of Disabled friendly infrastructure in institutes as a tool for employment:** Institutes that have

dedicated infrastructure for disabled can provide their students employment and become part time offices in the after-hours of colleges, since most colleges in India are not operational throughout the day. Companies can outsource certain tasks to these students and it can also form a part of their CSR activity.

6.1.3 Academicians:

- **Inculcating Sensitivity Regarding Disability:** Along with training to teachers for meeting the needs of students with disabilities, other students also be sensitized about the conditions of such students. They should also be trained with basic skills to help these special students.

- **Interconnectivity between Teachers and Parents**: A compulsory platform should be made available to the teachers in order for them to keep in contact with the parents/guardians of their students. With the help of this platform, they can communicate their observations and concerns to the parents. Additionally, a student's assignment can be informed to the parents and they can in turn help their children. An open and trusting relationship with parents will ensure overall development of students.
- **Use of Interactive Teaching Pedagogy:** Teachers need to make use of techniques that induce interest, curiosity and innovation among students. They can make use of group projects, game- based learning, and research-focused education. These techniques will make students self-sufficient learners and assist them in grasping new concepts, even after the completion of their courses.
- **Mentorship and Counselling:** As competition is on the rise and so is the pressure on students, we believe that teachers should put in extra efforts to bond with the students and act as mentors. They can act as counsellors for the students, so that the students feel free to share their problems and access a safe learning environment.

6.2 Establishment of Suggested Model

Currently the entire funding of the colleges in India is dependent on the grants given by the University Grants Commission i.e. UGC along with the donations that they receive. This limitations at times lead to shortage of funds for developmental projects that the colleges want to carry out.

We collectively suggest the following model to solve the existing problems:

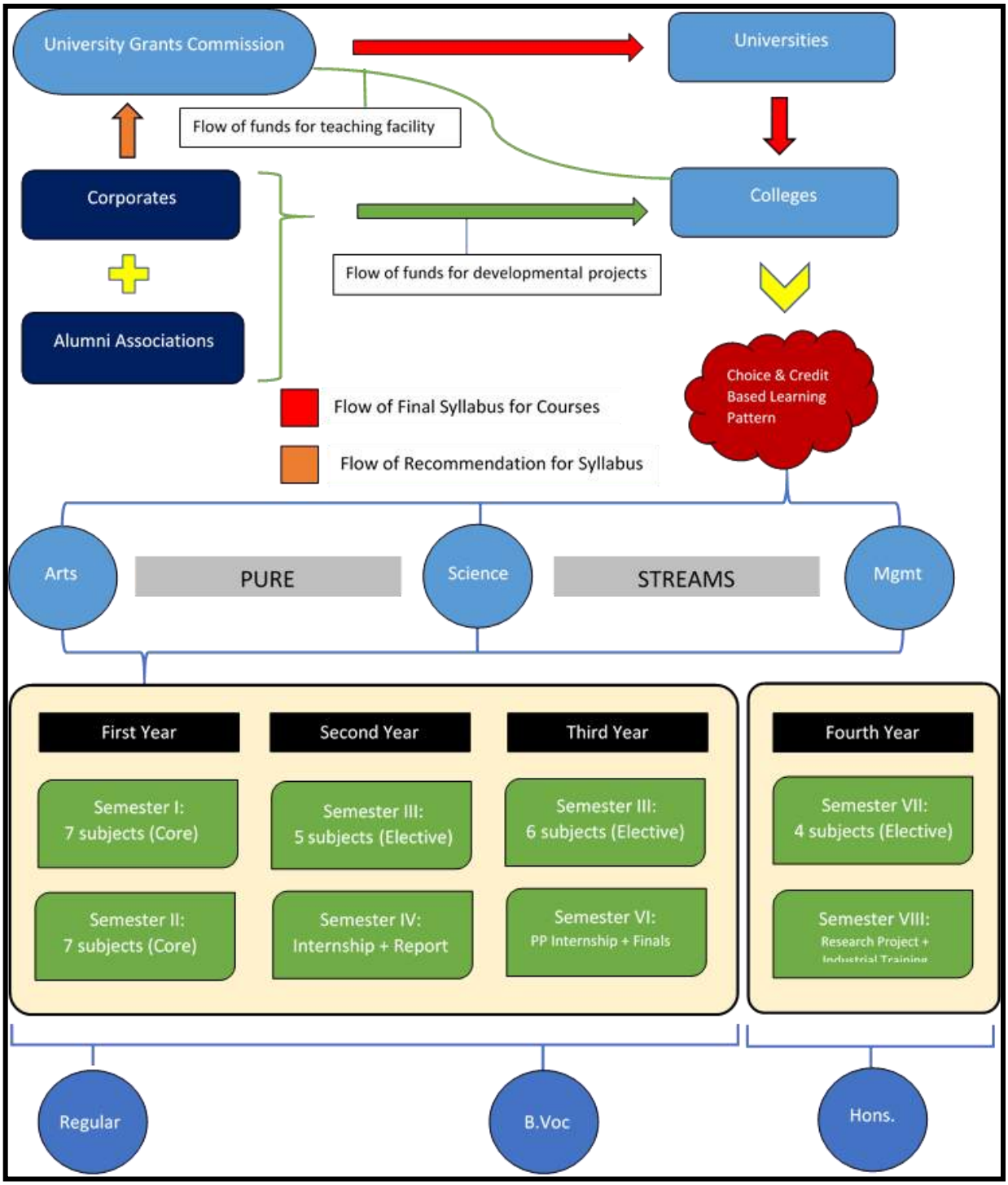

Figure 8: Working Mechanism of the Suggested Model

6.2.1 Explanation of the Suggested Model & Its Mechanism:

The model has been developed after an in-depth and thorough analysis of the problems that plague the Indian education system. The data collected through our primary sources along with secondary means of information have brought up observable & significant shortcomings that have been kept in mind while developing a model that can integrate in the unique Indian education system without altering major structural beams. The drawbacks were narrowed down into three major branches as follows:

- Deficiency in Requisite Funding
- Lack of Qualitative Education Facilities & Methods
- Observable 'Gap' Between Academic Structure & Industrial Expectations

The model brings about certain measures through a two-step approach to the present system. The model can be divided into two aspects as per their focus on solving the mentioned drawbacks.

I. Funding & Determination Aspect
II. Courses & Pattern Aspect

Funding & Determination Aspect: India spends equivalent to 4% of its annual GDP towards the existing educational system. The heavy subsidization of education in India has undeniably led to heavy burdens on the exchequer of the nation. Our model suggests that this amount is bifurcated on the joint shoulders of the national exchequer, corporations and alumni associations. The salient features of such an arrangement are listed out below:

- While the national budget for spending on education can remain on track, there can be additional investments through the route of mandatory spending for corporations. While such a mechanism already exists in the form of Corporate Social Responsibility for corporate force in India, there are no significant gains on this front since most corporations deviate towards other objectives which are in sync with their own company's objectives.
- The suggested model theorizes of a mandatory spending limit to be fulfilled by corporations in the form of monetary funds along with a system of adoption of colleges by corporations which can incubate growth & optimum utilization of the funds which are made available.
- Alumni associations can play a major role wherein they act as not just the benefactors towards their respective college but as watchdogs who ensure that colleges do not deviate from their set objectives and fulfilment of enhanced education.
- The model also provides ways to bridge the gap between the education imparted in classrooms and the requirements of the corporate world at large through a systematic determination of syllabus determination involving flow of recommendations from various stakeholders to the University Grants Commission. Further determination of syllabus flows in the same manner as per in the existing system.
- Benefits could be derived from this arrangement in the form of increased productivity of college personnel, better availability of interactive teaching methods, better student facilities, improved research & development opportunities, etc.

Courses & Pattern Aspect: The model brings out an improved & modified system of choice & credit-based learning system. This system provides lateral & vertical mobility to students along with an improved choice system. The system provides a mix of theoretical learning & practical understanding which bridges the gap between academic scenarios & industrial expectations. The system also takes into account the needs of differently-abled candidates and promotes inclusivity.

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- The pattern involves the design of undergraduate programs in India as three-year credit-based structures. Each year displays distinct features with regards to catering to student needs & facilitates narrowing the bridges of observable gaps between dysfunctional educational aspects.
- The first year of undergraduate program in any pure stream will consist of mandatory core subjects which are established through recommendations and discussions as well as well-rounded syllabus framing procedures. It intends to develop the students' core competencies while developing a well- meaning & educated individual.
- The second year consists partly of classroom teaching methodology and an insightful experience in the form of practical training. The period of practical training will help students to test out their mettle and develop exposure to their interested area of learning through **corporations, colleges & NGOs.**
- The student will be expected to submit a Project Report describing the exposure and learnings gained and the skills which the student believes he has acquired in the course of his training. Such a report may count towards the final grading approach by the institution. The subjects forming the second year of study will comprise of a mix of mandatory ability enhancement courses and electives based on the students' choice of specialised knowledge field.
- The first part of the third year consists of choice-based electives which provide in-depth understanding of the field of specialization. Along with such developed learning of their field, the student will be expected to undertake a mandatory outstation internship in order to develop additional working & specialised knowledge of their field of study.

There is an added aspect of distribution of programs on the criterion of intensiveness & composition of course structure. There are three bifurcations of degree programs namely: Regular, Honours and B.Voc. The Honours section would include the addition of a fourth year of study wherein a set of specialization can be developed through a focused study and selection of subjects. It must be noted that students still maintain their choice of selection of specialization. The vocational aspect (B.Voc) is specially designed for differently abled students who will be granted subjects on the basis of their need and understanding levels. This would inclusivity while maintaining quality of education through an offer of need-based development of subjects. The program of B.Voc will also cater to the needs of students who intend to pursue multidisciplinary education.

Years of Courses	Types of Courses	Honours	Regular	Vocational
First Year	Sem-I	7 Mandatory		
	Sem-II	7 Mandatory		
Second Year	Sem-III	2 (M) + 5 (E)		3 (T) + 4 (P)
	Sem-IV	Unpaid Internship		
Third Year	Sem-V	6 Elective		
	Sem-VI	Paid Internship		
Fourth/Additional Year	Sem-VII	4 Electives		
	Sem-VIII	Research Project	NA	

Table 8: Structure of the Model

6.2.2 Features of the Suggested Model:

1. **Exclusive Funding For Development By Corporates:** The model would assist all the developmental projects of colleges by funds acquired from Corporates. Each company will adopt 4-5 colleges and bear the monetary of costs for betterment of infrastructure, providing scholarships and other funding requirements excluding the salaries payments of teachers. The advantage to Corporates under this model is the tax benefit provided by government. They will also be allowed to categorize this expenditure under their Corporate Social Responsibility Requirements. They will also have to mandatorily spend a portion on Research & Development projects which will act as another tool for availing tax benefits.
2. **Students and Industry Requirement Induced Syllabus Curation:** The model would be implemented sector wise for testing the efficiency then it can be implemented on a national level. Initially the system would be run in western zone given that it is considered to an education hub in India. The syllabus in this model would continue to be designed by the UGC along with the Universities that are functional at the state level but the recommendations for the content of the syllabus would flow from Companies funding the colleges and the Students studying in these colleges.
3. **Inclusive Progression:** While the companies will be required to invest certain amount in the institutions, the intuitions would spend a specific part of these funding's on improvising and enhancing the facilities for differently abled students. Spending's each year would ensure that both top class and up to date facilities are made available or the facilities that are provided would expand each year. Eventually each colleges would have provisions for other than regular students.
4. **Utilization of UGC Grants Towards Teaching Quality Enrichment:** The grants currently spent on infrastructure and allied projects by the UGC would be utilized for extensive training of the teaching facility. They will conduct and/or sponsor advancement courses to the professors. This will guarantee every teacher's knowledge and skill development. In turn the students would be the recipients of better quality of education.
5. **Constant Amplification in the Investment in the Education Sector:** With India being a developing economy, the growth is going to remain constant at least till the end of next two decades. This growth points towards increase in the number of Industries and also an increase in the overall earnings of the existing industries. With the model the investments in the education sector would be directly proportional to the increase in the earnings of the industries. This will be helpful to take away the burden on government funds while ensuring productive usage of excess funds

6.2.3 Limitation of the Suggested Model:

While the aspect of funding and determination can be applicable on a broad basis, the course & pattern aspect has been developed keeping in consideration pure streams viz. B.Sc, B.Com and B.A. The said aspect cannot be suitably applicable for professional streams and streams requiring special consideration like Fine Arts, Liberal Arts, etc.

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CHAPTER 7:
CONCLUSION

Skilled labour has become the most important capital resource with the added population and strive for quality around the globe. In order to optimize and develop this potential resource, the best tool to be used is higher education.

The study focuses on two countries – India and Canada, to understand the education system currently in function across the economy. The team has given specific focus on understanding the viewpoints of students, teachers and placement officials. This has resulted in a comprehensive understanding of the strengths and problems faced in the Indian and Canadian education systems. It further enabled us to develop reforms to strengthen the Indian higher Educational system and improvising its role in Human capital development.

Through effective and efficient analysis the team concludes that significant differences do exist in the structures prevailing across the two countries in question, right from the way the system operates to the perception of education.

The suggestions and recommendations provided by the team aim at betterment of the positions of Policy makers, Institutional heads and academicians. The reformative model provided explains how injection of funds from the corporate sector and alumni associations to the educational sector and updating of the currently available degree course structures will add to the efficiency, ease, and added employability of the system output.

The Indian undergraduate educational system should try to emulate these suggestions and draw inspiration from features observed in the Canadian undergraduate education system. Not only would this help the system to become more student friendly but it will also enable our economy to utilize the human capital to function at a higher quality level. This would catapult Indian education out of the outdated educational techniques and grow in line with the global educational facilities, enabling it fully to utilize the human capital available as a tool for unparalleled and advanced development.

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Evolving Minds and Nurturing Development - The Danish Way

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The overwhelming experience comes to an end with a vote of thanks to the committee of the XXVII International Economics Convention for having given us an opportunity and a beautiful experience that we hope to cherish all our lives. Not only did participation in this convention with the theme 'Human Capital Development through Higher Education – Lessons for India' give us a chance to explore the challenges of Indian higher education system, but also to explore ourselves and thereby know our strengths and weaknesses and work on them. We learned team spirit while working on the Research project "**Evolving Minds and Nurturing Development -The Danish Way**" by shouldering responsibilities and many more qualities which will certainly help us in our future.

We owe all this to Our Director (Education), the Principal, Vice-Principal, and the faculty coordinators for this economic convention and the Library staff. A special word of mention about our research supervisors is essential who monitored us in the making of the Research Report and taught us the meaning and significance of the research. We owe a lot to all those who contributed directly or indirectly in preparation of this report. Many students who are not in the official team also contributed in data collection. The lessons learned by us in preparing this report will help us in our future endeavors towards research.

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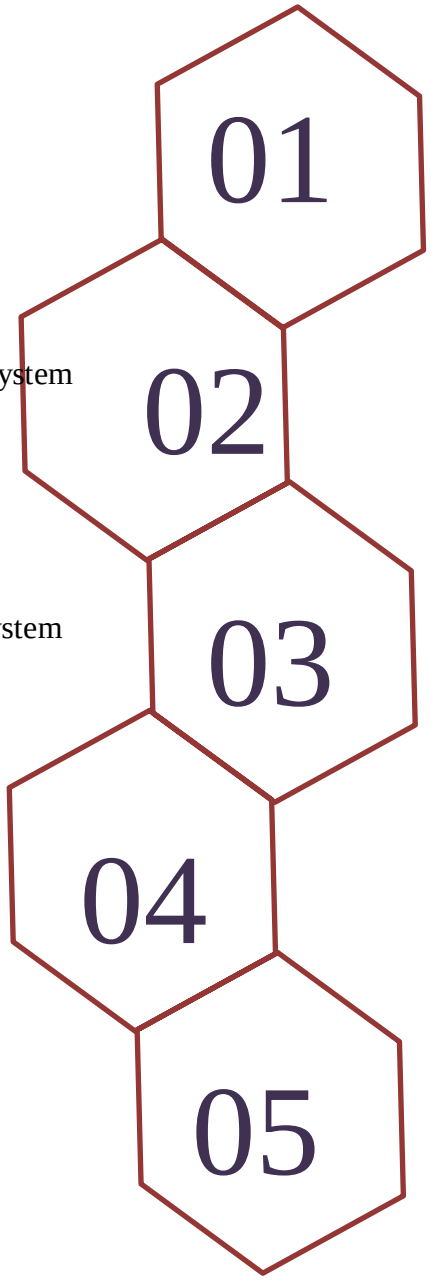

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CHAPTER 1:
BACKGROUND OF THE STUDY

Education is the fundamental right of every individual. Higher education (HE) is one of the important sources of creating, providing and transfer of knowledge in society. According to Chanakya the "*Education is the best friend. An educated person is respected everywhere. Education beats the beauty and youth*." On the similar thoughts, the Danish education reformist, who is also a professor at the University of Southern Denmark, Prof. Peter Mortimore quotes "*Education is the process through which society transmits its accumulated values, knowledge, skills, attitudes and customs from one generation to another and influences how an individual think, feels and acts.*"

The National Education Policy 2019 envisions an India-centred education system that contributes directly to transforming our nation sustainably. Education is free and compulsory for students in the age group of six to fourteen years by law in India as a Fundamental Right in such a manner as the State may, by law, determine. However, HE is conditionally funded for some students. Education is supported by the tax reforms such as Education Cess in India.(MHRD, 2019) As education is a key priority in Denmark the main focus and priority is the high literacy rate of 99% in Denmark during the year 2007 to 2018, which is equal for both men as well as a woman in Denmark. Whereas in India, the literacy rate is 74.04% and gender parity exists. There are eight universities in Denmark, awarding bachelors, masters and doctoral degrees. Denmark education providers have a very low number of students per teacher that means teachers are not overburdened and can make proper use of their allocated time for research and intellectual development of students. Homeschooling is legal in Denmark. Thus, profound education policies and priorities have made the Danish education system as one of the top education systems in the world.

1.1 History of Higher Education System in India

India is a versatile country with diverse literature. It has a wide educational background since the era of *Guru-Shishya* culture till modern E-learning techniques. India has gone through so many changes in the educational area. The world is now aware of the fact that the oldest university of the world such as Takshashila and Nalanda, are of an Indian origin. These universities were established around 2700 years ago. Music, Ayurveda, Vedas, Philosophy, various wars related skills, commerce, astrology, etc. were the various subjects that were studied in these universities. British education policies made drastic changes in our ancient Indian education system. Over the past few decades, India has witnessed a massive growth in the number of higher and technical education institutions. Nowadays, higher academic education is the channel through which one can enter or get promoted in the government services or corporate sector.

1.2 History of Higher Education system in Denmark

Until the sixteenth century, education was the responsibility of the Roman Catholic Church. Denmark became the first European country to establish a national Lutheran Church, after the Protestant Reformation and it had a major historical influence on Danish education. State supremacy was thus accepted and promoted by the Lutherans, which resulted in an everlasting peace between the Church and the State. During the initial stages of the 20th Century, an education system was introduced in the cities and town which was known as *folkeskole* ("school of the people")at the elementary level school the *mellemskole* ("middle school") at the middle level. The ancient Latin grammar schools were replaced by *real- skoler* (lower secondary schools). (State University, 2005)

	India	Denmark
Flag		
Area	**3287263 sq km**	**42933 sq km**
Population	**121 crore**	**56L**
currency	**Indian rupee**	**Krone**
Capital	**New Delhi NRC**	**Copenhagen**
Official language	**22 official languages certified by the government**	**Danish**
Literacy rate	**74.04%**	**99%**

Table 1:- India Denmark Country Profile

Source: (India: National Portal of India, 2019) ;(Denmark: BRITANNICA, 2019)

In the past couple of years from 2017, India has introduced several regulatory policies to improve the quality of higher education in India. Government has now appointed National Testing Agency (NTA) to conduct national level examinations like NET, NEET, JEE 0(Mains), that were originally organized by Central Board of Secondary Education (CBSE). NTA will gradually relieve AICTE, IITs, IIMs and other institutions and agencies from conducting their entrance test to enable them to focus more on their core mandate and research objectives. Along with that, government granted the Institution of Eminence (IoE) status to IIT Delhi, IIT Bombay and IISc Bangalore. This will help to get into the top 10 global rankings of Universities and attract international students. The PhD qualification will be made mandatory from year 2021 for being appointed at the entry level as the Assistant Professor. The effort is being made to improve the quality of higher education. In February 2018, cabinet approved implementation of Prime Minister's Research Fellowship. The scheme is aimed at attracting the brilliant minds in the country to pursue PhD courses at Indian Institutes of Technology (IITs) and Indian Institute of Science (IISc) for carrying out research in world-class science and technology domain, with a focus on national interest. (Today, 12 education initiatives taken by the govt. in 2018 to strengthen India's education sector, 2018) All India Council for Technical Education (AICTE) has put in place a multi- faceted approach to update the technical know-how and thus greater employability of engineering students. (India Today, 2019).

1.3 Government Schemes for higher education in India

1. **Indian Central Sector Scheme of Scholarship for College and University Students:** This scholarship provides financial assistance to meritorious students from families with an annual income of less than Rs 6 lakh, to meet a part of their daily expenses while pursuing higher studies. The eligible students must score over 80 percentiles.
2. **All India Council for Technical Education Scholarships**: Under the Ministry of Human Resource Development (MHRD) Pragati is being implemented by AICTE. The scheme aims to provide assistance to girls pursuing technical education. Two girl children per family are eligible under this scholarship. The applicants which are eligible receive tuition Fee of Rs 30,000 and Rs 2,000 per month for 10

months as incidentals charges for each year.

3. **Saksham scholarship for specially-abled**: Saksham scholarship which also comes under the MHRD is available for specially-abled children to pursue technical education. Under this scheme 1,000 scholarships available to students (500 for degree and 500 for diploma). Students with disability of not less than 40 per cent and family income of not more than Rs 8 lakh per annum during the preceding financial year.
4. **Sports Scholarships – Sports Authority of India:** The scheme aims to recognize the achievements of young sports persons and their outstanding performance at the national, state and university levels. A selection committee selects the applicants on the basis of merit. Athletics, Badminton, Basketball, Boxing, Football, Gymnastics etc. are included.
5. **Post Matric Scholarship Scheme for Minorities**: This scholarship was set up to help meritorious students belonging to economically weaker sections of the minority community get better opportunities for higher education, increase their rate of attainment of higher education and enhance their employability .Scholarship will be awarded to students who have secured more than 50 per cent marks or equivalent grade in the previous final examination and the annual income of whose parents/guardians below Rs 2 lakh per annum.

1.4 How education affects human capital development

In human capital we perceive humans/ citizens as an asset which can contribute positively to the country's GDP and thus their development. Therefore, different countries are applying this strategy, that instead of focusing/investing maximum on different capitalistic instruments countries invest on their citizens by improving their skill, knowledge, experiences etc. India is trying to apply the same strategy by investing in skill development and personal development which in turn would lead to high returns when the citizens use these skills and contribute to the GDP which would lead to the development of the country. Thus, education plays an important role in the development of the human capital. This can be reflected by the HDI ranking of Denmark which was 11 in 2017 whereas India stood at 130 the same year. Though Denmark is a small country as compared to India but still it has managed to get into the top global rankings due to their skilled population which is the result of its dynamic and ever evolving higher education system and focuses on Human Capital development.

India's HDI score has constantly improved over the last decade. It has moved from 0.427 to 0.640 between 1990 and 2017. These rankings were driven by health, education, and income. But the major drive force was education. Below graph, formulated by the scores from UNDP report, shows the Human Development Index (HDI) and Education Index (EI) scores of India and Denmark from year 2000 to 2016. India's score in education index has also increased gradually but not with the rate of HDI. India moved from 0.379 in 2000 to a score of 0.556 in 2017.

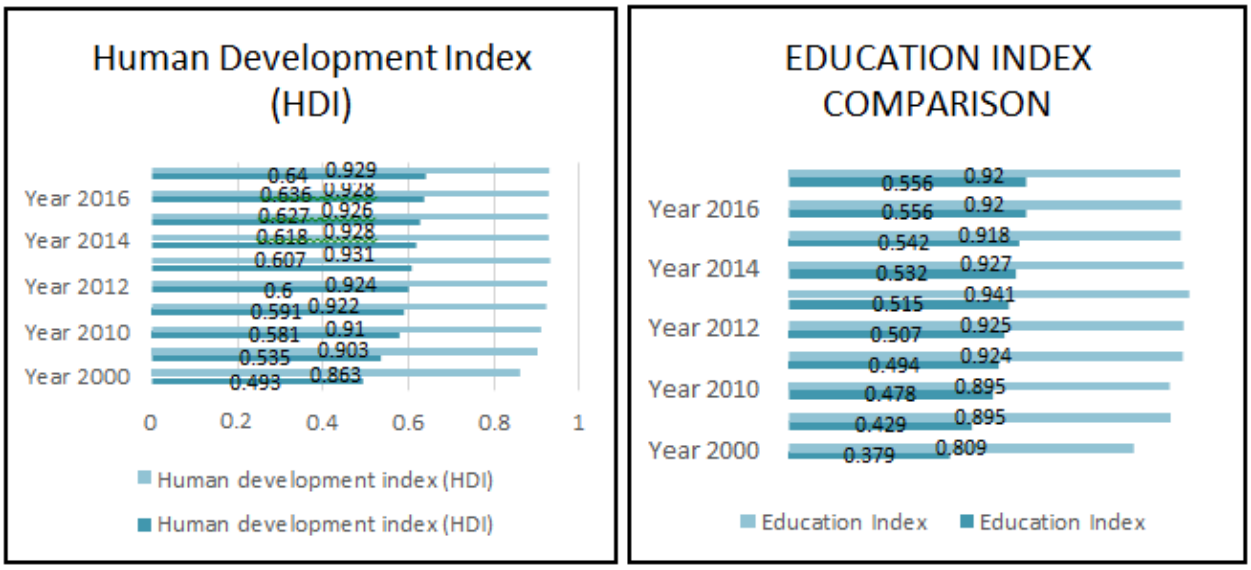

Chart 1:- India and Denmark HDI, EI Comparison Graph

Denmark's scores have been constantly higher than India, its HDI score was 0.929 in 2017 and its education index score was 0.920 in 2017. Thus, improvements need to be made in the education sector which would lead to an increase in education index rankings and further the human development index rankings of India.

1.5 Significance of the Research

The following table which shows the Human development Ratios based scores obtained by India and Denmark from the year 2000 to 2017 as per UNDP report 2018.

	Expected years of schooling (years)		Expected years of schooling, female (years)		Expected years of schooling, male (years)		Gross enrolment ratio, tertiary (% of tertiary school-age population)		Mean years of schooling (years)		Mean years of schooling, female (years)		Mean years of schooling, male (years)	
Year	**IND**	**DEN**	**IND**	**DEN**	**IND**	**DEN**	**IND**	**DEN**	**IND**	**DEN**	**IND**	**DEN**	**IND**	**DEN**
2000	**0.379**	**0.809**	**8.3**	**16.2**	**9.3**	**15.7**	**10**	**57**	**4.4**	**10.7**	**3.2**	**11.2**	**6.2**	**11**
2005	**0.429**	**0.895**	**9.7**	**16.9**	**10.2**	**16.3**	**11**	**80**	**4.8**	**12.8**	**2.9**	**12.9**	**6.6**	**12.7**
2010	**0.478**	**0.895**	**10.8**	**16.9**	**11**	**16.3**	**18**	**74**	**5.4**	**12.7**	**3.6**	**12.8**	**7.2**	**12.7**
2011	**0.494**	**0.924**	**11.3**	**18.4**	**11.4**	**17.8**	**23**	**77**	**5.4**	**12.7**	**3.9**	**12.8**	**7.4**	**12.6**
2012	**0.507**	**0.925**	**11.5**	**18.7**	**11.3**	**18**	**24**	**79**	**5.6**	**12.8**	**4.2**	**12.9**	**7.6**	**12.6**
2013	**0.515**	**0.941**	**11.6**	**19.1**	**11.3**	**18.5**	**24**	**81**	**5.8**	**13.2**	**4.5**	**13.4**	**7.8**	**13.1**
2014	**0.532**	**0.927**	**11.9**	**19.1**	**11.6**	**18.3**	**26**	**81**	**6.1**	**12.8**	**4.8**	**12.7**	**8**	**12.9**
2015	**0.542**	**0.918**	**12**	**19.2**	**11.6**	**18.4**	**27**	**82**	**6.3**	**12.5**	**4.8**	**12.7**	**8.2**	**12.4**
2016	**0.556**	**0.92**	**12.3**	**19.1**	**11.9**	**18.4**	**27**	**81**	**6.4**	**12.6**	**4.8**	**12.7**	**8.2**	**12.4**
2017	**0.556**	**0.92**	**12.3**	**19.1**	**11.9**	**18.4**	**..**	**..**	**6.4**	**12.6**	**4.8**	**12.7**	**8.2**	**12.4**

Table 2:- Human Development Ratios

In this research, we study the Human Capital Development through HE in India and Denmark with lessons for India. Expected years of Tertiary Education in India is low as compared to Denmark. But, on the other hand, it is continuously increasing throughout the years from 2000 (0.379) to 2017 (0.556) in India. And in the case of Denmark, it increased from 0.809 in the year 2000 to 0.92 in 2017. The same trend can be observed when Expected years of tertiary education is calculated separately for male as well as female in case of both India and Denmark. Gross Enrolment Ratio in India is low as compared to Denmark, But, on the other hand, it is continuously increasing throughout the years from 2000 (10) to 2016 (27) in India. And in the case of Denmark, it increased from 57 in the year 2000 to 81 in 2016.The mean years of tertiary education in India is low as compared to Denmark. But, on the other hand, it is continuously increasing throughout the years from 2000 (4.4) to 2017 (6.4) in India. And in the case of Denmark, it increased from 10.7 in the year 2000 to 12.6 in 2017. The same trend can be observed when mean years of tertiary education is calculated separately for male as well as female in case of both India and Denmark.

1.6 Statement of Research Problem

The research problem with respect to the HE system is grouped as;

1. **Measurement of Availability of the Resources:** For a well-performing education system, the availability of resources is important; it may be from the government or private source. In India, there are problems with respect to barriers in choice, percentage share of total GDP for HE, government expenditure per student, low coverage lifelong learning program, overpopulation, minimal financial support, etc.
2. **Comparison of Policy Environment:** India lacks behind in providing the best policy environment for tertiary institutions to operate. There are issues in the ethical approach, language barrier, and gap due to social factors and government policies in the education sector.
3. **National and International Research Connectivity:** Connectivity acts as a catalyst to facilitate technological change and economic growth. International connectivity is particularly crucial for developing countries. However, India has a wide skill gap, lack of industry-academic linkage, knowledge transfer and research culture along with limited global exposure resulting in a lack of employability and a lower number of international students.
4. **Analysis of the overall output:** India faces a dire necessity of improvement in the quality of HE, life skill development, vocational curriculum development, entrepreneurship development, raising the employment opportunity and employability of graduates. India has significant scope for improvement in the HE system to develop its human capital. There are several aspects where India can learn from the Danish education system and implement new reforms. We conduct the study of the problems in the Indian HE system in the light of the Danish HE system.

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1.7 Objective of the Study

1 To compare the process of higher education in Denmark and India
2 To study the development of human capital through higher education in Denmark and India
3 To study the problems faced by the Indian higher education system in the light of the Danish education system
4 To suggest measures and reforms for the development of human capital through higher education for India

1.8 Research Methodology

This research supports the Qualitative approach which allows the researcher to collect information by allowing in-depth study of issues and thereby following a less structured format with fewer respondents than quantitative methods. Quota sampling method was adopted for this research study. July 2019 to November 2019 was the duration of the study. The study is based on secondary data as well as primary data collected by the Questionnaire. The secondary data was collected from various sources throughout the period of this study. Based on are view of literature variables were finalized for this research. After verification as to the completeness of the collected questionnaire, 100 samples were finalized from 163 responses. The data corresponding to the values in the Lickert Scale was entered for each statement in the questionnaire. The statistical analytical tools applied include 1) Reliability analysis,2) Percentage Score analysis, 3) Ranking Score Analysis, 4) Correlation analysis, 5) ANOVA and 6) Average Score Analysis. The Study is limited to Time, Cost and Scope in analyzing the data. The major limitation is depending on secondary data as to the HE system of Denmark where in the case of India we could collect primary data too.

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CHAPTER 2:
CHANGING TRENDS IN DANISH & INDIAN HIGHER EDUCATION SYSTEM

In this Chapter Review of Literature is collected regarding the problems faced by the Indian Education system and the best practices in Denmark's HE system. The following table shows the scores obtained by India and Denmark from the year 2012 to 2019 as per the U21 report which clearly indicates the dire necessity to focus on HE policy amendments:

Score	Year 2019		Year 2018		Year 2017		Year 2016		Year 2015		Year 2014		Year 2013		Year 2012	
	IND	DEN	IND	DEN	IND	DEN	IND	DEN	IND	DEN	IND	DEN	IND	DEN	IND	DEN
Resources	42	93.7	42.4	97.1	44.6	98.2	42.1	100	41	100	41	100	41	100	23	97
Envrironemnt	70.5	78.9	65.3	79	65.3	81.2	71.8	80.3	68	81	70	83	71	83	69	81
Connectivity	25.9	84.7	24.3	81.5	22.8	85.2	24.6	88.1	24	87	24	90	16	71	16	64
Output	21.9	64.9	20.5	62.9	19.2	62.4	19.1	62.9	20	62	18	56	18	55	16	55
Overall	38.8	82.5	36.8	81.7	36.7	83.5	38	84.8	38	85	36.8	82.9	36.3	79.8	34	80

Table 3:- U21 Report Score Analysis
Source: Universitas 21, 2019

2.0 Availability of Resources

The current Population of India is 121.08 Crores and that of Denmark is 5.80 million. Increasing the population unfavorably affects the way of human capital in developing nations like India.(CSO, 2011)(MEIA:Statistics Denmark , 2018). Percentage of GDP measures the quality of Infrastructure i.e. public expenditure on the infrastructure level. Improvement in basic infrastructure is not enough considering the pace of time. Whereas, Denmark is the most sophisticated nation in terms of infrastructure.(Sreeradha D Basu, 2019). It is really a matter of concern in Indian HE that only 1 institution out of 5 has so far been accredited by NAAC. The Danish Accreditation institution and the accreditation council look forward to accredit the Higher Educational Institutions. In Denmark accreditation takes place including students into accrediting process and the council fixes surprise timings when the accreditation process takes place. (MHRD, Govt. of India , 2016) (MHES, 2017). The quality of teaching learning process depends on the availability of study tools such as Smart Classrooms, Internet browsing, etc. In India, many a times the training given to teachers is insufficient. In Denmark, teachers pre-service training programs vary with respect to content and duration depending on the level of education. A Teacher must have a qualification of Ph.D. level, if they wish to enroll for a full-time position in the university sector from the year 2021.(M.S.Sodha, 18th February, 2018). In India, Government expenditure per student has been decreasing continuously over the past years. The expenditure per student during 2013 was 49.18 of the total GDP per Capita. Therefore, there is a need for high amount of investment. Whereas, the tuition fees for the Danish students for Denmark citizens are free of cost. The students enrolled in HE courses get special monthly grants in Denmark. Finance in Denmark considers the grants and loan to 18-year students without Interest chargeable and payable only after 7 years to 14 years.(MHRD, Govt. of India, 2019)(The World Bank, 2017)

2.1 Comparison of Policy Environment

The choice of an individual towards his/her career can be influenced by external factors. In some parts of India, choices of an individual towards his/her career can be influenced through social factors like choices for women are very less due to the conservative mindset of family, casteism in society especially in rural areas. In Denmark, the circumstances arising while selecting a particular course are way too different from India. Danes tend to choose the HE area as per their likes, interest area, etc. which results in a greater workforce having dedication and interest in their work. (Jens Peter Thomsen, 2013). In India, the concept of lifelong learning has not been properly implemented and is very slow. Draft of NEP 2019 also places importance to promote adult and lifelong learning in India. According to Denmark's strategy for lifelong learning report to the European Commission in April 2007, the Danish government had framed certain policy where every citizen participation and adult education and continuing training has given importance.(Uttam, 2019). Many students' despite of having intelligence suffer due to a lack of understanding of the English language and also lose a lot of job opportunities. Denmark's HE offers programs in various languages. The choice of language differs from institute to institute. Institutes offer courses in English as well as various foreign languages like German, French, etc. Our ethical crisis is arguably larger than our financial crisis. India has such a wide knowledge and rich spiritual heritage but it is a sad reality that we are forgetful of this treasure. In Denmark mostly in schools they subtly and gradually mix children of different strengths and weaknesses together it helps students to students to see that everyone has positive qualities and to support each other in their efforts reach the next level which helps in ethical qualities like collaboration, teamwork, and respect. Students are taught with a view of inculcating an ethical approach in there learning. (Alexander, 09.08.2016).

2.2 National and International Research Connectivity

Discrimination on the basis of social factors like region, religion, caste, race and gender is mostly seen in the underdeveloped and undeveloped regions in India. The Denmark education system doesn't create discrimination on the basis of such social factors in the field of education. The Indian academic structure focuses more on conceptual study rather than a practical approach. The Denmark institute offers students the chance of working in industry practically together while taking education. So, the universities are allowed to collaborate with others or outside institutions which leads to knowledge transfer. A substantial amount is invested by Denmark from public resources on education and priorities funding for meeting local needs. In India apart from curriculum-based teachings research culture has to be inculcated. Danish students get the opportunity of having a qualified job according to their qualifications; they acquire more global exposure from their HE stages as per their selected courses. The use of technology in Indian education system is comparatively low. The Danish system adopted the new strategy for education and IT by giving global exposure to Students a particular benchmark is set to cope up with the standard of Global education. The difference between actual potential and the real application causes a skill gap. This results in a poor quality of education. There is a mismatch between actual qualifications and jobs in India. But the Danish way of education says vocational training base given to the students will let them set their goals according to their interest area. The rate of an international student coming in India to take HE is very low compared to other countries; this is because of low standards of HE provided, less practical knowledge and high rate of capital needed. The standard of HE in Denmark is remarkable and it is available at low cost but with better opportunities compared to India. The rate of an international student coming to Denmark is almost 55% of total international student in the globe whereas in India it is just 1%. (India Today, 21.09.18).

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2.3 Analysis of Overall Output

In India, the vocational education is add-on-course on graduation level. In Denmark, students can enroll themselves in VET courses immediately after completion of their basic schooling. VET programs enable the students to get practical training as per their interest areas. In India, life skill development is taking place informally where there is no such certification is given to an individual about his particular skill. Danish system focuses on the overall development of a student, including improvement in his outcome of communication skills, self-confidence and other life skills. The majority of the top business schools in India offer entrepreneurship education with tailored elective courses to make overall development and multi-disciplinary approach in the students. (Researchgate, 2014)India being a populated country, jobs and opportunities for employment to educated individuals are in shortfall. The society is attacked by the term overeducated workforce. On the other hand, the Danish Ministry of Employment focuses on the factors falling under the labor market criteria. (Kaul, 2006)

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CHAPTER 3:
COMPARATIVE STUDY OF INDO – DANISH HIGHER EDUCATION SYSTEM

3.1. Reliability Analysis

Using SPSS, reliability analysis is done and is interpreted based on the following value range:

Reliability	**Interpretation**
< 0	Poor agreement
0.0 – 0.20	Slight agreement
0.21 – 0.40	Fair agreement
0.41 – 0.60	Moderate agreement
0.61 – 0.80	Substantial agreement
0.81 – 1.00	**Almost perfect agreement**

Case Processing Summary

		N	%
Cases	Valid	100	100.0
	Excluded	0	.0
	Total	100	100.0

a. List wise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.776	.814	28

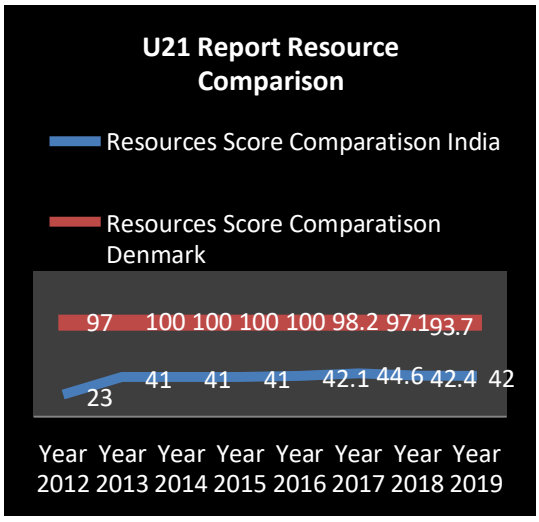
Table 4 Reliability Analysis Test

Source: Primary Data

The result of the Reliability analysis is = 0.814 (Almost perfect agreement)

3.2. Research Problem 1: To measure the resources and its availability in India

This problem is studied with respect to the identified variables such as: Population (RV01), Proper infrastructure (RV02), Institutional accreditation (RV03), Measures of quality of teaching learning process (RV04), GER (RV05),



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STR (RV06), Financing HE (RV07), Expenditure per student (RV08) and Contribution of total GDP in HE (RV09).

From the analysis of the U21 report, the comparison of India and Denmark scores can be depicted as given in the chart. We can comment that: **(1) Infrastructure:** Indian system lacking behind in case of the ranking of infrastructural policies because there is less Uniformity of quality infrastructure in every part of the country. Danish system has particularly planned, well-developed equipment utilizing the resources of infrastructure as a whole. Such circumstances lead to a Higher score of Infrastructure in Denmark. In terms of resource, India ranks 40th whereas Denmark ranks 4th with a score of 93.7**(2) Quality of teaching learning process:** Denmark practices low STR to promote quality education. Focusing students' abilities could be achieved along with a high quality of teaching. Indian Education lacks in maintaining a proper STR, which restricts a teacher to groom a student. That further sacrifices the quality of teaching learning. In terms of resource, India ranks 40th whereas Denmark ranks 4th with a score of 93.7**(3) Cost of education:** Danish system offer free education in terms of tuition fees that ultimately gives chance to increased GER. On the other hand, the Indian system falls behind when it comes to maintaining the cost of education low. In terms of resource, India ranks 40th whereas Denmark ranks 4th with a score of 93.7

3.2.1 Percentage analysis:

Figure 1: RV 02

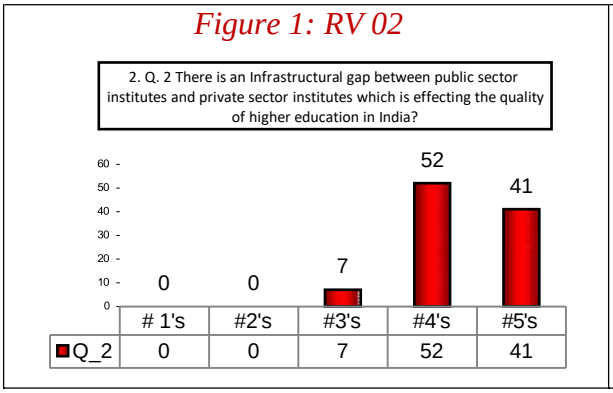
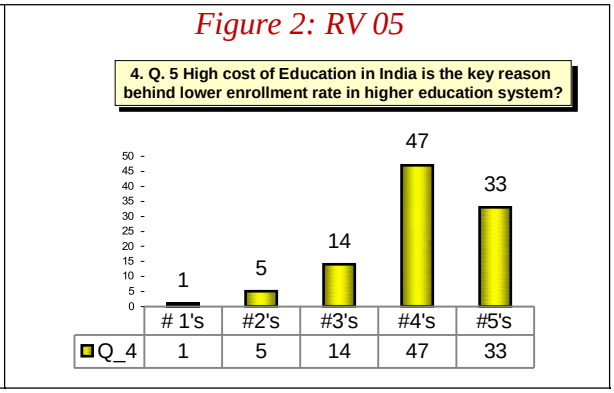


Figure 2: RV 05



Source: Primary Data

From the above percentage analysis, we found that:

- Respondents gave the highest opinion towards RV02 (Infrastructural development) followed by RV 05 (Gross Enrollment Ratio).
- RV02 (Infrastructural Development): 93% of the respondents opined that there is an infrastructural gap which is affecting HE in India.
- RV 05 (Gross Enrollment Ratio): 80% of the respondents felt that the High cost of Education in India is the key reason behind the lower enrollment rate in the HE system.

3.2.2 Ranking analysis and Correlation Analysis

Correlation analysis is a method of statistical evaluation used to study the strength of a relationship between two, numerically measured, continuous variables. This particular type of analysis is useful when a researcher wants to establish if there are possible connections between variables.

Q. 4 Rank the following measures to improve the quality of teaching learning process in Indian higher education system.

Status	**EL**	**TP**	**PL**	**MS**	**IM**	**Age**	**EL**	**TP**	**PL**	**MS**	**IM**	**EQ**	**EL**	**TP**	**PL**	**MS**	**IM**
Rank 1	36	12	31	15	15	**Rank 1**	36	12	31	15	15	**Rank 1**	36	12	31	15	15
Teach	7	0	8	3	4	Blw 20	4	2	5	4	3	UG	7	0	8	3	4
Stud	2	2	4	2	3	20-30	4	0	4	2	1	G	2	2	4	2	3
BusCl	13	5	9	6	5	30-40	9	3	9	3	5	PG	13	5	9	6	5
SrvCl	4	2	6	2	1	40-50	11	2	8	4	2	PhD	4	2	6	2	1
Ots	10	3	4	2	2	50 Abv	8	5	5	2	4	Prof	10	3	4	2	2

Table 5 Ranking of Quality of Teaching Learning Process

Source: Primary Data

EL: E-learning, TP: Third party assessment of teachers, PL: Practical learning, MS: Massive Open Online Courses, IM: Individual mentor.

From the ranking analysis, it is found that E-Learning is ranked 1st which is followed by Practical learning as a required improvement measure in the Indian HE system. Business Class and Others show the highest level of demand for E-Learning and Practical Whereas, Post Graduates and Professionals also suggest a great demand for E-Learning. Respondents in the age group between 30 to 40 and 40 to 50 years have indicated the necessity of the E- Learning process.

Particulars	EL	TPA	PL	MOOCs	IM
E-Learning (EL)	1				
Third party assessment of Teachers (TPA)	0.403493	1			
Practical Learning (PL)	0.487886	0.443398106	1		
Massive Open Online Courses (MOOCs)	0.236584	0.276484923	0.560121	1	
Individual Mentors (IM)	0.069808	0.245828387	0.531717	0.544327	1

Table 6 Correlation Matrix of Measures to improve quality of teaching learning process

Source: Primary Data

From the above Correlation Matrix table, we found that practical learning and MOOC's are positively correlated to each other (0.560120834). Also, MOOC's and individual mentors are positively correlated to each other (0.544326786)

3.2.3 ANOVA

Analysis of variance (ANOVA) is a statistical technique that is used to check if the means of two or more groups are significantly different from each other.

Null Hypothesis: The Status/Age/Educational qualifications of the respondents do not influence their perception towards measuring the resources and their availability in India.

The Table below describes the results of ANOVA in terms of independent variables, sources of variations, degrees of freedom, the sum of squares, mean sum of squares, F value, p-value and its significance.

Source of Variation (Status of the respondent)	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	195.34787	8	24.41848	24.75447	1.37595E-34	1.948789
Within Groups	877.9202	890	0.9864272			
Total	1073.2681	898				
Source of Variation (Age of the respondent)	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	269.86043	8	33.73255	37.26150	3.55048E-51	1.948789
Within Groups	805.7102	890	0.9052924			
Total	1075.5706	898				
Source of Variation (Educational Qualification)	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	339.52222	8	42.44027	46.48630	1.26034E-62	1.948778
Within Groups	813.45	891	0.912963			
Total	1152.9722	899				

Table 7 Availability of Resources and Independent Variables

Source: Primary Data *S – Significant at 5% level (p value<= 0.05); NS – Not Significant*

- It is found from the table above that the null hypothesis is rejected in all cases, which establishes the significance of the studied variables. It is concluded that the Status/Age/Educational qualifications of the respondents significantly influence their perception towards the study factor as to measuring the resources and its availability in India.

3.3. *Research Problem 2: To compare the policy environment under which the higher education institutions operate*

This problem is studied with respect to the identified variables such as: Barrier's in choice (EV01), Lifelong learning (EV02), Language barrier (EV03) and Ethical Approach (EV04)As per the U21 report, the chart is drawn and we found the reasons as **(1) Choices:** In India, choices of an individual are influenced by various factors like Expenditure on Education, Home-Institute distance, Physical disability, Political instability and infrastructure. In Denmark, such social factors do not act as a barrier of choice of an individual. This is the main reason for India's low ranking as compared to Denmark**. (2) Lifelong learning:** The process of developing the policy framework of lifelong learning in India is very slow and used as an umbrella term to cover basic literacy, post-literacy and continuing education. In India, the concept of Lifelong Education and Awareness Program (LEAP) is not seen as an overarching framework of learning, the main reason being the absence of interlinkages among different sectors of education and recognition and validation of prior learning. The Danish government had framed certain policies where every citizen participation and adult education and continuing training has given importance. This is the main reason for India's low ranking as compared to Denmark**. (3) Language Barrier:** Most of HE in India is being taught in the English Language which acts as a barrier for many students. Denmark's, HE offers programs in various languages differing from institute to institute. This enables the students to choose from different languages like Danish, German, French, etc. and ensures that language does not act as a barrier for any student. This is the main reason for India's low ranking as compared to Denmark. **(4) Ethical approach:** It is difficult to find People with ethical flavors because India has widespread knowledge and rich spiritual heritage but it is a sad reality that we are forgetful of this treasure. In the Indian HE system, specifically higher technical education, the importance of values and ethics has been lost. In Denmark, programs like 'CAT-kit' and 'My Circle' help students to improve emotional awareness and increase their understanding of each other. This is the main reason for India's low ranking

3.3.1 Percentage analysis:

Figure 3: EV 02

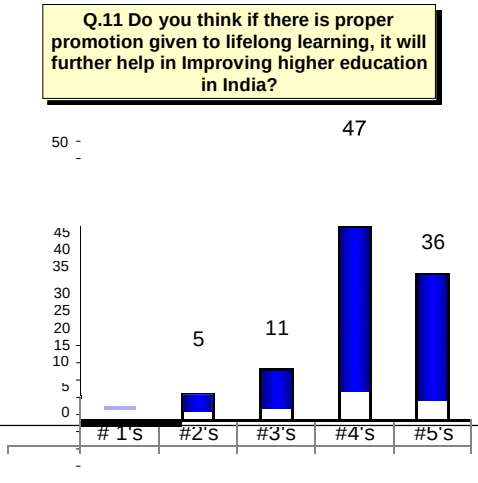
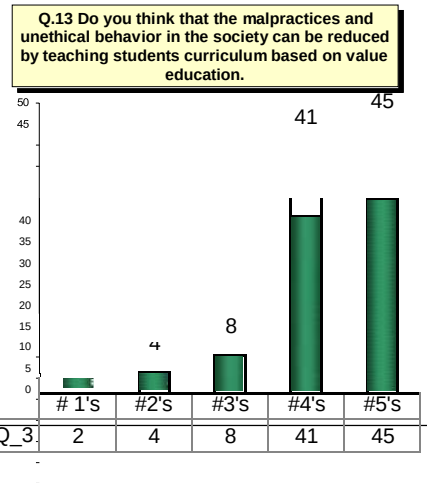
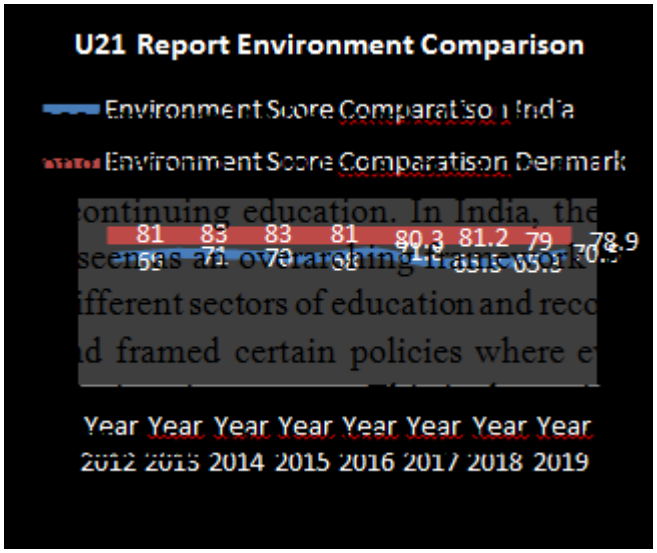


Figure 4: EV 04



From the above percentage analysis, we found that:

- Respondents gave the highest opinion towards EV 04 (Ethical Approach) followed by EV 02 (Lifelong learning).
- EV 04 (Ethical Approach): 86% of the respondents opined that malpractices and unethical behavior can be reduced in India by teaching students value education.
- EV 02 (Lifelong learning): 83% of the respondents felt that Lifelong learning should be promoted on a larger scale to improve HE system in India.



3.3.2 Ranking analysis and Correlation Analysis

Status	EE	HID	PD	PI	INFRA	AGE	EE	HID	PD	PI	INFRA	EQ	EE	HID	PD	PI	INFRA
Rank 1	39	15	12	20	18	**Rank 1**	**39**	**15**	**12**	**20**	**18**	**Rank 1**	**39**	**15**	**12**	**20**	**18**
Teach	8	2	1	4	5	Blw 20	6	1	3	4	1	UG	10	4	6	7	3
Stud	8	3	4	5	3	20-30	13	7	3	7	6	G	18	5	1	10	9
BusCl	11	5	3	5	6	30-40	7	2	1	4	6	PG	3	1	2	2	2
SrvCl	2	3	2	4	1	40-50	10	4	4	5	5	PhD	3	0	0	0	2
Ots	10	2	2	2	3	50 Abv	3	1	1	0	0	Prof	5	5	3	1	2

Table 8 Ranking of Barriers in Choices for Higher Education

Source: Primary Data

EE: Expenditure on education, HID: Home-institute distance, PD: Physical disability, PI: political instability, INFRA: Infrastructure.

Q.10 Rank the following factors responsible for barriers in choices against HE.

Particulars	EE	HID	PD	PI	INFRA
Expenditure on education (EE)	1				
Home-Institution Distance (HID)	0.57618	1			
Physical Disability (PD)	0.132549	0.264785	1		
Political Instability (PI)	0.191252	0.266339	0.260304	1	
Infrastructure (INFRA)	0.347523	0.282915	0.226067	0.568102	1

Table 9 Correlation matrix of factors responsible for barriers in choices against HE
Source: Primary Data

From the above analysis, we found that Expenditure on education and Home-Institution distance are positively correlated (0.576180064). Also, Political instability and infrastructure are positively correlated to each other (0.568101891). From Ranking analysis, it is found that Education Expenditure is ranked 1st, followed by Political instability as a factor responsible for the barrier in choice, in the Indian HE system. Business Class and Others show the highest level of demand for Education Expenditure and Political instability. Respondents in the age group between 20 to 30 and 40 to 50 years have indicated the necessity of the E- Learning process. Whereas, Under Graduates and Graduates also suggest that Education Expenditure results in barriers in choice in India.

3.3.3 ANOVA:

 Null Hypothesis: The Status/Age/Educational qualifications of the respondent's do not influence their perception towards the study factor as to policy environment in India.

Source of Variation (Educational Qualification)	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	145.112	4	36.278	31.9377	1.08666E-23	2.389948
Within Groups	562.27	495	1.135899			
Total	707.382	499				
Source of Variation (Age of the respondent)	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	204.548	4	51.137	51.65248	2.36943E-36	2.389948
Within Groups	490.06	495	0.99002			
Total	694.608	499				
Source of Variation (Educational Qualification)	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	262.228	4	65.557	65.63921	1.57737E-44	2.389948
Within Groups	494.38	495	0.998747			
Total	756.608	499				

Table 10 Comparison of Policy Environment and Independent Variables
Source: Primary Data *S – Significant at 5% level (p value<= 0.05); NS – Not Significant*

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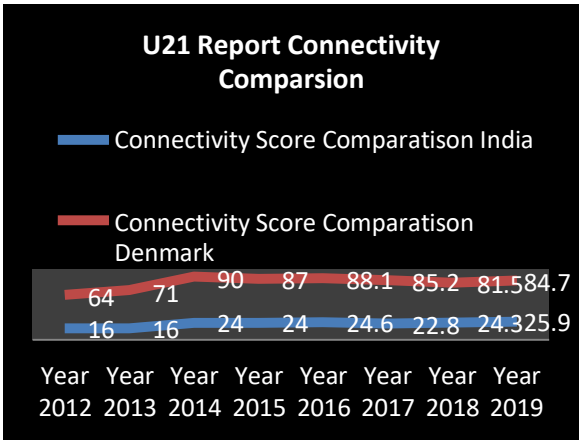
 It is found from the table above that the null hypothesis is rejected in all cases, which establishes the significance of the studied variables. It is concluded that the Status/Age/Educational qualifications of the respondents significantly influence their perception towards the policy environment in India.

3.4 Research Problem 3: To evaluate the national and international connectivity of higher education system in India.

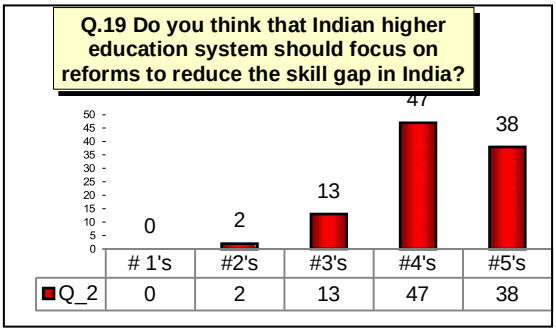
This problem is studied with the identified variables such as: Social Barriers (CV01), Government reforms in HCD (CV02), GPI (CV03), HDI (CV04), Education sector government policy (CV05), Skill gap (CV06), Knowledge transfer (CV07), Industry academy linkage (CV08), Research culture (CV09), Migration role in HCD (CV10), International students (CV11), International research linkage (CV12) and Global exposure(CV13). From the U21 report analysis we can draw the graph and comment on the reasons for the parity **(1) Skill gap:** In India, the less practical study and more theoretical study are creating a skill gap. There is a need for including the practical knowledge of subjects in the curriculum. **(2) Government reform in HCD:** In Denmark, there is only one policy framing body OECD

which focus on making reform but on the other hand there are many government institutions in India which focus on policymaking this is creating hurdle as more institutions more time taking in the process of frameworks of policy. **(3) Social barrier:** There are many social barriers in India which are affecting the HE system. The discrimination-free environment will help to



create the quality of higher education in India. **(4) Gender parity index:** there are still differences in gender in many of the states in India which is affecting the literacy rate in the country. Denmark is ranked high in the GPI index there are an equal rate of man and women contributing in HE sectors.

3.4.1 Percentage Analysi



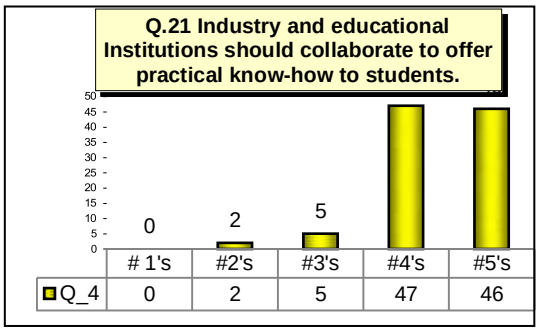


Figure 5: CV06 **Figure 6:CV06**

Source: Primary Data

From the above percentage analysis, we found that:

- Respondents gave the highest opinion towards CV 08 (Industry academy linkage) followed by CV 6 (Skill Gap).
- CV 08 (Industry academy linkage): 93% of the respondents opined that Industry-Academic linkage will provide greater exposure HE students in India.
- CV 6 (Skill Gap): 85% of the respondents felt that Indian HE System should focus on reforms to reduce the skill gap in India.

3.4.2 Correlation and Ranking analysis:

Q.14 Rank the following social factors acting as the barriers in Indian Higher education system.

Status	Gender	Caste	Race	Religion	Age	Gender	Caste	Race	Religion	Religion	EQ	Gender	Caste	Race	Religion
Rank 1	27	23	16	12	Rank 1	27	23	16	12	12	Rank 1	27	23	16	12
Teach	4	3	3	3	Blw 20	4	3	2	3	4	UG	6	4	4	4
Stud	5	4	3	2	20-30	7	10	6	5	2	Grad	8	11	6	5
BusCl	4	7	4	4	30-40	4	5	3	3	4	PG	5	7	5	3
SrvCl	4	6	3	3	40-50	9	5	5	1	2	PhD	2	0	1	0
Ots	10	3	3	0	50 Abv	3	0	0	0	0	Prof	6	1	0	0

Table 11 Ranking of Social Factors

Source: Primary Data

- Gender Discrimination is ranked 1st, followed by Caste Discrimination as a social factor responsible for the barrier in choice, in the Indian higher education system.
- Business Class and Others show the highest response for Gender Discrimination and Caste Discrimination.

- Respondents in the age group between 20 to 30 and 40 to 50 years have responded gaps due to Gender Discrimination and Caste Discrimination.
- Whereas, Graduates have also suggested that Gender Discrimination and Caste Discrimination acts as social barriers in choice in India.

Q.14 Rank the following social factors acting as the barriers in Indian HE system.

Particulars	Gender	Caste	Race	Religion	Region
Gender	1				
Caste	0.452579	1			
Race	0.260303	0.344177	1		
Religion	0.14621	0.453305	0.447074	1	
Region	-0.03641	0.136123	0.198711	0.448292	1

Table 12 Correlation matrix of social factors acting as the barriers in Indian HE system

Source: Primary Data

- From the above analysis, we found that caste and religion are positively correlated to each (0.45330505). Also, gender and caste are positively correlated to each other (0.452578548)

Q.15 Rank the following reforms where there is a major scope for improvement in Indian Higher Education system.

Status	FS	INFRA	QT	D and T	PE	Age	FS	INFRA	QT	D and T	PE	EQ	FS	INFRA	QT	D and T	PE
Rank 1	39	22	32	22	19	**Rank 1**	39	22	32	22	19	**Rank 1**	39	22	32	22	19
Teach	7	5	9	5	5	Blw 20	7	5	9	5	5	UG	8	5	9	5	5
Stud	5	3	5	4	3	20-30	12	8	11	8	6	G	16	11	16	13	9
BusCl	10	8	8	6	5	30-40	8	5	5	6	4	PG	6	5	6	4	5
SrvCl	6	3	5	5	3	40-50	9	4	7	3	4	PhD	2	1	1	0	0
Ots	11	3	5	2	3	50 Abv	3	0	0	0	0	Prof	7	0	0	0	0

Table 13 Ranking of major scope for improvement in Indian higher education system

Source: Primary Data

FS: Fee structure, INFRA: Infrastructure, QT: Quality teaching, D and T: Development and training to low quality institutes, PE: Promoting enrollment rate in Higher Education System.

- Fee Structure is ranked 1st, followed by Quality Teaching as an improvement measure required in the Indian higher education system.
- Business Class and Others show the highest level of demand for Fee Structure and Quality Teaching.
- Respondents in the age group between 20 to 30 years have indicated the necessity of improvement in Fee Structure and Quality Teaching.
- Thus, Graduates also suggest that improvement in Fee Structure and Quality Teaching are essential development of the higher education system in India.

Q.15 Rank the following reforms where there is a major scope for improvement in Indian HE system.

Particulars	FS	INFRA	QT	D and T	PE
Fee structure (FS)	1				
Infrastructure (INFRA)	0.636618	1			
Quality Teaching (QT)	0.528844	0.720576	1		
Development and training to low quality institutes (D and T)	0.526194	0.632137	0.692498	1	
Promoting enrollment rate in Higher Education System (PE)	0.282801	0.481965	0.681296	0.673844	1

Table 14 Correlation matrix of reforms where there is a major scope for improvement in Indian HE System

Source: Primary Data

- From the above analysis, we found that infrastructure and quality teaching are positively correlated to each other (0.720576358). Also, quality teaching and development and training to low-quality institutes are positively correlated to each other (0.692498184).

Q.16 Rank Improvement measures to be made in the Indian Higher education system to reduce the gender inequality gap

Status	PGB	SOW	FFG	FC	SGC	Age	PGB	SOW	FFG	FC	SGC	EQ	PGB	SOW	FFG	FC	SGC
Rank 1	36	35	25	23	21	**Rank 1**	36	35	25	23	21	**Rank 1**	36	35	25	23	21
Teach	7	8	8	6	6	Blw 20	7	7	7	4	5	UG	8	8	8	6	6
Stud	6	7	4	4	4	20-30	11	16	7	8	7	G	14	21	11	10	6
BusCl	8	11	5	4	2	30-40	7	7	6	6	4	PG	6	5	6	7	7
SrvCl	5	5	5	5	5	40-50	8	5	5	5	5	PhD	1	1	0	0	2
Ots	10	4	3	4	4	50 Abv	3	0	0	0	0	Prof	7	0	0	0	0

Table 15 Ranking of Measures to be made in Indian higher education system

Source: Primary Data

PGB: Proper Gender Budgeting, SOW: Safety of women, FFG: Free-ship for girls in higher education, FC: Female counselling, SGC: Separate girls college.

- Proper Gender Budgeting is ranked 1st, followed by the Safety of Women as an improvement measure required in the Indian higher education system.
- Business Class and Others show the highest level of demand for Proper Gender Budgeting and Safety of Women.
- Respondents in the age group between 20 to 30 years have indicated the necessity of improvement in Proper Gender Budgeting followed by the Safety of Women.
- Whereas, Graduates suggest that the Safety of Women is most important before Proper Gender Budgeting for the development of the higher education system in India.

Q.16 Rank Improvement measures to be made in the Indian HE system to reduce the gender inequality gap.

Particulars	PGB	SOW	FFG	FC	SGC
Proper Gender Budgeting (PGB)	1				
Safety of Womens (SOW)	0.645761	1			
Free ship for girls in Higher education (FFG)	0.552096	0.675187	1		
Female Counselling (FC)	0.436018	0.648976	0.668625	1	
Separate girls college (SGC)	-0.01042	-0.02448	0.258787	0.473738	1

Table 16 Correlation matrix for measures to be made in the Indian HE System to reduce the gender inequality gap

Source: Primary Data

- From the above analysis, we found that safety of women and free ship for girls in HE are positively correlated to each other (0.675187167). Also, free ship for girls in HE and female counseling are positively correlated to each other (0.668625421)

3.4.3 ANOVA:

- **Null Hypothesis:** The Status/Age/Educational qualifications of the respondent's do not influence their perception towards the study factor as to international research linkage.

Source of Variation (Status of the respondent)	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	129.909	9	14.43433	20.1799	2.21644E-31	1.889321
Within Groups	708.13	990	0.715283			
Total	838.039	999				
Source of Variation (Age of the respondent)	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	224.016	9	24.89067	38.74978	2.88364E-59	1.889321
Within Groups	635.92	990	0.642343			
Total	859.936	999				
Source of Variation (Educational Qualification)	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	308.464	9	34.27378	52.99738	1.35201E-78	1.889321
Within Groups	640.24	990	0.646707			
Total	948.704	999				

Table 17 International Research Connectivity and Independent Variables

Source: Primary Data S – Significant at 5% level (p value<= 0.05); NS – Not Significant

- It is found from the table above that the null hypothesis is rejected in all cases. It means the studied research problem has significance. It is concluded that there exist significant differences between the international research connectivity marked by the respondent with respect to independent factors.

3.5 Research Problem 4: To study the overall output of higher education system in India

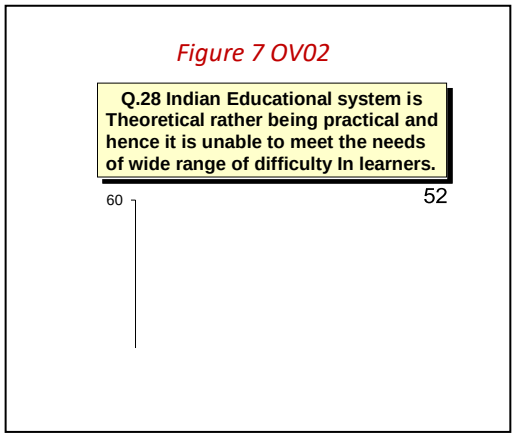
This problem is studied with the identified variables such as: Global technical know-how (OV01), Vocational aspects of Curriculum development (OV02), Life skill development (OV03), Importance of quality education (OV04), Entrepreneurship development (OV05) and Employment opportunity and Employability (OV06) From the U21 report, the following inferences are drawn.

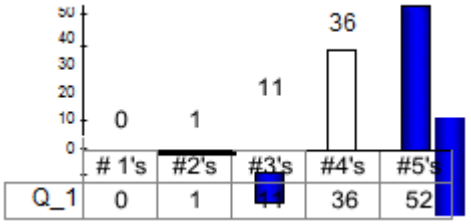
1)Inculcating hands-on learning: In India, very few courses offer internship programs due to which the practical approach of the subject is denied to the students. Therefore, they are enabled with education but disabled by practical learning. In Denmark, there is a proper industry-academic linkage. Students early on in their careers are given practical education accordingly in specific fields thus developing a much better approach with an integration of theoretical and practical knowledge. This is the reason why Denmark ranks higher in global educational rankings. **(2) Need for skill subjects:** In India, skill subjects are not part of a regular curriculum. Due to this, the students have to acquire these needed skills through add on courses or separate VET courses which not available in all institutions in India thoroughly. Whereas in Denmark VET courses are provided to the students right during secondary education. Due to this, Denmark is the home to a large skilled population. Due to this reason, India lags in the HDI rank to Denmark. **(3) Promoting EdTech:** Integration of education and technology has not taken place in India as per the global standards. Many institutions in India lack the smart class, the latest technologies in the labs, and sustainable development. Due to this, the students miss opportunities to compete on par with global students. In Denmark integration of technology at the core level has helped students in their interpersonal skills as well. Nettop software is seamlessly blurring the lines between distance learning and classroom learning in Denmark. Thus, due to these reasons, India ranks behind Denmark in UNDP rankings. (**4**) **Boosting start-ups and entrepreneurship:** In India, startups are not given proper financing due to which these startups are closed down before starting itself. A proper launchpad is not available for young entrepreneurs to experiment without the fear of loss of funds. On the contrary, Denmark has created world-class digital infrastructure along with a strong network of clusters of tech entrepreneurs which provides a strong base for young startups to prosper. This is the reason why India lacks behind demark in global rankings.

1.5.1 Percentage Analysis

From the percentage analysis we found that: OV02(Vocational aspects of curriculum development):

89% of the respondents felt that the Indian Educational system is Theoretical rather than being practical and hence it is unable to meet the needs of a wide range of difficulty in learners.





Source: Primary Data

1.5.2 Correlation and Ranking analysis:

Q.26 Rank the following Program's in India that should be upgraded with the latest global trends

Status	Encouraging Online Test	EL	LT	MS	Simulation Learning	Age	Encouraging Online Test	EL	LT	MS	Simulation Learning	EQ	Encouraging Online Test	EL	LT	MS	Simulation Learning
Rank 1	40	24	28	22	25	**Rank 1**	40	24	28	22	25	**Rank 1**	40	24	28	22	25
Teach	7	7	7	5	8	Blw 20	7	5	3	3	4	UG	5	5	8	4	5
Stud	15	10	11	8	9	20-30	10	7	10	8	7	G	23	12	14	14	15
BusCl	6	5	7	5	5	30-40	10	6	6	3	6	PG	5	2	1	3	2
SrvCl	9	2	3	4	3	40-50	11	6	8	7	8	PhD	3	3	3	3	4
Ots	3	0	0	0	0	50 Abv	2	0	1	1	0	Prof	4	5	5	1	3

Table 18 Ranking of programs to be updated with latest global trend

#

EL: E-Learning, LT: Latest technology, MS: Massive Open Online Courses.

- Encouraging online tests is ranked 1st with a large difference, followed by Simulation Learning as an improvement measure required in the Indian higher education system. Students show the highest level of demand for Encouraging online test and Latest Technology.
- Respondents in the age group between 20 to 30 years have indicated the necessity of improvement in Encouraging online tests and the Latest technology followed by the Safety of Women. Age Group 30 to 40 and 40 to 50 also suggest a need for Encouraging online tests. Whereas, Graduates suggest that Encouraging online tests and the Latest Technology are should be upgraded with latest global trends in India.

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Q.26 Rank the following Program's in India that should be upgraded with global trends.

Particulars	EOT	EL	LT	MOOC	SL
Encouraging Online Tests (EOT)	1				
E-learning (EL)	0.771162	1			
Latest Technology (LT)	0.617874	0.768989	1		
Massive Open Online Course (MOOC	0.474808	0.571994	0.774029	1	
Simulation Learning (SL)	0.377613	0.551942	0.642432	0.709786	1

Table 19 Correlation matrix of program's in India that should be upgraded with the latest global trends
Source: Primary Data

 From the above analysis, we found that the latest technology and MOOC's are positively correlated to each other (0.774028932). Also, encouraging online tests and E-learning are positively correlated to each other (0.771162474)

Q.32 Rank in Order for the reasons responsible for Unemployable fresher in India.

Status	OC	LK	LOIE	LOSS	WCC	Age	OC	LK	LOIE	LOSS	WCC	EQ	OC	LK	LOIE	LOSS	WCC
Rank 1	43	12	13	16	15	Rank 1	43	12	13	16	15	Rank 1	43	12	13	16	15
Teach	6	2	2	4	5	Blw 20	7	2	3	4	4	UG	7	3	5	4	2
Stud	8	2	3	4	3	20-30	12	4	5	5	4	G	20	5	5	7	9
BusCl	11	5	4	4	3	30-40	11	2	1	2	5	PG	9	2	1	2	3
SrvCl	6	2	3	2	2	40-50	11	4	4	5	2	PhD	3	0	0	0	0
Ots	12	1	1	2	2	50 Abv	2	0	0	0	0	Prof	4	2	2	3	1

Table 20 Ranking of reasons responsible for unemployment of freshers
Source: Primary Data *OC: Outdated curriculum, LK: Lack of Knowledge, LOIE: Lack of industrial exposure, LOSS: Lack of soft skills, WCC: Wrong career choices.*

- Outdated Curriculum is ranked 1st by maximum respondents followed by a Lack of soft skills as a prime reason for unemployable fresher, in the Indian higher education system. Business Class and Others show the highest response for the Outdated Curriculum.
- Respondents in the age group between 20 to 30, 30 to 40 and 40 to 50 years have reported the Outdated Curriculum as a factor responsible for unemployable fresher. Whereas, Graduates have also suggested that the Outdated Curriculum and Wrong career choice followed by Post Graduates responding that the Outdated Curriculum acts as a major reason responsible for unemployable fresher, in the Indian higher education system.

Q.32 Rank in Order for the reasons responsible for Unemployable freshers in India.

Particulars	OC	LOK	LOIE	LOSS	WCC
Outdated Curriculum (OC)	1				
Lack of Knowledge (LOK)	0.515837	1			
Lack of Industrial Exposure (LOIE)	0.598254	0.543957	1		
Lack of Soft Skills (LOSS)	0.387028	0.364614	0.566618	1	
Wrong Career Choices (WCC)	0.187009	0.258186	0.344545	0.668822	1

Table 21 Correlation matrix of the factors responsible for unemployable freshers

Source: Primary Data

- From the above analysis, we found that lack of soft skills and wrong career choices are positively correlated to each other (0.668821623). Also, outdated curriculum and lack of industrial exposure are positively correlated to each other (0.598253684)

3.5.3 ANOVA:

- **Null Hypothesis:** There is no significant difference between the Status/Age/Educational qualifications of the respondent's perception towards the overall output of education.

Source of Variation (Status of the respondent)	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	131.428	4	32.857	37.776316	1.36369E-27	2.3899478
Within Groups	430.54	495	0.8697778			
Total	561.968	499				
Source of Variation (Age of the respondent)	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	222.22	4	55.555	76.744133	1.30574E-50	2.3899478
Within Groups	358.33	495	0.723899			
Total	580.55	499				
Source of Variation (Independent Variable)	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	302.412	4	75.603	103.1945	7.41271E-	2.3899478

					64	
Within Groups	362.65	495	0.7326263			
Total	665.062	499				

Table 22 Overall Output and Independent Variables

Source: Primary Data S – Significant at 5% level (p value<= 0.05); NS – Not Significant

It is found from the table above that the null hypothesis is rejected in all cases. It means the studied research problem has significance. It is concluded that there exist significant differences between the overall output marked by the respondent with respect to independent factors.

Var code	Teacher	Students	Business	Service	Other	Total	Below 20	20-30	30-40	40-50	Above 50	Total	Under Graduate	Graduate	Post Graduate	PhD/Post Doctoral	Professional Qualification	Total
	20	20	20	20	20	100	17	35	23	20	5	100	23	44	19	5	9	100
RV01	3.90	4.10	4.05	3.95	3.80	3.84	4.24	3.51	4.00	3.80	4.20	3.8	4.17	3.61	3.63	4.40	4.22	3.84
RV02	4.45	4.20	4.35	4.25	4.45	4.34	4.12	4.34	4.43	4.50	4.00	4.3	4.17	4.27	4.58	4.60	4.44	4.34
RV03	4.00	4.15	3.95	3.95	4.50	4.07	4.06	4.14	4.13	3.90	4.00	4.1	4.13	4.02	3.95	4.20	4.33	4.07
RV05	3.80	4.05	4.00	4.45	4.00	4.06	4.06	4.00	4.22	4.00	4.00	4.1	4.00	4.14	3.89	3.80	4.33	4.06
RV06	3.90	3.60	3.95	4.05	4.10	3.92	3.71	3.80	3.87	4.35	4.00	3.9	3.61	3.93	3.74	4.60	4.67	3.92
RV07	2.55	2.70	2.65	3.00	3.60	2.90	2.76	2.94	3.00	2.85	2.80	2.9	2.65	3.16	2.58	3.20	2.78	2.9
RV08	4.05	4.00	3.85	4.10	4.15	4.03	3.71	4.00	4.30	4.05	4.00	4	3.91	4.18	3.79	4.20	4.00	4.03
RV09	3.80	3.90	4.05	3.70	3.85	3.86	3.76	3.80	3.91	3.95	4.00	3.9	3.83	4.00	3.47	4.20	3.89	3.86
EV02	4.00	4.30	4.20	4.15	3.95	4.12	4.18	3.77	4.22	4.50	4.40	4.1	4.22	3.93	4.00	4.60	4.78	4.12
EV03	3.50	3.80	3.80	3.55	3.95	3.72	4.06	3.54	3.91	3.40	4.20	3.7	4.00	3.64	3.58	3.20	4.00	3.72
EV04	4.10	4.35	4.05	4.30	4.35	4.23	4.18	4.14	4.35	4.25	4.40	4.2	4.22	4.23	4.05	4.20	4.67	4.23
CV04	4.15	4.05	4.35	3.95	4.10	4.12	4.06	4.00	4.22	4.10	4.80	4.1	4.00	4.02	4.32	4.20	4.44	4.12
CV05	2.05	2.05	2.75	3.40	2.75	2.96	2.94	3.00	2.96	2.95	2.80	3	2.87	2.98	3.11	2.80	2.89	2.96
CV06	4.15	4.45	4.10	4.30	4.05	4.21	4.35	4.17	4.04	4.20	4.80	4.2	4.35	4.16	4.16	4.20	4.22	4.21
CV07	4.10	4.15	4.10	4.00	4.25	4.12	3.94	4.06	4.22	4.90	4.00	4.1	4.09	4.11	4.11	3.80	4.44	4.12
CV08	4.45	4.25	4.25	4.40	4.50	4.37	4.24	4.51	4.30	4.90	4.40	4.4	4.22	4.50	4.37	3.80	4.44	4.37
CV09	4.00	4.35	4.10	4.05	4.25	4.15	4.24	3.94	4.30	4.25	4.20	4.2	4.26	4.09	3.95	4.80	4.22	4.15
CV10	4.15	3.85	4.00	4.10	4.15	4.05	4.00	4.06	4.09	4.10	3.80	4.1	3.91	4.16	4.11	3.80	3.89	4.05
CV11	3.80	4.15	4.30	3.70	4.20	4.03	4.06	3.91	4.17	4.00	4.20	4	4.17	4.00	3.79	3.40	4.67	4.03
CV12	4.05	4.25	4.15	3.70	3.80	3.99	4.12	3.86	4.22	4.00	3.40	4	4.22	3.95	3.79	3.80	4.11	3.99
CV13	4.00	4.65	4.20	4.25	4.25	4.27	4.53	4.20	4.35	4.15	4.00	4.3	4.57	4.18	4.05	4.20	4.44	4.27
OV02	4.45	4.65	4.25	4.20	4.40	4.39	4.59	4.43	4.52	4.10	4.00	4.4	4.57	4.43	4.16	4.00	4.44	4.39
OV03	4.35	4.30	4.25	4.10	4.25	4.25	4.35	4.11	4.35	4.25	4.40	4.3	4.30	4.16	4.37	3.80	4.56	4.25
OV04	4.15	4.10	4.00	4.05	4.20	4.10	4.12	4.11	4.13	4.00	4.20	4.1	4.22	4.05	4.11	3.60	4.33	4.1
OV05	4.15	4.45	4.35	4.30	4.25	4.30	4.29	4.29	4.35	4.20	4.60	4.3	4.43	4.25	3.95	4.80	4.67	4.3

Table 23 Average score analysis

Source: Primary Data

It is found from the above table that the respondents irrespective of their classification have given the highest level of perception towards the following:

- Industry-Academic Linkage (CV08): The perception of respondents towards CV08 is found high which is 4.37.
- Vocational Aspects of Curriculum Development (OV02): The perception of respondents towards OV02 is found high which is 4.39.

Whereas, from the above table we found that the respondents irrespective of their classification have given the highest level of perception towards the following:

- Education sector government policy (CV05): The perception of respondents towards CV05 is found low which is 2.90.
- Financing Higher Education (RV07): The perception of respondents towards RV07 is found low which is 2.96.

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CHAPTER 4:
LEARNINGS FOR INDIA FROM DANISH HIGHER EDUCATION

4.1 Challenges of Indian Higher education system

- ***Availability of Resources:***

1. Indian education system lacks need-based development and restructuring of infrastructural facilities as compared to global standards.
2. In India, teachers are well qualified but due to lack of additional resources and further training, the quality of the teaching-learning process is affected.
3. In a Developing country like India, the high cost of HE becomes a hurdle in the growth of the education sector. Due to the limited reach of education policies literacy rate is also affected.

- ***Comparison of Policy Environment:***

4. In India, students are constrained of their choices which causes confusion and lack of clarity among the students. It is found that education expenditure and political instability is responsible for the barriers in choices.
5. In India, the reach of lifelong learning is limited, which affects improvement in HE.
6. There is a need to increase the value of education in the curriculum so that malpractices and unethical behavior is reduced in society.

- ***National & International Research Connectivity:***

7. Diversity is a core feature of India but it is found that gender and caste discrimination widely affect the HE.
8. The government is showing very steady growth in making and renewing the policies relating to the educational sector, which is affecting the development of human capital.
9. The discriminative role of Indian society has created a huge difference in educational GPI.
10. India is losing a crucial opportunity of having skilled labors due to less VET

- ***Analysis of overall output:***

11. Less internship and workshop programs have led to weakening the industry-academic linkage which declines a practical approach.
12. India is losing a crucial opportunity of having skilled labors due to fewer VET programs.
13. Indian education emphasizes more on teaching about technology rather than teaching through technology which eventually results in a less technology developed workforce.
14. It is found that it is necessary to promote entrepreneurship cell and skill hub in HE. Very few universities offer entrepreneurship programs that support young entrepreneurs.

4.2 Lessons for Indian Higher education system – The Danish Way

1. ***Revamping infrastructure:*** There is an infrastructural gap due to lack of funds is creating hurdles in the way of improving HE. In Denmark, the policies for infrastructural development are made in accordance with the Global policies which make the educational system to improve its status. Such integration of global policies is applicable in India as well because without meeting global standards the quality of HE cannot be met.
2. ***Training the facilitators:*** In India, teachers are well qualified but due to lack of additional resources and further training, the quality of the teaching-learning process gets affected. Whereas in Denmark proper training is given to a teacher focusing on their specialization field. In India, the teachers' training program has taken place in a nascent stage. So, the Danish training programs can be implemented in India. Within a few years, specific programs can also be implemented once the institutions start to integrate these programs regularly.
3. ***Affordable education for all:*** In a Developing country like India, the high cost of education becomes a hurdle in the growth of the education sector. But Danish way to tackle this situation is to implement Grant Commission policy, where education loans are granted to students without any interest and the overall cost of education is low. In India Educational loan policy is available, but the reach of such policy is very less. Considering the population of India, the concept of entire free HE cannot be met practically. But assistance can be provided to the students in the form of loans, scholarships, etc.
4. ***New generation new choices:*** In India right to choose his/her own Educational Field is influenced by various factors, whereas in Denmark, there is freedom to choose because there is a personalized education system. India is a country in which career-related decisions are also influenced by many factors. Thus, to change the mentality of the people to accept courses apart from STEM courses is difficult. But an attempt can be made by setting up seminars and representing the monetary benefits of specific courses and their demand in the outside world. This will not only help the parents and the students but also the society to change as a whole.
5. ***Increased Promotion:*** The policies and terms made for lifelong learning are not so popular in India. Danish people, do not consider the restriction to learn anything, along with that their reach of government policies are more. Lifelong learning will take time on Indian soil because until and unless the basic education requirements aren't met people won't focus on lifelong learning. The proper development of lifelong learning will start after India will come close to its goal of 100% education. Till that time lifelong learning will be in a nascent stage.
6. ***Going back to the roots/ value the values:*** In Denmark, ethics and values is considered as core subjects and compulsory at every level. Ethics and values are developed in every Indian in their early lives through scriptures and legends such as Ramayana and Mahabharata. But these need to be implemented in later life as well. Integration of our ethical history in our curriculum by making it compulsory like Denmark can help generate responsible ethical citizens.
7. ***Changing the status:*** Diversity was a core feature of India, but now the diversity in caste, race, religion, and region is affecting the growth of quality education. Denmark is leading Educational growth because there is no such discrimination in Educational policies based on caste, race, religion and region. Diversity will always play a role in India. India unlike Denmark is home to various sections of the society. Policymaking is tough in India as it is difficult to cater to it.
8. ***Government intervention/ initiatives:*** The *g*overnment is showing very steady growth in making and renewing the policies relating to the educational sector, which is affecting the development of human capital. In Denmark, education is the key element for human capital development Danish government,

by providing low cost or free education ensuring entrepreneurship and employment opportunities. Free HE in India is a daunting task but assistance can be provided at every step. We can also learn from the importance given to education to develop human capital.

9. ***Eradicating gender biasedness****:* The discriminative role of Indian society creates a huge difference in educational GPI. Whereas in Denmark there is no such restriction based on gender in the field of education. The Mindset of people is the main hurdle, which could be tackled by bringing up a revolutionary change in the mindset of people. This change in mindset is a must and should be implemented in India as it would lead to an increase in equality in education. India needs this equality in terms of education as it will help to transform this large population into an asset.
10. ***Need for competency learning:*** Skill gap is caused due to factors such as lack of training or less application of a potential to work, the Indian workforce has studied moreover theoretical than practical. On the other hand, the Danish workforce is trained practically at HE level. Practical education at a higher level is a must in India as the youth need to in touch with the demand for skills in the market. This will make them a sought-after asset, which in turn would lead to monetary gain.
11. ***Inculcating hands-on learning:*** Problem of theory and practical gap arises due to less practical approach on educational level, which could be talked by giving exposure to the industry at an academic level. In Denmark the industry Academic coverage is well placed. The Knowledge that an individual is grasping at an academic level along with practicing in actuality at industry could provide India with a quality workforce and that leads to a quality HE.
12. ***Need for skill subjects:*** Lack of Vocational aspect of curriculum results in a less skilled workforce in India. Whereas in Denmark special Vocational education and training (VET) programs are in action to provide actual training and for youth development. In India, these vocational courses are external courses that need to be integrated into the curriculum like the Danish system. Bringing such programs in the academic fold will help generate interest in the students and the students will come to know early on about their career prospects and requirements.
13. ***Promoting EdTech:*** Indian curriculum lacks in inculcating technical teachings to the students which give Global exposure to students. In that case of developing technological skills, Denmark has established technological upgradation as per the global standards. Technological skills should be developed in Indian students. These skills need to be percolate to all students which are difficult in a country like India due to its population. Therefore, though the task is steep actions need to be taken accordingly.
14. ***Boosting startups and entrepreneurship*****:** Job opportunities are not less in India, but they fall short considering the huge population. Hence, India can tackle the problem of unemployment by creating entrepreneurs, where youngsters won't be searching for jobs but they will create employment opportunities. In Denmark specialized Bachelors and master's program focusing on entrepreneurial development. The current situation is in a very nascent stage with respect entrepreneurial development.

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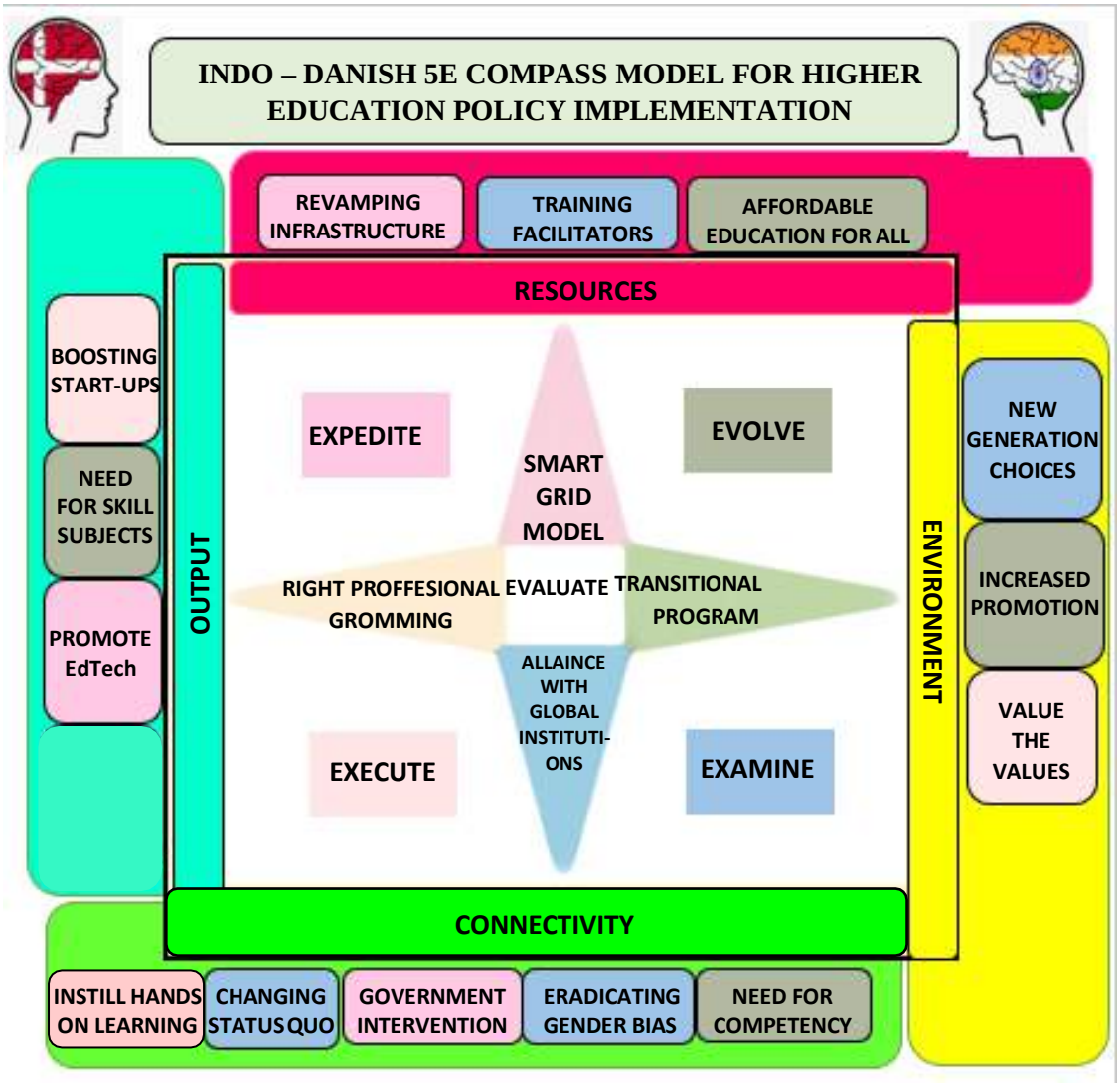
CHAPTER: - 5
TOWARDS NEW HORIZONS

5.1 Indo-Danish 5E compass model for Higher Education policy implementation

Based on lessons from the Danish HE system, suggestions for improvement of the Indian HE system were offered. Many of the suggestive measures offered in this research study are covered to some extent in the New Education policy 2019. But as the implementation plan of the suggestive measures were felt not so clear, we thought of developing an implementation model. Based on the research analysis and findings, we suggest the following model 'Indo- Danish 5E compass model' for giving direction to HE policy implementation:



Indo Danish 5E model is our sincere attempt to provide implementation solutions for the silent suggestions mentioned in the new education policy 2019. A) Danish smart grid model helps to evolve infrastructure by providing modern sustainable solutions. The Smart grid model is all about developing smart universities. Renewable energy such as solar, wind, hydro, etc. can be used to generate electricity

which in turn would lead to the development of smart labs, smart boards, etc. This energy can also be used for developing a college transport system which will help in the connectivity of long distanced students. The universities which will abide/meet by these clean energy requirements will get special grants from the government and aid in the accreditation score. It will also aid in the promotion of the Danish EdTech program via government initiatives. B) The transitional program suggested by us will help to evolve the concept of HE for all, lifelong learning and need for skill subjects by providing bridge courses at the start of each year considering India specific HE problems. C) Alliance with global institutions will help examine the training of facilitators, reduce gender biasness, change the status quo, and most of all will help boost start-ups and bring them on par with the globalized standards. The Danish system is having affiliation with globalized renowned institutions. D) Execution of the right professional grooming will help instill hands on learning and suggest appropriate career moves for aspirants. In the Danish education system, it is integrated from the school level which is the best practice which we suggest for India.

5.2 Ancient Indian education thoughts

“ □ □
□ □“

The meaning of this shloka comes out even by playing with the words. It means that, when a person is only literate [sa-ksha-ra] (scholar, but no good manners), that person turns out to be a demon [ra-ksha-sa] during extreme circumstances (by inverting the words). But, a person with etiquettes and manners [sa-ra-sa] (scholar with etiquettes and manners), will always remain a good-natured person even during extreme circumstances (by inverting the words).

Ancient education system focused on skillful citizens rather than literates. The banyan tree on the cover page is a symbol of the Indian Wisdom which is deep rooted to our epical and ethical values. Source of Indian ethos are the strong pillars of ancient education system. The joining of hands shows the India’s open mind set to learn from Denmark’s higher education by strengthening its current higher education policies. This ultimately results in the maturation of the branches and leaves which represents the growth of human capital in India.

5.3 Conclusion

Education is the backbone of any country that wants to make a mark in today’s modern world. Therefore, a close relationship between human capital and economic growth is undeniable. The outcome of this research study will definitely navigate the way in Evolvingminds and nurturing development. Our objective was to explore the Danish higher education system and to suggest practical measures for Indian Higher education system which will boost to develop our human capital. According to the U21 2019 rankings, India ranks 49th while Denmark ranks 5th in the overall rankings among 50 countries. After a thorough analysis of samples collected, we came up with 14 significant variables out as challenges to the Indian higher education system. Out of 32 studied variables which were grouped under 4 key factors i.e. availability of resources, comparison of the policy environment, national and international research connectivity, and overall output, 14 variables were found significant. Suitable findings were derived on significant findings keeping in mind the on-ground realities and sustainable solutions were drafted based on Danish HE system. Relating the Danish lessons with the ancient Indian education system was essential. The Ancient Indian HE system not only taught student’s necessary life skills but also provided good training to

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students in the performance of their social, economic and religious duties. A strong urge was felt on the implementation of the suggestions mentioned in the NEP 2019. Thus, to overcome these problems, the Indo-Danish 5E compass model was proposed to aid in the implementation process. India always had ancient wisdom which was lost due to many years of colonial rule. This ancient wisdom if revived and integrated with the modern solutions from Denmark along with the 5E compass model will navigate India in improving the global rankings. We hope, the suggested implementation model will act as compass in directing the Indian higher education system through its predicament.

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Growth and Transformation through Higher Education

An Analysis of the Higher Education System in France and Recommendations to India

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CHAPTER 1:
INTRODUCTION

Around the world, education plays a vital role in improving economic conditions and creating new opportunities to enhance a country's overall well-being. In the 21st century, education has taken a shift to include knowledge and experiences beyond the traditional classroom learning. Higher education is an optional path that students can take beyond primary and secondary school years. Higher education provides students with unique opportunities to choose their prospective area of study by gaining a variety of perspectives in different subject areas through both traditional teaching practices and student interactions.

India has one of the world's largest higher education systems. The higher education system includes 700 universities and more than 35,000 affiliated colleges enrolling more than 20 million students (DrEducation, 2013). The higher education institutions found in India can be divided into four broad categories. These categories include universities, colleges, deemed to be universities and institutes of national importance (U.G.O, 2019). Universities in India includes central and state universities. The federal government funds central universities while state universities are supported by their respective state. While there are several higher education institutions in India, the total Gross Enrolment Ratio (GER) in Higher education in India is still only 25.8% among the 18-23 years of age group (AISHE, 2018). According to the Department of Education through the Ministry of Human Development, India desires to increase their GER to 30% by the end of 2020.

Currently, India is in a youth bulge phase. It has the largest youth population in the world—with 600 million young people under the age of 25 (WENR). With a large young adult population, the Department of Higher Education is seeking to expand greater accessibility while also increasing the quality of education in order to reach their goal of increasing their GER. In doing so, India hopes to attract both domestic students and students from abroad. India's large youth population is advantageous because it can be used to drive economic growth and improve human development. In 2016, the Department of Higher Education, through the Ministry of Human Resource Development Government of India or MHRD, laid out their specific objectives on improving the higher education system in India. Our research on how India can enhance its higher education system will be based on a comparison with France's higher education system and three of the MHRD's objectives to improving India's higher education system.

Three of the goals highlighted in the MHRD provide the objectives for our research.

The three goals are 1) expanding the institutional base of higher education (including technical, professional and vocational education) 2) establishing new institutions and incentivizing state governments and non-governmental Organizations/civil society, promote collaboration with international community, foreign governments, universities/institutions and regional and international institutions, and 3) increasing Gross Enrolment Ratio (GER) in Higher Education to 30% by the year 2020 (MHRD, 2016). Our research will address access to underserved communities, improving accreditation standards, and expanding internet access that will help India increase its GER to 30%. Throughout our research, we will concentrate on how the country of France is addressing these challenges. Our research will include a background into France's education system, a comparison of educational reforms in both countries, a statistical analysis comparing accreditation standards in India and France as well as recommendations based on France's education system.

France's Higher Education System

The French education system consists of five levels: Elementary education, Secondary education, Lower secondary education, Upper secondary education, and Higher education. France's education system is somewhat similar to India's six levels of education: Pre-elementary, Elementary, Upper Elementary, Secondary, Higher secondary education, and Higher education.

One of the most significant differences in the construction of the countries higher education structure is the number of years a student spends in primary and secondary school years. In France, a student spends nine years in their primary and secondary studies while in India, students spend twelve years in primary and secondary studies. In France, after the completion of the ninth year of study, students have three options of preparation for pursuing higher education. The three options include Lycée Général, Lycée Technologique, and Lycée Professionnel. Lycée Général prepares students for the first year of higher education by providing preparation, "in two years the high school students with the general baccalaureate and the pursuit of higher studies, mainly in university or in preparatory classes. It comprises three series: literary (L), economic and social (ES) and scientific (S)" (Ministere de l'education Nationale et de la Jeunesse, 2019). Lycée Technologique is a similar program but with a heavier focus on technology, math, and science. (Ministere de l'education Nationale et de la Jeunesse, 2019). The third option for students who want to pursue higher education in France is the Lycée Professionnel. The Lycée Professional program offers vocational studies or, "an alternating education with the company and its trades to acquire skills and general and professional knowledge, in various sectors and at different levels of training. The education provided has two ends, professional integration, and further studies" (Ministere de l'education Nationale et de la Jeunesse, 2019).

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The following charts from World Education News and Reviews compare the education structure in both countries. The chart on the left features the overall structure of the France's education system and the chart on the right features the overall structure of the India's higher education system.

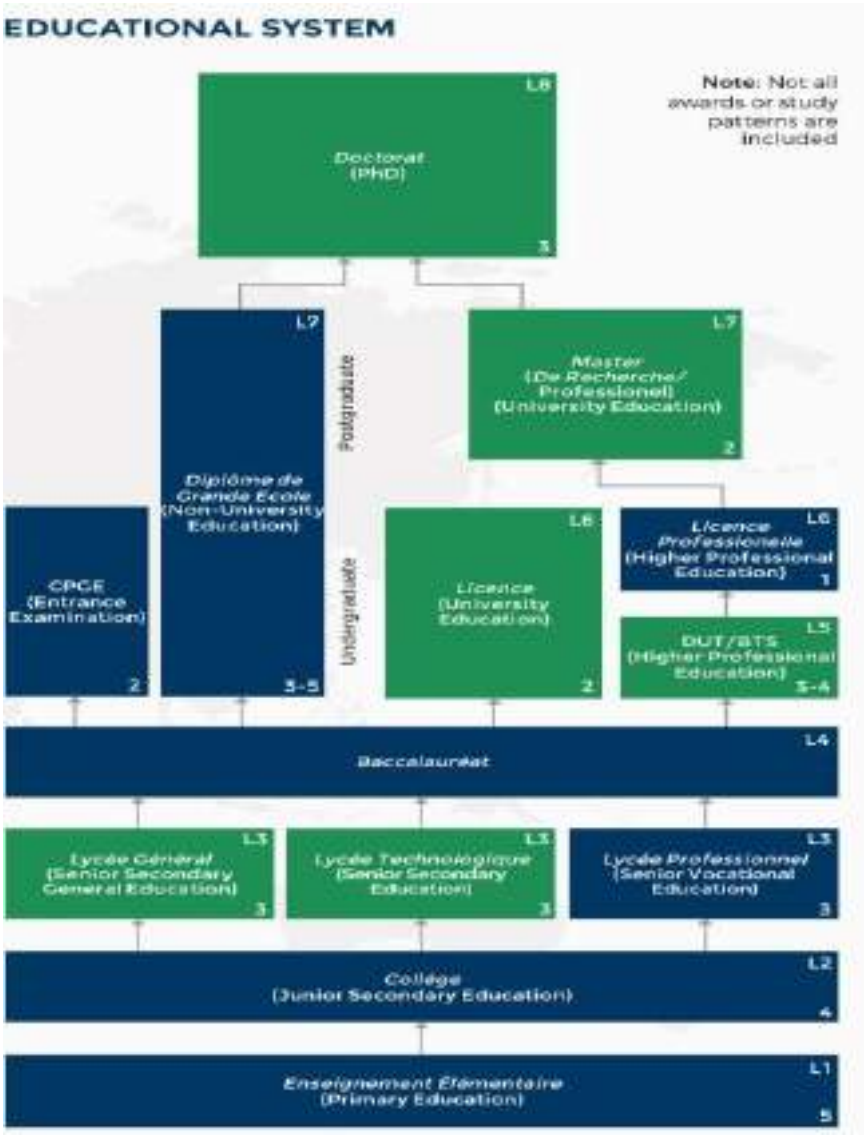

Fig 1:- French Educational System

(Numbers on the bottom right corner represent the number of years students spend at each level.)

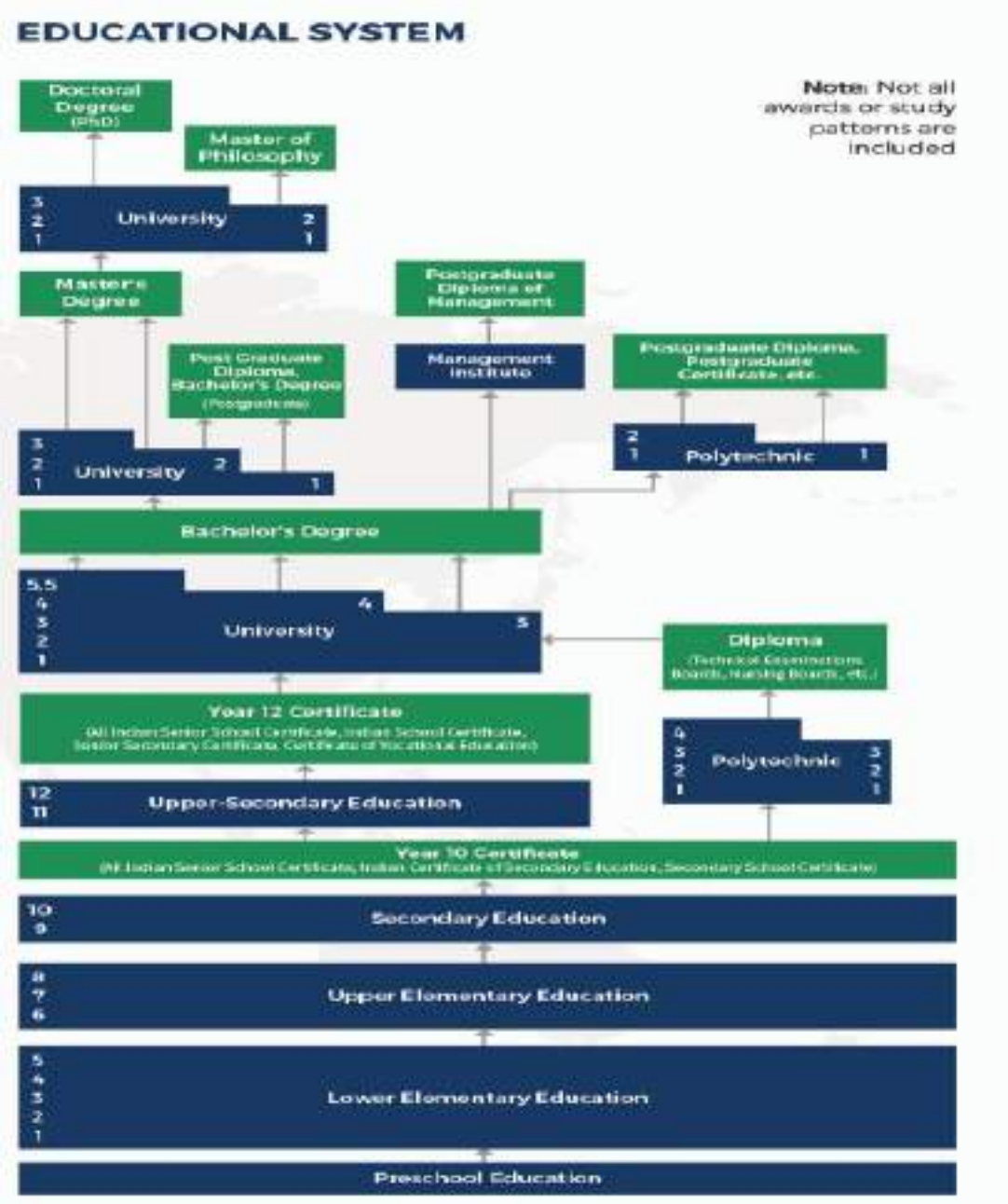

Fig 2:- Indian Educational System

(Numbers on the left side represent the grades at each level.)

In comparison, India has similar entrance preparation and exams into the higher education system. The year ten certificate is obtained after the students have completed that year of education. Students, "who have completed ten years of education (Standard X) take the Secondary School Certificate. Pupils then enter higher secondary schools or Junior Colleges and complete a further two years of education (Standards XI and XII). Courses focus on university preparation" (Foreign Consultants Inc, 2003). These certificates allow students to have exposure to a class structure in higher education institutions. The exams following the

completion of the years of educational training, “Public examinations are held at the end of Standard IX either by individual states or by Central Boards and lead to the award of the Higher Secondary School Certificate (also called All India Senior School Certificate or Indian School Certificate or Pre-University Course)” (Foreign Consultants Inc, 2003). In India, there is also a certificate in place for students who choose to pursue vocational studies. Vocational studies are, “offered in two years at Higher and Technical Schools and lead to the Certificate of Vocational Education (CVE)” (Foreign Consultants Inc, 2013).

In France, the higher education level consists of roughly 2.5 million students. (Campus French, 2019) This number has more than doubled since 1980 when there were 1.18 million students enrolled in higher education. This rise in the number of students in the French higher education system is in direct response to market demand. More and more jobs across France require a college education for employment.

The duration of the higher education level varies from a minimum of two years to eight-plus years, depending on the degree pursued and the availability of courses. The higher education, or University, the structure is organized by the license, master, doctorate or LMD System organized under Europe’s Bologna Process. The French higher education system is divided into three tiers: the bachelor’s degree (license), the master’s degree (master) and the doctorate (doctorate). French higher education has two popular types of institutions. The European Education Directory lists these options as Universities and Grandes Ecoles. Table 1 compares the key differences between the two institutions.

Grandes Ecoles are more specialized and are concentrated on specialized learning. The time required to obtain a degree the same between Universities and Grande Ecoles but those who attend Grande Ecoles are better exposed to their future careers. This exposure occurs earlier in the students’ higher education process (Calmand, Giret, Guégnard, Paul, 2009). Universities and Grandes Ecoles are France’s most popular options for higher education. However, there are other options for those students who do not want to pursue a traditional professional career. Degrees in technical studies and creative studies in art and film are just two of the options available to these students.

		University	**Grandes Ecoles**
Number of institutions		83	250
Fields of Study		all-encompassing fields of study	more specialized including fields of engineering, science and math
Cost		average: €190 per year	vary between institutions range: € 500 - 10,000
Admission Requirements	completion of the baccalauréat exam	completion of preparatory classes following the passing of the baccalauréat de l'enseignement du second degré	

Table 1:- Comparison of Institutions

The French education system has many strengths and weaknesses. One of the strengths is the strong focus on foreign language skills. Students are able to start learning their first foreign language as early as four years of age. In addition, they can pursue a second foreign language as early as nine years of age. Learning foreign languages at such a young age allows students to achieve higher degrees of comprehension and enables the child to develop the skills necessary to learn additional foreign languages. Knowing how to communicate in multiple foreign languages also makes French graduates more marketable in their chosen career field.

Another strength of the French education system is the standardization provided by the Ministry of Education. This standardization is critical to the mobility of the French citizens. Students that move within the country, often at their parents' discretion, can have the same curriculum no matter where they relocate to. These students can easily pick up their studies and arrive at a new institution where they are on-track with the rest of the students.

The standardization of the education system additionally allows for less discrepancy across the school system. Standardization is especially beneficial to lower-income school systems. Instead of being neglected, these systems receive the same level of education as the higher income school systems.

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One of France's most significant strengths of its education system is also one of its weaknesses, the Baccalauréat. "The *Baccalauréat* is an academic qualification which French students take at the end of high school. Originally introduced by Napoleon I in 1808, the *Baccalauréat* exam is not a requirement for finishing high school, but for entrance into universities" (European CEO, 2018) One of the defining problems of the baccalauréat is that it does not fulfill its purpose of providing a good filter between secondary education and higher education, due to a passing rate of around 90%. The Baccalauréat has such a significance that failing the exam can have severe negative consequences "from not being allowed into higher education to terrible career perspectives" (Sayare, 2013). The successful pass rate of the examination is not a good indicator of a student's preparedness for higher education. Currently, less than half of the first-year higher education students move onto a second year. This flawed rite of passage to higher education also comes at an enormous cost. According to the New York Times, (Sayare, 2013) a study conducted by a significant educators' union in France, S.N.P.D.E.N., placed the "true cost" of the "general and technical bacs at a combined $2 billion" in 2012-- the true cost meaning, the teachers' salaries, the cost to produce, administering, and grading the exam.

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CHAPTER 2:
EDUCATIONAL REFORMS IN FRANCE

Autonomy Reform

France's higher education system has seen many educational reforms to improve governance and overall structure. Since the passing of the 2007 law on Liberties and Responsibilities of Universities, commonly referred to as LRU, all public universities became EPSCPs (Établissements publics à caractère scientifique, cultural et Professionnel – public institutions of a scientific, cultural and professional nature), legal entities enjoying educational, scientific, administrative and financial autonomy (European Commission, 2018). University presidents were granted autonomy over the use of their allocated budget and other incoming government funds. Under the new law, university presidents are responsible for ensuring the budget is used to prepare students for future employment by providing opportunities for students to expand on their skill set. Interpretation of this responsibility is left to university presidents. One driving factor to the law's passing may have been that university budgets were becoming more challenging to manage within the government ministry. Before the passing of the LRU law, the French government had steadily increased government spending on higher education. Expenditure on higher education more than doubled since 1980 (by a factor of 2.6, at constant prices), rising by an average of 2.7% a year (Ministere de l'Enseignement Supérieur, 2017). Transfering budget authority to the universities significantly increased the ability of the university to allocate funds to initiatives directed at preparing students for their careers.

Research Reform

Currently, students who live and study in France pay small fees in tuition and the rest of the tuition is subsidized by the government. This year, the French government decided to spend roughly €72 billion for education, and of that, about €28 billion will be spent on higher education and research (Statista, 2019). Research plays a significant role in improving the quality of teaching and enhancing global perspectives in the French higher education system. Research helps to deepen students' knowledge in their chosen field of study or area of interest. With the new reforms, university presidents now have the option to spend their budgets on providing research opportunities to students.

The results of this research in higher education can address the challenges facing French society and help promote international visibility. In late 2012, the Minister of Higher Education and Research, Mrs. Geneviève Fioraso, proposed a bill that sought to improve higher education structure and international visibility. France began improving the quality of education by placing a stronger emphasis on research much earlier in the licence or undergraduate programs. One of the significant provisions of the new reform was the

restructuring and collaboration of research in higher education. This provision includes enhancing research strategies within higher education institutions by connecting students with national research facilities. The new law introduced territorial groupings to strengthen the coordination of training, research, and transfer policies as well as actions for the development of improvement of student life (Ministry of Higher Education, research and innovation, 2017). Many educational institutions are seeking to gain efficiencies by coming together with other institutions, fostering relationships, and pooling resources by creating "*Communautés d' Universités et d'Etablissements*" (COMUE - Communities of Universities and Schools).
The research coordination now falls between twenty COMUE groups and five new research association groups across France. COMUE groups include universities, Grande Ecoles, and research facilities. The goal of bringing these groups together is to increase international rankings and to promote international student inflow. While there are not enough results to measure the success of these COMUE groups, the success and continuous works of these groups can help enhance the quality of France's education system. By sharing any research completed through these groups will not only help improving challenges in the local area but also gain international visibility and improve global rankings.

Included within the Higher Education and Research law is a policy created to promote an overall research strategy. The National Research Strategy (SNR) aims to address current challenges within society, including topics of science, technology, and the environment. In addition to in-depth research, the National Research Strategy ensures the development of innovation, the transfer of technology, the capacity of expertise and support for public policies and associations and foundations, recognized as being of public utility (Ministry of Higher Education and Research, 2015). Implementing the National Research policy includes the continuation of multi-year contracts with higher education facilities and research institutions, public funding, and participation in the European Union's Horizon 2020 program.

Research Funding

The Horizon 2020 program was introduced in late 2013 and is a research and innovation funding program throughout the European Union. The program has three priorities: scientific excellence, industrial leadership, and societal challenges (Ministry of Higher Education, Research and Innovation, 2017). France is using the Horizon 2020 program by encouraging research participants to address the country's societal challenges such as climate change, clean energy, digital transformation, and health through the National Research Strategy. The groups wanting to participate in research submit proposals to the Horizon program to receive funding. France is governing the National Research Strategy by creating multinational contracts with those who are wanting to partake in extensive research projects such as the relationships the states, higher education institutions, and research facilities. These contracts could also include France's COMUE groups

who want to use federal spending on research projects.

Since the beginning of the program, over fifty-five thousand applications for funding have been received. While the program tracks sufficient progress of each country participating in research projects, some projects that are being completed are not available for public access. Also, considering the time frame of significant research projects results may not be immediate. By using Europen Union funding to promote extensive research projects, students pursuing higher education are more likely to initiate research during their studies or continue current research projects. The successful completion of research will help address societal issues in the country, and France can gain international visibility on the rankings of research. Improvements in the higher education research rankings will also help promote the overall quality of France's education system. In the long term, this research the program will benefit not only France but Europe as a whole. France now is faced with the challenge of continuing to promote Horizon 2020 to higher education institutions.

This year, the educational reforms in France have begun to modernize and improve the quality of the higher education system. Under Emmanuel Macron's current administration a new focus of educational reforms will emphasize diversifying university funding, making students' lives easier by providing financial assistance and housing opportunities including for international students, and increased transparency with the successes of educational reforms.

Upon further research, this year, India is in the process of passing an all- encompassing higher education policy with similar features of restructuring and research additions seen similarly in the French educational reforms. In the past India has had problems with restructuring their higher education to accommodate their large student population. The policy includes ambitious goals to restructure India's large number of institutions into three types of institutions to streamline collaboration and expand opportunities for students. Successful collaboration and restructuring of the higher education system are the main points of focus for improving the quality of education.

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CHAPTER 3:
EDUCATIONAL ANALYSIS

The core of our research and recommendations for India focus on the idea of building knowledge. Bringing knowledge to life by developing skills that will create better jobs and economic conditions throughout India. India's current large youth population has presented a robust demographic shift that has the power to fuel economic growth and development. The current education system in India is under pressure to expand education access and options to accommodate the large youth population. More than 27% of the country's youth are excluded from education, employment, or training, while the overwhelming majority of working Indians are employed in the informal sector, many of them in agriculture, often in precarious engagements lacking any form of job security or labor protections (Trines, 2018). In addition to providing access to higher education, India is also faced with the challenge of ensuring quality education; knowledge that will shape the future of new jobs that are needed to improve the quality of human development in the country. It has been estimated that India's economy needs to create 10 million new jobs annually until 2030 to keep up with the growth of its working-age population—that's more than 27,000 jobs each day for the next 12 years (Trines, 2018). The idea of building knowledge in a higher education system requires establishing a diverse curriculum range by allowing autonomy through accreditation and regulation and ensuring students all over the country have fair and equal access to education.

Curriculum Changes

The curriculum provides the base of higher education. Traditionally, in higher education, students choose their area of study based on career interests to enter a related professional career after graduation. However, creating a curriculum that fits the needs of both students and society can be a difficult task. Today, traditional learning in a classroom is not enough to prepare students for their future careers. Curriculums around the world are shifting to provide dynamic experiences to transfer skills in and outside of the classroom. The addition of new technology, research studies, innovative projects, and collaborations with companies in the surrounding areas can help improve the quality of education.

In France, the youth unemployment rate has varied over the last few years and is a concern. Although France's overall unemployment rate is only 8.3%, the lowest the country has seen in the previous ten years (Trading Economics, 2019), the current youth unemployment rate is 20.1% (Trading Economics, 2019). The youth unemployment rate covers France's youngest working population ranging in age from 15 to 24. It includes those who are eligible for work and are seeking some type of employment. Although France has seen steady declines in the unemployment rate, there is an ongoing discussion about how the country is

addressing this issue. France's attention to higher education and its recent reforms are making an impact by helping job-seekers identify and obtain higher-quality jobs. As seen in previous educational reforms, France is emphasizing bridging the gap between the job's required skills and those skills new graduates possess when they enter the workforce.

Although effective, it is an ongoing challenge to ensure that the educational opportunities and instruction expand to meet the needs of its students and society as a whole.

In France, there is still somewhat of a divide in curriculum standards between the types of higher education institutions. Until recently, the focus in most universities in France was to provide a straightforward knowledge-based education with a little emphasis on the preparation of skills in future careers. The exception is the Grande Ecoles, which have prestigious reputations for preparing students for future careers much earlier on in their baccalauréat programs. Those who graduate from Grande Ecoles are desirable candidates to employment recruiters. The curriculum in Grand Ecoles is based on current industry demand and a mano on the teaching staff are known as industry experts in their respective fields. As a bonus, these industry experts maintain their contacts in the industry to keep the channels open for new graduates to find key employment opportunities (MBA Crystal Ball, 2019).

As the table Graduate Employability show, graduate employability rankings universities and Grande Ecoles make the top ten list. A further look into the types of the curriculum offered in within the Universities, specifically the ones ranked on the list offer programs similar to those in found in Grande Ecoles.

France Rank 2018	Graduate Employability Rank 2018	Graduate Employability Rank 2017	University	City
1	23	23	HEC Paris	Paris
2	30	22	École Polytechnique	Paris
3	31	32	Ecole Normale Supérieure Paris (PSL)	Paris
4	33	36	Mines ParisTech (PSL)	Paris
5	34	27	EMLYON	Lyon
6	39	41	CentraleSupélec	Various
7	84	70	ESSEC Business School	Cergy
8	89	104	Sorbonne University (Faculty of Science and Engineering)	Paris
9	97	98	EDHEC Business School	Various
10	110	129	Paris-Sud University	Paris

Table 2: Graduate Employability

Sorbonne University and Paris-Sud University are science and research-focused universities that have gained international rankings due to high-level cross-sectional research and collaborations. Traditional public universities offering degrees outside of math and science do not make the top ten list for graduate employability. Upon further examination of the list, there are Grande Ecoles that specializes in studies besides math and science. Because Grande Ecoles receive recognition for their prestige and skill set preparation Grande Ecoles rank higher in preparing students for future jobs. Students attending universities are gaining knowledge in their chosen profession, but in today's modern job market, it's the skills and experiences that set graduates apart from others.

In France, the higher education system has begun to bridge the divide between university and Grande Ecole students by offering university students the chance to enhance their skill set through collaboration with more substantial companies in France as well as an international collaboration with other universities. When looking at the skills gap between higher education and employment, it is crucial to consider the type of jobs that are currently available as well as the future of jobs that may not exist yet. High-growth industries in France include energy, technology, and manufacturing (World Atlas, 2017).

France is accommodating these in-demand jobs by creating unique partnerships with large corporations and universities. Collaborations and partnerships with large companies within booming industries have begun to allow university students to gain opportunities to enhance their employability skills. Airbus, with their manufacturing headquarters in the heart of France, has provided students with a unique insight into the company's innovation, design, manufacturing, and business divisions. Airbus' university program called Airbus Global University Partner Programme includes, "a global network of universities to develop engineering and technology specialists of the future. The programme currently covers 26 universities in 13 countries – each supported by a Campus team made of an Employment Marketing Manager and several Airbus employees acting as the company's ambassadors" (Airbus, 2018).

While this program also includes international schools, the program offers international exposure and collaboration with the French universities and with the company as well. In 2017, their "100-strong Campus Team reached 300,000 students via our network of 21 universities, with a particular focus on digital skills and competencies" (Airbus, 2018). The program offers unique experiences to enhance skill sets by providing experiences on campus through workshops and various activities set up by Airbus. This makes the program unique because students who may not have the chance to work at the Airbus facilities are still gaining skills needed for future careers. The program is continuing to grow and has the goal of reaching more universities within the next few years.

Universities focusing more on non-science and math degrees offer students the chance to enhance their skill set by partnering with international schools to gain a more well-rounded experience. Institut d'Etudes Supérieures des Arts or IESA, offers studies in art, history, and management through international collaboration. The core foundation for this school is to provide partnerships that, "facilitate academic exchanges and international internships through the Erasmus University Charter, but they also allow for the creation of multi-country programs, jointly run by IESA and its prestigious partner universities" (IESA, 2019). The Erasmus university charter is part of the Erasmus Charter for Higher Education and is described as, "the general quality framework for European and international cooperation activities a higher education institution may carry out within Erasmus+" (European Commission, 2019). Erasmus+ is a student exchange program for students abroad and within the European Union. Partners within the program at IESA include art galleries such as White Chapel Gallery and international museums, including Sir John Soane's Museum London.

These unique partnerships allow students with a more creative to passion international gain experience

through university partnerships included under the Erasmus charter. By partnering with other universities, universities within the organization can share resources and promote international students' skills.

Unique partnerships with companies and universities within the country and abroad is an excellent tool for strengthening the quality of education in any higher education system.

Today the job market is highly competitive in a variety of different fields, and it's the combination of experience and knowledge that will help a student stand out in the job market. Ensuring students are gaining experience is also beneficial to improving current economic conditions and challenges that France and India are experiencing.

Access

Access to high-quality education has been a difficult task for both France and India. In recent years France has seen a surplus in student admissions into universities because every French citizen with a high school diploma, the Baccalauréat, has the right to attend a university at low tuition fees for public universities. The Baccalauréat has a pass rate in recent years, according to the Ministère de l'Enseignement Supérieur, of around ninety percent (Ministère de l'Enseignement Supérieur, 2015).

In recent years, France has had a few economics challenges, especially high unemployment. While the majority of French citizens can attend a university, the actual ability to do so is far less. Due to every French citizen that receives the Baccalauréat being able to participate in a university, overcrowding is a problem in most public institutions.

The congestion of universities leads to a higher student to professor ratio. According to the OECD, the student to professor ratio for higher education in France during 2014 was 18.205 students per professor (OECD, 2016). The OECD also states, the student to professor ratio for higher education in India during 2016 was 23.7 students per professor (OECD,

2016). A lower student to professor ratio allows for more personal one on one conversations with the professor; this ratio allows for more questions asked and more answers answered by the professor. By lowering the student to professor ratio in countries around the world, the NCTE report indicates that as class sizes shrink the students will "perform better in all subjects and on all assessments when compared to their peers in larger classes" (NCTE, 2014).

The NCTE organization suggests that hiring more professors and adding more class offerings for any given subject is the best way to lower the student to professor ratio within a given country. This suggestion by the NCTE would ultimately allow students to have greater exposure into their career fields earlier within the student's college career. This NCTE suggestion will, more importantly, be creating such access to have the exposure mentioned previously. These efforts to increase access could increase the cost of the overall higher education system.

France has begun to expand access to higher education by introducing Student Plan, an application system that focuses on the bridge between upper secondary school and higher education. The Student Plan was introduced in October of 2017 with the goal of creating equal opportunities for students to attend higher education institutions. France has committed, "€500m over five years – on top of the €450m of the Big Investment Plan – to increasing capacity in those streams where demand far outstrips the number of places, to developing apprenticeship-based training, to providing individual guidance for each student and to recognizing the educational commitment of teaching staff (Republique Francaise,2017).

The Student plan involves a number of guidance opportunities for students to gain an insight into career opportunities and the different options for higher education. Acting to ensure success will help each student make better informed decisions with the goal of keeping students in their chosen higher education institution beyond the first year. While entrance into the higher education institutions are not changing, public, "Institutions will be required to accept all applicants. To ensure they are given equal opportunities to succeed, customized pathways will be created between the upper secondary school level and higher education" (Republique Francaise, 2017). The customized pathway will be introduced through a survey that will contain, "all of the information that A level students (students that complete the Baccalauréat) need: the course content, its employment rate and pass rate among former students "(Republique Francaise,2017). In France, access to education is providing access to a productive path for students that aligns with their interests, abilities, and options for the future careers. The Student Plan will help students find a path with a high likelihood of success would be an effective use of resources. France's Student Plan is to ultimately improve access to the higher education system and allow for more transparency between the applicants and

the universities.

Accreditation and Regulation

French Regulation. Public Universities in France are accredited by the Ministry of Education. Three bodies comprise the basic structure of the university. The first is a governing board (Conseil d'Administration), which oversees the budget, policy, and approves actions signed by the university president. The second is the scientific council (Conseil Scientifique), which recommends research policy to the governing board. It also gives input into new educational programs, research contracts, and changes in diplomas. Finally, there is a council for university studies and university life (Conseil des Etudes et de la Vie Universitaire). They propose measures to enhance campus social life, student living conditions, and university facilities (Kaiser, 2007).

Teaching and research faculty, students, administrators, and outside stakeholders are elected as representatives on these counsels. Collectively this structure ensures universities have autonomy in several key areas including in administrative, financial, and educational/scientific matters. A university president is elected and serves for five years.

Interesting, tenure can only be offered by the state (Kaiser, 2007).
The High Council evaluates research for Evaluation of Research and Higher Education (HCERES). Its job is to assure the quality of French research institutions and their research activities, as well as study programs/degrees. They serve as an evaluator of international networks of researchers and French researchers conducting research abroad. They evaluate institutions every five years, and the reports are publicly available. This autonomy from the pressures of the government and other stakeholders ensures trust in the council from the institutes evaluated (Houppe, 2016).

Online Distance Learning in France. The National Centre for Distance Education (CNED) is a public institution that delivers distance learning material. It operates under the Ministry of Higher Education and Research and has the autonomy to create and maintain course offerings. This autonomy allows CNED to keep up with the growing technology fields and enables French schools to compete globally. CNED offers courses ranging from grade school to the university level (Amirault, 2018). In 2013 the French Ministry of Education created the France Digital University-MOOC (FUN-MOOC). MOOC stands for massive online open courses. These are free to use educational programs that are made available by universities and organizations. FUN-MOOC was designed to promote the use of online distance education (Amirault, 2018). As mentioned previously, the student-to-teacher ratio is an increasingly growing problem within India's

higher education system. MOOCs can help lessen the severity of the problem by offering a cost-effective alternative to traditional classroom instruction.

Indian Higher Education System. The Indian higher education system has numerous designations for institutions. State and Central Universities are established by an Act of the state legislature and Parliament, respectively. Central Universities receive funding through the Union Government, while State Universities are funding by the respective State. Deemed- to-be-universities can be established by private organizations such as international schools of higher education. This status is conferred by the University Grants Commission (UGC).

Institutions with this designation have greater autonomy than State and Central universities, in areas like admissions and syllabi. Private Universities can only be established by an Act of a State Legislature (Shah, 2015). There are two types of colleges in India: constituent colleges and affiliated colleges. A University establishes constituent colleges. Affiliated colleges are established by the government or educational trust (Ravi, 2015).

Universities are mostly autonomous bodies with a governance structure similar to France's. Each institution has a Board of Governors with bodies including research boards and academic councils under them. In State universities, the highest authority is overseen by the Governor of the State's Chancellor. In Central universities, the Chancellor is appointed by the central government (Koligudde, 2014).

Accreditation in India. The two central accreditation bodies are the National Board of Accreditation (NBA) and the National Assessment and Accreditation Council (NAAC). The NBA was established under the All India Council for Technical Education. The NAAC was formed under the UGC in 1992. Since 2012, all universities, institutions, and colleges are mandated to be accredited by an accreditation agency unless created through an act of Parliament (Shah, 2015). NAAC's methodology is comparable to international standards with self-evaluations and peer-reviewed evaluations. Some of the criteria include research, student support, and innovation. The final grade is based on the weighted average of the criteria points. The allocation of points is determined by the type of institution being evaluated, with more being allocated for research for universities and more for teaching for autonomous colleges (Shah, 2015). There are significant accreditation gaps in India, with a sizeable backload of pending accreditation cases. The NAAC accredited roughly 410 institutions a year, and it would take approximately 42 years to authorize just half of all Indian institutions (Shah, 2015).

There are five functions of a regulator in higher education: license to grant degrees, accreditation, issuing grants and funds, regulating access (fees, affirmative action, etc.), issuing professional licenses. The UGC is responsible for all of these except the first one. Other bodies have filled some of these responsibilities. Resulting in the large accreditation gap, as well as, the overall state of poor governance (Ambavale, 2015).
Until 2013, accreditation was optional for higher educational institutions. In 2012, the UGC laid out the Mandatory Assessment and Accreditation of Higher Educational Institutions Regulations. The new regulations stated that only accredited institutions were eligible for grants, while technical schools and medical institutions are not required to seek accreditation. The lack of uniform accreditation requirements has been a hamper on ensuring quality within the higher education system (Mohsin, 2017).

Open and Distance Learning in India. About 11% of students in India's higher education system are enrolled in a distance learning institution (AISHE, 2018). In 1985, the Distance Education Council (DEC) was created to regulate distance learning. Eventually, in 2013, responsibility for regulating ODLs was given back to the UGC, which created the Distance Education Bureau (Distance Education Bureau). Currently, the NAAC accredited ODLs, and this has posed several problems.

The NBA and NAAC both encourage the traditional campus learning experience. When evaluating institutions, both bodies take into consideration classroom size, library resources, and other features only present at traditional schools. Since ODL institutions could be penalized in the evaluation and given a lower grade, many are deterred from seeking accreditation (Shah, 2015). India has a relatively young population with around half of the entire population being below the age of 25 (CIA World Factbook). As one report notes, "the fruits of demographic dividend will only be available to India if this population can be empowered to contribute to growth through education" (Sampat at el, 2008). Younger people have a higher propensity to use technology, and online distance learning institutions could take advantage of the uniqueness of India's demographics.

The lack of proper accreditation standards for ODLs means that some students are receiving an education that is undervalued in the market. The lack of accreditation could also discourage students from attending ODLs who cannot go to a traditional school.

Report to the Nation. In 2009, the National Knowledge Commission (NKC) issued a report on the status of the India higher education system. The report's main criticism was that "the system, as a whole, is over-regulated but under-governed." The UGC, the accreditation bodies, and the overall system of university governance were stifling quality. The NKC recommended the creation of an Independent Regulatory

Authority for Higher Education (IRAHE). This body would take over three of the four functions that the UGC currently does (License to grant degrees, accreditation, and regulating access). The UGC would be relegated to issuing grants and funds, and external bodies would take over the provision of professional licenses (National Knowledge Commission, 2009).

The report also found issues with the system of affiliated colleges. They state that universities are saddled with the burden of regulating the admissions, curriculum, and examinations of these affiliated colleges, with uneven regulatory standards from the UGC compounding the problem. The report cited the monopoly that the NAAC has over accreditation as another reason quality is suffering. The sheer number of institutions seeking accreditation every year is too much for the NAAC to handle. The IRAHE would grant multiple accreditation agencies to the ratings. Under this arrangement, regulatory guidance would come from the IRAHE, and the accreditation bodies would be held to strict disclosure standards to ensure faith in the ratings are being addressed (National Knowledge Commission, 2009).

Data

We wanted to identify which factors, related to education, were likely to improve a society. To do this, we accessed data on the nations of the world and performed statistical analysis to identify which factors are significantly related to common indices of human and economic progress. These significant factors would form the basis or our recommendations from France to India. We wanted to formulate advice on only those factors that are likely to improve a society, and ignore those factors that are not likely to improve a society. We used the United Nations' Human Development Index for our analysis. The index is designed to gauge the overall development of a country. The index summarizes three dimensions of human development: a long and healthy life, knowledge, and a decent standard of living. These three dimensions are based on a composite index of life expectancy, education, and gross national income respectively (Human Development Report Office). While the HDI only considers a couple of variables, the United Nations collects data on a wide range of areas and includes them in the annual report. We used a number of these variables in our analysis to find relationships between them and our two dependent variables, Human Development and Gross Domestic Product per Capita (GDP per capita).

CHAPTER 4:
RESULTS

Table 3 displays the descriptive statistics of our data set. We used a regression analysis to compare which variables were significantly related to increases in human development and GDP per capita. These two dependent variables were chosen because they are both trusted measures of the overall health of a particular society.

Variables	Minimum	Maximum	Mean	Std Dev	France	India
Educ as percent of GDP	1.81	12.46	4.69	1.69	5.52	3.84
Pct. employment in ag	.1	91.5	26.86	24.67	2.9	42.7
Internet users	1.18	98.24	49.91	28.19	85.62	29.55
Intl' student mobility	-198.18	64.06	-6.27	25.76	6.32	-0.72
Unemployment	.2	27.9	7.76	5.92	9.7	3.5
R&D as pct. of GDP	0.02	4.27	.87	.93	2.23	.63
Median age	14.924	46.348	28.85	8.83	41.195	26.678
Land area (sq. km)	160	16376870	671507	1873374	547557	2973190
Population (natural log)	.02	1409.52	39.56	145.85	64.98	1339.18
Pct, of population urban	12.7	100	58	23.08	80.2	33.6

Table 3: Descriptive Statistics of Variables Used in Analysis

Human Development

Table 4 presents the results of our regression analysis. Variables highly correlated with human development include: percentage of population that is urban, internet users, and median age. The finding that unemployment was not significantly correlated with HDI is rather surprising. One would assume that higher levels of unemployment would bring down human development. However, our analysis shows that there is a negative relationship with HDI. The data shows that more people living in urban areas, which is typically where high skilled jobs are, is positively correlated with HDI. This would imply that while unemployment is not significant, the kinds of jobs people do matter more. This point is further substantiated by our analysis

showing employment in agriculture has a significant negatively correlated relationship with human development.

	DV: Human Development Index		DV: GDP per Capita	
Variable	**β**	**Sig (p-value)**	**β**	**Sig (p-value)**
Educ as percent of GDP	-.010	n.s.	-.130	p < 0.10
Knowledge based employment	-.210	p<0.001	-.075	n.s.
Internet users	.371	p<0.001	.433	p < 0.05
Intl' student mobility	.010	n.s.	-.082	n.s.
Unemployment	-.021	n.s.	-.202	p < 0.01
R&D as pct. of GDP	.039	n.s.	.193	p < 0.1
Controls				
Median age	.346	p < 0.001	-.063	n.s.
Land area (sq. km)	.009	n.s.	.005	n.s.
Population (natural log)	-0.009	n.s.	-.117	n.s.
Pct, of population urban	.098	p < 0.10	.253	p < 0.05

Table 4: Results of Regression Analysis

Another reason that unemployment is not a significant variable might be due to the differences in the labor force participation rate among countries, types of jobs available, and cultural forces that shape who actually works. The human development index considers quality of life factors, such as life expectancy, which could skew the impact unemployment would have. Countries that have more public services and provide a safety net for their citizens who don't or can't work, can affect the life expectancy of those citizens. The benefits of these services can cause some citizens to choose unrmpoyment over employment. The effect is that the figures on the nation's human development ranking and unemployment might both increase. For example, France's unemployment rate is three times higher than India's, but it maintains a higher human development ranking. Finally the index uses Gross National Income as a proxy for standard of living which isn't directly affected by the unemployment level.

The data shows that a higher median age has a strong positive correlation with human development. This higher media age reflects a longer life expectancy. Education can generate the innovations and developments

in a society that can improve the healthcare system, reduce the physical demands of jobs, and extend life expectancy. This does not invalidate our suggestion that India's younger population is a positive. As we noted in the accreditation sector, this young population is better able to utilize the technology that powers the global economy. Updating India's accreditation criteria, so as to fully utilize the power of online distance learning, will ensure young people are getting a quality ODL education. As India's population ages, the investments in online distance learning will reap long-term benefits. The R-squared value is .93, meaning 93% of the variance in HDI among countries can be explained by our selected variables. From this we give several recommendations in the last section.

GDP per capita

The most surprising variable in this analysis was that education as a percentage of GDP is negatively correlated with GDP per capita. We infer from these results that increasing spending on education in hopes of some reward is counter-productive. From this our recommendations of focusing on governance, regulation, and accreditation of India's higher education are better options that simply increasing funding.

The relationship between research & development as a percentage of GDP and GDP per capita was both positive and significant. The R&D variable is calculated by incorporating research and development expenditures in four sectors: Business enterprises, government, higher education, and private non-profit. As one of the goals of India is to house a world class higher education system, this correlation suggests that one way is by increasing the amount of educational partnerships with domestic businesses.

While unemployment is negatively correlated with GDP per capita, India's low unemployment rate makes this variable less useful for this analysis. International Student Mobility was not a significant variable, which means it does not directly relate to GDP per capita. However, inflows and outflows of students in exchange programs and travel abroad can affect research output and employment opportunities for students. Therefore, international student mobility may be indirectly related to GDP per capita, but has not been examined in our analysis.

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RECOMMENDATIONS

Based on the analysis we conclude with recommendations to India to support its educational goals. Our analysis has looked at the higher education system in France as a basis for our recommendations. The higher education systems in France and India are similar in that both are increasingly interested in strengthening job opportunities for students after completion of higher education training and degrees. Collaborations with business across all industries will help strengthen opportunities for students. In addition, collaborations can also offer research opportunities for students to expand their knowledge base. Allowing higher education institutions India to provide these opportunities for students will start with increasing institutional autonomy. Over the last several decades, both countries have made attempts to increase institutional autonomy in higher education. Autonomy addresses the fact that different higher education institutions need different approaches. Different geographic locations could make some opportunities more relevant to the students while resources such as access to local business leaders could make some programs more cost-effective for some schools.

India's Ministry of Human Development has stated policy initiatives related to student opportunities for degrees that align with future employment. Specifically, the ministry proposes to provide "practical training in response to social and personal needs" and create "opportunities to access all curricular areas with a fair degree of mobility" (MHRD, 2016). Social needs are constantly changing as new areas of concern arise. Solutions to improving human development begins with education. Education creates opportunities for students to apply what they have learned to address tough challenges such as poverty and environmental concerns. France has addressed similar concerns with research collaborations and partnerships with research institutions that reside in France. Research plays a big role in addressing concerns with human development as it creates new knowledge and new ways of addressing issues. One way to establish and propel those collaborations in India could be through research on issues of importance to society. There is currently a research initiative under Biotechnology Industry Research Assistance Council or BIRAC that partners with, "the Bill & Melinda Gates Foundation (BMGF) and the Department of Biotechnology (DBT) to collaborate on mission-directed research and build Grand Challenges India to support health research and innovation" (BIRAC). A few examples of topics that are included in their research are, "scientific and technical solutions for infectious diseases, strengthening India's scientific translation capacity, scientific and technical advances related to agriculture"

(BIRAC) While research studies completed under BIRAC are more advanced research studies, research concerning innovation across multiple fields can help address a variety of societal problems. Allowing students to share innovative ideas through research can begin to improve human development standards across India.

The curriculum offerings in higher education institutions in India should include traditional learning methodology as well as exposure to employment opportunities. While students are gaining exposure into their career field, they are also being exposed to different challenges facing those industries and the impacts of those industries. France has begun to introduce partnerships with large companies to provide these opportunities to university students. Similarly, there are initiatives underway in India that address expanding institutional base. These initiatives are the "Make in India" initiative and an initiative to support entrepreneurship. The, ""Make in India is a major national programme of the Government of India designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build best in class manufacturing infrastructure in the country" (IBEF, 2019). Expanding on the manufacturing industry in India will help create new jobs encompassing a variety of different needs. While the main goal of the initiative, "is to attract investments from across the globe and strengthen India's manufacturing sector" (IBEF, 2019), in order to do so India must improve current standards in the manufacturing industry.

The need for innovation in technology and enhancing manufacturing efficiency can be obtained through partnerships between local universities and private firms. Partnerships give students the opportunity to learn new skills while still in school and simultaneously creates the jobs of the future. In addition, manufacturing partnerships can extend to the vocational studies allowing those students exposure with their skill sets. Increasing collaborations with businesses will help students gain exposure into skills that are needed for jobs in a particular industry. In many cases, the general skills learned through outside learning can be shared throughout many different jobs a student may encounter after completion of higher education studies. The need for transferable skills can be achieved by a student who is exposed to as many opportunities as they can while completing their studies.

One of the economic goals of the India government is to increase entrepreneurship and business formation. According to the EY G20 Entrepreneurship Barometer 2013 report, India ranks 11th among the G20 countries in ease with which entrepreneurs can assess funds (Franchise India, 2015). Higher education can serve as a potential tool for encouraging entrepreneurship through linking student research projects to industry and start-ups. India ranks very low in education and training for entrepreneurship, yet 70% of local entrepreneurs believe that access to unofficial training networks has increased over the 2008-2010 period (Franchise, 2015). Higher education could supplement, yet not replace, these unofficial training networks,

and provide opportunities to enhance small scale businesses and start-ups simultaneously. This approach would not only expose students to the world of entrepreneurship but increase the production of research in domestic industries. In addition, taking a somewhat formal approach to entrepreneurship education might enable outside parties to more easily identify unique and valuable entrepreneurial start-ups that are reasonably safe for venture funding.

As India considers increasing the intellectual autonomy of its educational institutions, one way to approach this would be to change the governance structure to include independent agencies. In line with the National Knowledge Commission's report, we recommend the formation of an independent regulatory agency to oversee the regulation of India's universities and colleges. This board would supplement the UGC and replace the NAAC. The UGC would handle disbursement of funds. The IRAHE would handle entry requirements for new institutions and oversee accreditation directly, or license outside bodies to accredit institutions. This arrangement would allow institutions to retain their autonomy without significant oversight from the State.

One low cost way of increasing accreditation standards without restructuring the roles of the UGC and other bodies would be to allow institutions to seek accreditation from international agencies. This would serve as a step towards India's goal of housing a world class higher education system by literally putting its institutions on par with the global standard. We recommend the creation of a separate body to handle ODL institutions. A body similar to France's CNED would accredit the institutions and could even promote the usage of them. The Distance Education Bureau could regain its powers from the UGC and take on these new responsibilities. Another solution would be for the NAAC to update their standards to incorporate the uniqueness of ODLs. This could mean evaluating them using different standards that doesn't consider criteria only traditional institutions would have.

Education is the first step in improving human development. Education addresses economic and societal challenges and its solutions. India's large higher education system has faced multiple challenges in recent years. Despite the challenges, India has begun to make changes to improve the quality of the higher education system. The goals laid out by the Ministry of Human Resource Development are achievable. Expanding educational base to provide opportunities for students to gain employability skills will require direct changes to traditional curriculum. Promoting research and fostering collaborations will allow students the opportunity to share their knowledge and gain valuable skills. By working to improve the quality of education with proper allocation of the resources on hand, the possibilities for students after their learning period in higher education are endless.

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KNOWLEDGE AND NATION

Human Capital Development through Higher Education – Lessons For India

UNITED STATES OF AMERICA

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As it is rightly said by Mustafa Kemal Ataturk, “A good teacher is like a candle who consumes itself to light the way for others”

Lastly we would like to thank our faculty as we feel privileged for being a part of this platform provided by them to us where we got an opportunity to expose our talents and abilities.

In the words of Henry Ford, “Coming together is a beginning, keeping together is progress and working together is success”

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OVERVIEW

The following project ‘Knowledge and Nation’ is a detailed study of higher education with respect to human capital . Human capital development is the process of improving an organization's employee performance, capabilities and resources for achieving the objectives of the organisation.

Development is void if the human development doesn’t take place .Human capital development is vital to the growth and productivity of the organisation. The most effective way of enhancing and enlarging the productive workforce in the country is the expenditure done on strengthening the education system, the root of development starts from education which should be given immensely.It is considered as the best source of human capital formation because ‘ A dull mind cannot lit a bright future ‘ . And it is rightly said that education will always remain the prime factor while considering human capital development.

The above information is further elaborated in the research paper.

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CHAPTER 1:

INTRODUCTION

*An investment in knowledge pays the best interest – By **Benjamin Franklin***
*Education is the most powerful weapon which you can use to change the world – By **Nelson Mandela***

Research has shown that human capital acquired through education influences economic growth by increasing adoption of new technologies and the productivity of the labor force. Education influences and is also influenced by such rapid economic growth and the social changes that accompany it. While education by itself is not sufficient for economic transformation, it is one of the necessary ingredients. Education also influences the evolution of politico-economic institutions.

Human Capital Development is defined as the knowledge, skills, competencies and other attributes (including creativity) embodied in individuals or group of individuals acquired during their life to produce goods and services or to produce economic value. The idea of human capital is alive from the days of Adam Smith but it was Arthur Cecil Pigou, a British Economist, who discussed about the term "human capital" in his book 'A Study in Public Finance' which was published in 1928, that grabbed everybody's attention.

Human Capital is similar to physical means of production, e.g., factories and machines; one can invest in human capital via education, training, medical treatment and can yield outputs depended on the rate of return on the human capital one owns. Thus, Human Capital is a means of production into which additional investment yields additional output.

Adam Smith, who is known as "the father of Economics" mentioned human capital as one of the four fixed capitals in his book ' An Inquiry into the Nature and Causes of the wealth of Nations Book 2 - of the Nature, Accumulation, and Employment of Stock'. He defined human capital as, "... the acquired and useful abilities of all the inhabitants or members of the society. The acquisition of such talents, by the maintenance of the acquirer during his education, study, or apprenticeship, always costs a real expense, which is a capital fixed and realized, as it were, in his person. Those talents, as they make a part of his fortune, so do they likewise that of the society to which he belongs. The improved dexterity of a workman may be considered in the same light as a machine or instrument of trade which facilitates and abridges labor, and which, though it costs a certain expense, repays that expense with a profit."

Studies proposed by Mankiw, Romer and Weil (1992), stress the essential role of education as the most important production factor in increasing human capital as a determinant of economic growth, by helping individuals acquire knowledge which encourages participation in groups, open doors to job opportunities, develops social interactions , makes individuals aware of their rights, improves health, and reduces poverty.

Nelson & Phelps (1996) and Benhabib & Spiegel (2005) emphasize that education can facilitate the sharing and transmission of knowledge needed for developing new technologies. For instance, nations without enough human capital could not manage effectively their physical capital.

There are various organizations that publish Human Capital Index annually. The World Bank's 'World Development Report on the Changing Nature of Work, 2019' showcases the index and explain its importance given the impact of technology on labor markets and the future of work. In this Index, which followed five main indicators such as child survival, school enrolment, quality of learning, health growth and adult survival, Singapore held the top spot followed by South Korea and Japan. America ranked 24th and India at a low 115 out of 157 countries.

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Education is one of the sectors that plays a major role in accelerating human capital formation. Many theories explicitly connect investment in human capital development to education, and the role of human capital in economic development, productivity growth, and innovation has frequently been cited as a justification for government subsidies for education and job skills training.

One of the countries that has been attracting youth from all across the world to its higher education institutions is U.S.A, whose 17 universities are among the top 20 in the world (Time Higher Education World University Rankings 2019). The United States of America, a highly developed country with the world's largest economy by nominal GDP (IMF World Economic Outlook ,2018), is the third most populous country that is estimated to be 329,618,373 as of Sept. 11, 2019 with having 1 birth every 8 seconds and 1 death every 12 seconds. Besides, its 24th ranking in Human Capital Index indicates America's top position in the world. Such a country wouldn't have touched these heights, had it not had a strong education system as its foundation. According to IIE's Project Atlas 2018 data, U.S.A is by far the most popular destination for international student population with 1,094,792 international students. This data proves that U.S.A is the most sought out country to attain higher education across the world.

On the other hand, though India is standing as the 5th largest economy by nominal GDP in the world (IMF World Economic Outlook, 2018),its education system hasn't been able to reach out to every corners of the country effectively, with its quality of education being questioned many times when after introducing many reforms in education system. This is reflected in its 115th ranking in Human Capital Index, 2019. Indian higher education is the third-largest educational system in the world after the United States and China, and has a great potential to compete with global universities Main participants in the system include Institutes of National Importance, central universities, state universities, deemed-to-be universities, private universities, autonomous institutes, and supporting institutes. According to MHRD, [the] number of universities has notably increased from 20 in 1950 at an extreme growth rate by 3285%, to 677 in 2014, which represents 51 institutions of national importance (16 IITs, 30 NITs and 5 IISERs), 45 central universities, 318 state universities, 185 state private universities, 129 deemed-to-be universities, and 4 institutions established under various state legislations. Likewise, [the] number of registered colleges has markedly increased from 500 in 1950 at a massive growth rate by 7341%, to 37,204 in March 2013.

Dr. Manmohan Singh, Former Prime Minister of India said that, by 2030, India will be amongst the youngest nations in the world with nearly 140 million people in the college-going age group, one in every four graduates in the world will be a product of the Indian education system.
(Times of India, 2014).

By 2030, fifty percent of youth would be in the higher education system, at least 23 Indian universities would be among the global top 200, six Indian intellectuals would have been awarded the Nobel Prize, the country would be among top five countries globally in cited research output, its research capabilities boosted by annual R&D spends totaling over US$140 billion. (Businessline,2014).

Therefore, this research work concentrates on U.S Higher Education and its impact on Human Capital Development and to suggest its salient features for India's Education System to make it effective and aligned to the modern demands of the world with an objective to help every individual in India to attain his/her fullest potential.

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CHAPTER 2:

THE UNITED STATES OF AMERICA – PROFILE

"There's not a liberal America and a conservative America- there's The United States of America."- Barrack Obama

1.2.A. Country Profile: USA and INDIA
1.2.B. History of the USA
1.2.C. Current Political Landscape of the USA

1.2.A. Country Profile of the USA

The United States of America is the world's foremost military and economic power, with global interests and unmatched global reach. The USA has the largest military budget in the world. It has the world's third largest population at 325,000,000. It is the world's largest economy valued at $20.41 trillion this account to a quarter of the world total. This makes Human Capital Development a very integral factor in the United states.

In 2018, 11.8% of The United States' population was found to be living below the poverty line, this compared to countries like India where the Late Finance Minister Mr. Arun Jaitely assumed that the total population living below the poverty was 17% still is relatively a lower figure. As of May 2019, the rate of inflation in the United States was at a healthy 1.8%.

Today the United States attracts millions of people from around the world to seek education within its borders, the majority of these people belong to countries in Asia, such as India and China. This is because of the better quality of education given in the United States; today almost 172 universities in the United States are amongst the top ranking universities in the world.

The US receives students from all over the world, but china and India particularly dominate the market. Most international students in USA are degree seeking students as opposed to short-term exchange students. The reputation and diversity of its higher education system, along with opportunities to work in the country, are among the top reasons that students are drawn to U.S.

In contrast, The first Indian prime minister, Jawaharlal Nehru, declared that the (Indian) education system had to be renovated to meet the national needs and aspirations of building a secular democracy with a state-led command economy. the higher education focus of India proceeded unchecked by egalitarianism or revolution. This has resulted in one of the largest higher education systems and the third largest scientific and technical manpower in the world. While this allowed India to position itself as a player in the global knowledge economy when it cautiously began its economic liberalization in the 1980s, less than 30 percent of its population as a whole had any level of education. It was only in 1986 that India realized the importance of basic education, a delayed start that set it back considerably in the education race.

1.2.B. History of USA

The United States of America was formed after the American Revolution where it separated itself from the British crown and united all its colonies in 1776 to form a Democratic Country with a federal system of government where there is a clear division of powers between the Judiciary, Executive and Legislative branches. It is nicknamed the **Land of The Free** where people from all corners of the world immigrate to in order live a life of liberty and one which is devoid of any kind of persecution. Since then there have been

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many events that shaped the United States we know today. From the Civil War in 1861 where the Federalists fought the Confederates in order to abolish slavery to the 1929 Wall street crash which rendered 13 million people unemployed, to the creation of the world's first Atomic bomb the United States has had its fair share of experiences to learn from. In 2001 the world trade center in New York City was attacked by Al-Qaeda, a terrorist outfit based in Afghanistan which prompted the United States to increase its Military Expenditure. In 2008, the world saw the sub-prime crisis which hit the United States the worst this again was followed by major reforms to its economy. Such events shaped the economy of the United States and made it a major player in the world economy today.

1.2. C. Current Political Landscape Of The USA

The Current President of The USA is Donald Trump, a former real estate developer. He came into power in 2016 after he defeated democratic candidate Hillary Clinton. Donald Trump's economic policies are more right leaning and aim at encouraging production in the USA and reducing foreign imports through tariffs and gave the slogan of **"Buy Americans and Hire Americans".** Many of his methods have ideologically divided the people of the United States. So far, the United States has made several changes to its economic policies such as reforming the NAFTA (North Atlantic Free Trade Agreement, signed between The USA, Canada and Mexico), he pulled the USA out of The Paris Climate Agreement, and He Imposed several tariffs on Chinese goods. Domestically he has tried to curb illegal immigration in the United States and has restructured the H1B Visa Program that allowed people from other countries to take jobs in the USA in order to encourage jobs in America going to American Citizens. Hence the election of Donald Trump has played a massive role in the phase shift of The American Economy in the 21st Century.

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CHAPTER 3:

OBJECTIVES

The objectives of the present article are:
1. To compare the education system of USA with India on the basis of different indicators.
2. To see the impact of achievements in education sector on literacy rates and the number of literates of these states.
3. To suggest policy recommendations to improve the education scenario of India as well as it's states under the study.
4. To measure the conversion of educated individuals into human capital formation
5. To study the educational status with reference to major reforms taken place
6. To study the cost and effects of education
7.To study the reasons for students seeking education in the United States

Indian poverty line: down to earth magazine
Us poverty line: US census Bureau
(Rienda et al., 2011; Times of India, 2014).
Pacific Science Review B: Humanities and Social Sciences
journal homepage: www.journals.elsevier.com/pacific-sciencereview-b-humanities-and-social-sciences/

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CHAPTER 4:

STRUCTURE OF THE UNDERGRADUATE SYSTEM

"No other investment yields as great a return as the investment in education. An educated workforce is the foundation of every community and future of every economy."- Brad Henry

2.1.A Types of Colleges
2.1.B Characteristics of US higher Education System
2.1.C Admission Requirements
2.1.D Associations for Higher Education

2.1 A Types of Colleges

➢State College or University

A state school is supported and run by a state or local government. Many of these public universities schools have the name of the state, or literally the word "State" in their names: for example, Washington State University and the University of Idaho.

➢Private College or University

These schools are privately run as opposed to being run by a branch of the government. Private US universities and colleges are mostly smaller in size than state schools. Religiously affiliated universities and colleges are private schools.

➢Community College

Community colleges are two-year colleges that award an Associate's degrees (transferable), as well as certifications. There are many types of Associate's degrees, but the most important distinguishing factor is whether or not the degree is transferable. Usually, there will be two primary degree tracks: one for academic transfer and the other prepares students to enter the workforce straightaway. University transfer degrees are generally Associate of Arts or Associate of Science. Not likely to be transferrable are the Associate of Applied Science degrees and certificates of completion.

➢Institute of Technology

An institute of technology is a school that provides at least four years of study in science and technology. Some have graduate programs, while others offer short-term courses.

2.1.B. Characteristics of the U.S. Higher Education System

➢Learning Environment

The learning structure of the higher education is dynamic .Students will be expected to share their opinion, argue a point, participate in class discussions, and give presentations which is quite surprising for the international students.

Each week professors usually assign textbook and other readings and the students are expected to keep up-to-date with the required readings and homework so they can participate in class discussions and understand the lectures. Certain degree programs also require students to spend time in the laboratory.
Grades are issued to the students for their courses which are usually based upon:

- Participation in class discussion, seminars and quizzes determine the student's grades
- Midterm examination given during class time
- Term/report papers, or laboratory reports must be submitted for evaluation.
- A final examination will be held after the final class meeting.

➢Credit based system

Each course is worth a certain number of credits or credit hours. This number is roughly the same as the number of hours a student spends in class for that course each week. A course is normally worth three to five credits.

A full-time program at most schools is 12 or 15 credit hours (four or five courses per term) and a certain number of credits must be fulfilled in order to graduate. International students are expected to enroll in a full-time program during each term.

➢Transfer of credits

If a student enrolls at a new university before finishing a degree, generally most credits earned at the first school can be used to complete a degree at the new university. This means a student can transfer to another university and still graduate within a reasonable time.

➢Grading System

An academic transcript is to be submitted as part of application for admission to university or college. Academic transcripts are official copies of your academic work. In the US this includes "grades" and "grade point average" (GPA), which are measurements of your academic achievement. Courses are commonly graded using percentages, which are converted into letter grades.
The grading system and GPA in the US can be confusing, especially for international students. The interpretation of grades has a lot of variation. For example, two students who attended different schools both submit their transcripts to the same university.

➢Academic Year

The academic calendar usually begins in August or September and continues through May or June..
The academic year at many schools is composed of two terms called "semesters." (Some schools use a three-term calendar known as the "trimester" system.) Still, others further divide the year into the quarter system of four terms, including an optional Summer session. Excluding the Summer session, the academic year is either comprised of two semesters or three quarter terms.

2.1.C. Two-Year Programs | Four-Year Programs

Two-Year Programs
There are over 1,000 two-year colleges in the United States. These schools are also known as junior or community colleges. In most states, community colleges are operated either by a division of the state university or by local special districts subject to guidance from a state agency. Students who choose a two-year program route in higher education study to earn an associate (also known as intermediate) degree. Associate degrees are awarded by a community, junior or technical college indicating that you have completed a program of study with a broad base in general education and a concentration in a specific area.
In order to obtain an associate degree, you must earn 60 semester credit hours, which typically takes about two years. Programs generally consist of three parts: general education requirements, requirements within your major (or concentrated area of study) and electives (courses of your own choosing based on your interests).

➢Two-Year Undergraduate Degrees

There are different types of associate degrees. Both the A.A. degree (or Associate of Arts degree) and A.S. degree (Associate of Science degree) are designed to prepare students to transfer into a 4-year college or university. For example, you may earn an A.A. in Early Childhood Education, then transfer to a 4-year university. At the university, you can study further to earn a degree that will enable you to become a teacher at a preschool or elementary school.
Other associate degrees, such as an A.A.S. degree (Associate of Applied Science degree), are designed to prepare students to join the workforce immediately following their two years of study. These degrees, also called occupational or vocational, are sometimes preferred by employers in science and technology-related industries for mid-level jobs.

Over 2,000 colleges and universities offer four-year programs in which students earn a bachelor's degree. Last year, over 1.3 million people in the United States earned this degree. Commonly called a "college degree," the undergraduate bachelor's degree typically takes four years to complete and is comprised of 120-128 semester credit hours (60 of which may be transferred from an associate degree at a community college - see 2 year programs above).

The four years spent as an undergraduate at a university are typically known as the freshman, sophomore, junior and senior years. The curriculum of many undergraduate programs is based on a "liberal arts" philosophy in which students are required to study courses from a range of subjects to form a broad educational foundation. These general education courses include study in English composition, social sciences, humanities, history, mathematics and natural or physical sciences.

Once they have met the core curriculum requirements, students at most institutions are asked to choose a specific field of study, also known as the major. The major should be in an academic area that is of great interest to student. The final two years are spent taking more courses that are more directly related to your major. Other four-year colleges and universities emphasize preparation for special professional areas—fine arts, pharmacy, engineering, business, agriculture, and other specialized fields.

Unlike other undergraduate models, degrees in law and medicine are not offered at the undergraduate level in the US. Instead, they are completed as professional study after receiving a bachelor's degree. Neither law nor medical schools require or prefer a specific undergraduate major, although medical schools do have set prerequisite courses that must be taken before enrollment. Undergraduate students who are preparing to attend medical school following their undergraduate careers are known as pre-med.

➢Four-Year Undergraduate Degrees

The two types of bachelor's degrees typically offered are **B.A. degrees** (Bachelor of Arts degrees) and **B.S. degrees** (Bachelor of Science degrees). If you choose to earn a B.A., the majority of your coursework will typically be in the arts, such as social sciences, humanities or fine arts. Students who earn a B.S. degree take the majority of their courses in life, physical or mathematical sciences.

Other, more specialized bachelor's degrees include:

- Bachelor of Fine Arts (B.F.A.)
- Bachelor of Social Work (B.S.W.)
- Bachelor of Engineering (B.Eng.)
- Bachelor of Science in Public Affairs (B.S.P.A)
- Bachelor of Science in Nursing (B.S.N.)
- Bachelor of Philosophy (B.Phil.)
- Bachelor of Architecture Degree (B.Arch.)
- Bachelor of Design (B.Des.)

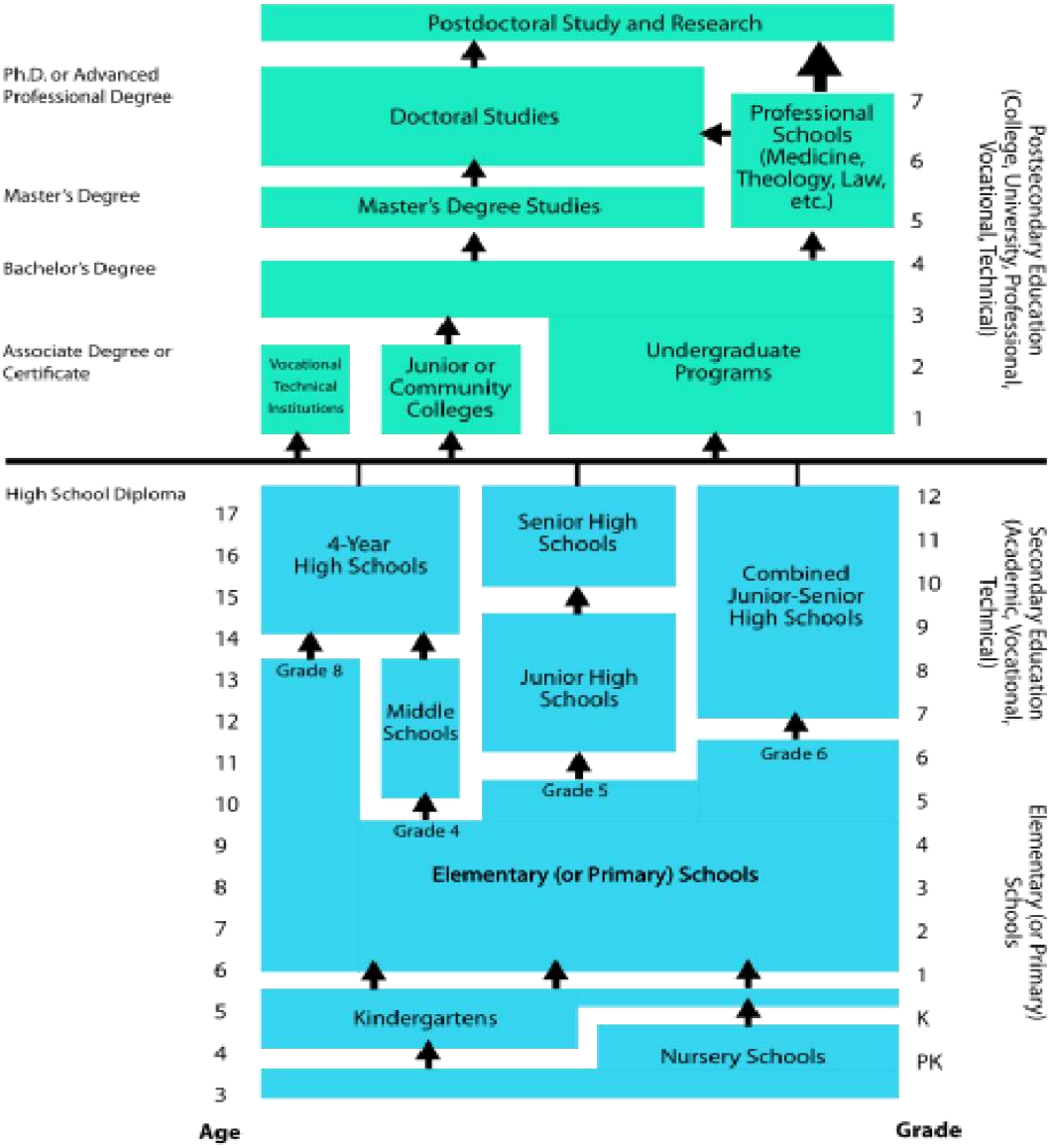


FIGURE 2.1.C. (1) UNDERGRADUATE SYSTEM OF UNITES STATES OF AMERICA :

2.1.C. Admission Requirements

- **Advanced placement**

AP is a college board program that offers college level courses to high school students. The AP program gives students the opportunity to earn college credit early and sometimes enables them to enter an undergraduate program at a college at the higher level.

- **Admission to higher education**

American Higher Education Institute varies significantly, there are also major differences in Admission requirement.

1. Low or no requirement :- Institution with open door admission policy with low requirement or no requirement.

i. No Diploma requirement: Anyone aged 18 and over is welcome.

ii. Low requirements: Anyone with a school diploma or GED is welcome.

- **Average Requirements**

Most Institutions fall between low and stringent admission requirements.

i. Requirements: A High School Diploma obtained followed by a college preparatory curriculum, plus average scores in the SAT or ACT college readiness test.

- **Stringent Requirements**

A relatively small number of institutions select the best student based on.

i. Level content and Performance during the last four years of high school.
ii. Scores in the SAT or ACT college readiness test

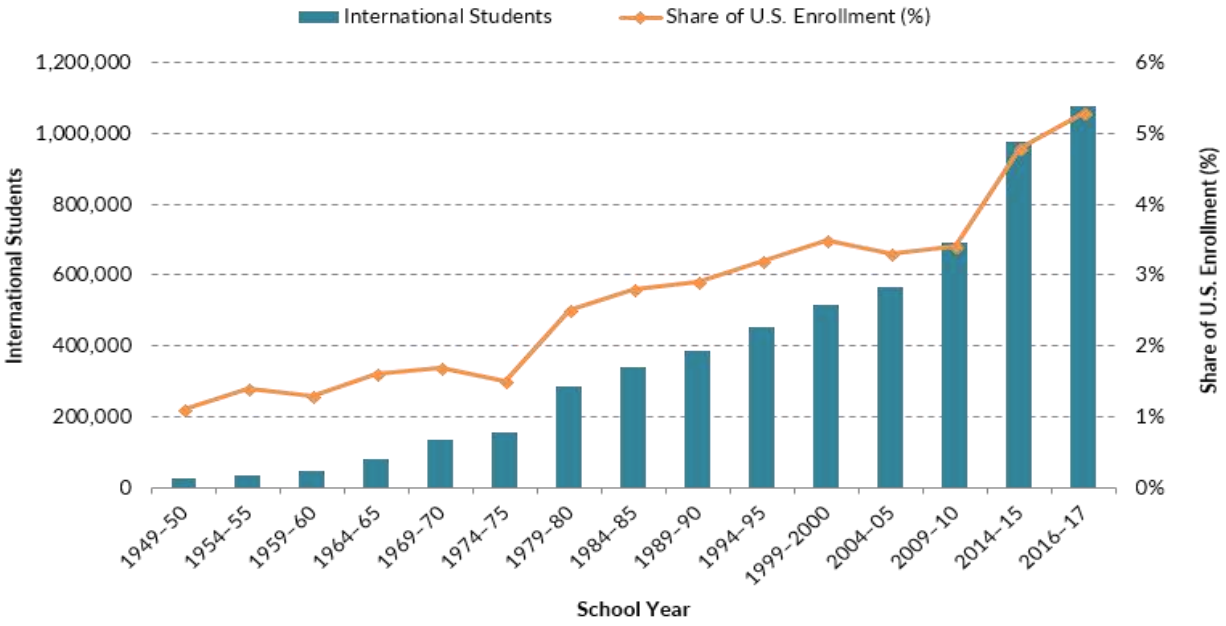
In addition

i. Involvement in extra circular activities, evidence of leadership essays, letter of recommendation, etc.
ii.In order to know the value of a diploma from the United States, it is important to establish at which institution and what level the person has studied.

2.1.D. Associations for Higher Education

Compared to most other higher education systems around the world, the U.S. system is largely independent from federal government regulation and is highly decentralized.

[1]The U.S. higher education contains a variety of not-for-profit associations that promote the professional development of people within the field of international higher education and work to expand awareness of issues related to it, including international student recruitment, international student admissions and retention, international student services, and comprehensive campus internationalization. Examples of such associations include the American Council of Education (ACE), the American Association of Collegiate Registrars and Admissions Officers (AACRAO); the American Association of State Colleges and Universities (AASCU); the American Association of Community Colleges (AACC); the National Association for College Admission Counseling (NACAC); NAFSA: Association of International Educators; the National Association of Graduate Admissions Professionals (NAGAP); and the Overseas Association for College Admission Counseling (OACAC).



Source: Institute of International Education (IIE), "International Student Enrollment Trends, 1948/49-2016/17," *Open Doors: Report on International Educational Exchange* (Washington, DC: IIE, 2017), available online.

FIGURE 2.1.D. (2) INTERNATIONAL STUDENT INTAKE AND ENROLLMENT

CHAPTER 5:

STRENGTHS OF THE UNDERGRADUATE EDUCATION STRUCTURE OF THE COUNTRY

"The key to a successful learning environment is structure."- Cara Carroll (The First Grade Parade)

Education system in united states is much more diversified than that of other countries. USA has the highest no. of international students followed by UK and France . following are the few reasons why united states has better amount of human capital formation and how it affects their economy.

The United States is the premiere destination for international students from all over the world. The main advantages of higher education in the USA are as follows:

➢World class learning institutions

Most American colleges and universities offer top-notch education programs with highly qualified teaching staff. The research at many of these universities is cutting-edge and often published in journals worldwide. Many of the professors at these schools are leading authorities in their field. The list of world-class learning institutions in the USA is endless and include, but are not limited to: Stanford University, Harvard, Yale, Cornell, California Institute of Technology, UC Berkeley, University of Pennsylvania, MIT, John Hopkins, Northwestern University, etc.

➢Worldwide recognition

A degree or certificate from a college or university is useless if it is not recognized by employers, other institutions or field authorities. Therefore, it is of the utmost importance that we ensure that the degree from the school chosen is recognized in the place you plan to use it in. Fortunately, colleges and universities in America are given professional accreditation by different governing bodies. These schools have to earn their accreditation by meeting certain criteria, helping ensure a quality education, as well as a degree or certificate that is recognized.

➢Supporting industries, training and research

Because of the vast wealth of resources in America, the opportunities for practical training related to the field of study are vast. Most college and universities have established affiliations with employers and researchers in different fields of study, thereby creating an avenue for students to obtain hands-on and invaluable experience.

➢People and culture

America is a melting pot of people from all over the world. One will find most Americans to be very hospitable, friendly, kind, generous and accepting of foreigners. Of course, there are a few exceptions, as in any country, but these are not the norm. In general, the people are funny, gregarious, innovative, and eager to learn. These are traits that many international students adopt and take home with them.

➢Technology

Regardless of what degree a student chooses to pursue in school, he or she will have to use computers and other technologies in order to succeed. Many universities incorporate the latest technology into their

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curriculum, encouraging students to obtain proficiency before they go out into the workplace. Specialized technology, such as the newest medical equipment in medical schools, allows each student to maximize their true potential and gain experience that is marketable in the real world.

➢**Flexibility**

Since the USA school system utilizes credit units and often accommodates working students, most schools offer academic programs that are flexible in nature. This means that, very often, one can choose when to attend classes, how many classes to enroll in each semester or quarter, what elective or optional classes to take, etc. An American education is very conforming to each student's needs.

➢**Global Focus**

More and more often, American colleges and universities are focusing on the global aspects of each subject, better preparing students with a worldwide view of their field. No longer can students merely focus on certain geographic areas when obtaining their academic training. Most US learning institutions have recognized this and offer a more comprehensive and global curriculum to meet these new trends.

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CHAPTER 6:

MAJOR REFORMS INITIATED BY THE COUNTRY SINCE THE YEAR 2000

"Reform is not an event; it is a process. We will continue to push forward the cause of reform."- Manmohan Singh

Educational Reforms since 2000

In 2000, Republican George W. Bush was elected president in one of most controversial elections in the history of US. Early in his term, his administration approved education reform and a large across-the-board tax cut aimed at stimulating the economy. Here are some major reforms since the year 2000.

1.Bill Clinton: Goals 2000

The National Educational Goals known as Goals 2000 were set by the U.S. Congress in the 1990s to set goals for standards-based education reform.

The goals stated in the Summary of Goals 2000 include:

- All children in America will start school ready to learn.
- The high school graduation rate will increase to at least 90 percent.
- All students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, the arts, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our nation's modern economy.
- Every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.

2. No Child left Behind: George W Bush

The No Child Left Behind Act of 2001 (NCLB) was in effect from 2002–2015. It was a version of the Elementary and Secondary Education Act (ESEA). NCLB was replaced by the "Every Student Succeeds Act in 2015".

When NCLB was the law, it affected every public school in the United States. Its goal was to level the playing field for students who are disadvantaged, including:

- Students in poverty
- Minorities
- Students receiving special education services
- Those who speak and understand limited or no English

NCLB Improvements

- NCLB gave more flexibility to states in how they spent federal funding, as long as schools were improving.
- NCLB worked on all teachers to be "highly qualified" in the subject they teach. Special education teachers had to be certified and demonstrate knowledge in every subject they teach.

- NCLB said that schools must use science- and research-based instruction and teaching methods.

3. Every Student Succeeds Act- Barack Obama

On December 10, 2015, President Obama reauthorized ESSA as the Every Student Succeeds Act (ESSA). ESSA replaced the previous reauthorization of ESEA, known as the No Child Left Behind (NCLB) Act, enacted in 2002. A few provisions from the act are as follows:

- Advances equity by upholding critical protections for America's disadvantaged and highneed students.
- Requires—for the first time—that all students in America be taught to high academic standards that will prepare them to succeed in college and careers.
- Ensures that vital information is provided to educators, families, students, and communities through annual statewide assessments that measure students' progress toward those high standards.

4. Race to the top fund (R2t)

Race to the Top or R2t was a $4.35 billion United States Department of Education competitive grant created to stimulate and reward innovation and reforms in state and local district K-12 education. It was announced by President Barack Obama and Secretary of Education Arne Duncan on July 24, 2009. funded as part of the American Recovery and Reinvestment Act of 2009.

Through Race to the Top, the Department ask states to advance reforms around four specific areas:

- Adopting standards and assessments that prepare students to succeed in college and the workplace and to compete in the global economy;
- Building data systems that measure student growth and success, and inform teachers and principals about how they can improve instruction;
- Turning around lowest-achieving schools.

Race to the Top promised to reward States that demonstrate success in raising student achievement and have the best plans to accelerate their reforms. Moreover, these States offer models for others to follow and will spread the best reform ideas across their States, and across the country.

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CHAPTER 7:

FINANCIAL ASPECTS

"Wealth, in even the most improbable cases, manages to convey the aspect of intelligence" ---John Kenneth Galbrath

According to College Board, published tuition fees for 2018/19 at state colleges are an average of US$10,230 for state residents, and $26,290 for everyone else. This compares to an average of $35,830 at private non-profit colleges.

While the US remains the world's most popular destination for international students, it's also among the most expensive choices. However, although the headline costs of studying in the US may be daunting, often involving a string of five-digit numbers, it's worth checking all the facts on fees and funding options before you make up your mind, as it may work out cheaper than you initially think.

In HSBC's 2018 report, The Value of Education, the US again emerged among the top choices for parents considering university abroad for their child – but also one of the most expensive, with students spending an average of US$99,417 over the course of their degree. Most undergraduate degrees at public universities cost around $27,000 (according to student support organization College Board).

Costs of study at different types of US university

At the very top-tier US universities (the majority of which are private non-profits), fees and living costs are likely to add up to around US$60,000 per year, but it's also possible to study in the US at a much lower outlay.

Those seeking a more affordable option will find lower tuition fees at US universities within the public sector. These are typically run as state university systems – collections of colleges within a state, which share some administrative aspects while operating as separate institutions. Public universities in the US have two tuition fee rates: one for state residents and one for everyone else. The second (more expensive) category applies equally to applicants from other US states and from other countries. Private universities tend to be much smaller than public universities and have a more diverse student population (both from different states and different countries) due to the fact that tuition is the same price for all students. You can read more about how public and private US universities compare here.

According to College Board, published tuition fees for 2018/19 at state colleges are an average of US$10,230 for state residents, and $26,290 for everyone else. This compares to an average of $35,830 at private non-profit colleges. The cheapest options of all, however, are public-sector twoyear colleges – also known as community, technical or city colleges – where average fees for 2018/19 are just $3,660.

Average fees at US universities, 2018-19				
	Public two-year colleges	**Public four-year colleges (in-state fees)**	**Public fouryear colleges (out-of-state fees)**	**Private nonprofit fouryear colleges**
Tuition and other fees	$3,660	$10,230	$26,290	$35,830
Room and board	$8,660	$11,140	$11,140	$12,680
Total (per year)	**$12,320**	**$21,370**	**$37,430**	**$48,510**

TABLE 6.1
Source: College Board

When transport and other living expenses are factored in, College Board estimates the following annual budgets for undergraduate students in 2018/19:

- $17,930 (community college)
- $25,890 (in-state students at a four-year public college)
- $41,950 (out-of-state students at a four-year public college)
- $52,500 (private non-profit four-year college)

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CHAPTER 8:

COMPARISON OF TOP COUNTRIES AND THEIR HIGHER EDUCATION

Country	World Ranking(Higher Education)		Flagship Institute		GDP Expenditure on Education
	2018	2019	Student Intake	Acceptance Rate	
US	1	1	MIT		1.3% (higher education)- OECD 2018
			11574(2018)	7.20%	4.9% (education) -World Bank 2014
Switzerland	2	2	ETH Zurich (Swiss Federal Institute of Technology)		5.1% (WB 2016)
			20607(2017)	27%	
UK	3	3	Oxford University		5.5%(WB 2016)
			8800(2018)	20%	
Denmark	5	5	University of Copenhagen		7.6% (WB 2014)
			38324(2018)	26%	
Canada	6	8	University of Toronto		5.3% (WB 2011)
			91286(2018)	43%	
Singapore	7	9	NUS		2.9% (WB 2013)
			37047(2018)	25%	
Australia	8	10	ANU		5.3% (WB 2016)
			25500(2018)	35%	
Finland	9	6	Aalto University		6.9% (WB 2016)
			12000(2018)	20%	
Germany	16	15	Techniche Universitat Munchen(TUM)		4.8% (WB 2016)
			4200(2018)	IELTS : 6.5, TOEFL : 88	
France	17	16	PSL University		5.4% (WB 2016)
			17000(2018)		

TABLE 6.2

1-World Ranking based on Overall ranking of U21 (Melbourne Institute Project) data based on Webometrics university Rankings 2- Acceptance rates based on Quora interaction with students of college and official college websites.3- Latest available % from world bank data.

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CHAPTER 9:

SWOT ANALYSIS

" The SWOT Analysis- Using your strength to overcome weakness,Using opportunities to overcome threats " –Lawrence G Fine

COUNTRIES	STRENGTHS	WEAKNESS	OPPORTUNITIES	THREATS
USA	1. Advance Technology 2. Practical Exposure	Affordability	Providing training, general education, and upward mobility opportunities for people	Massive Open Online Courses (MOOCs)
INDIA	1.Subsidized education 2. Reservation for unprivileged	1. Heavy emphasis on grades. 2.Absence of counsellors	Distance education possibilities for continuing education.	Pressure to take up STEM courses over any other options
UK	1.Strict Educational System 2. High research and teaching standards	Rigidity in terms of changing majors	Increased research partnerships with universities worldwide	Increasing global competition
FINLAND	Equality in education and working life	Lack of internationalisation	Developing research training and careers	Radical changes in operating environment

Table 2.5

USA Education System as compared to India:

1. Schools in USA have lighter syllabus than India, they mainly focus on creative learning through practical application, students do not carry a lot of books to the school. In India, studies are more focused on theory and traditional marking.

2. Their education system is much more flexible than India. Students can change their subjects after 1 or 2 years of their bachelors too.

3. Unlike the under graduate system of India, higher education in USA has 4 years of bachelors in which 2 years is foundation. This develops a broad based knowledge across many subject areas like math, history, literature, history etc. This gives them a broader perspective for choosing a specific area of study

4. Schools do not conduct formal examination for students in lower grades rather they have grading on homework, so that students can track their level of proficiency and know where they are going wrong.

5. Universities are research oriented educational institutions with more emphasis on practical world, according to New York times nations 18 million undergraduates, 40% were attending community college, of these students 62% of the students worked full time and 40% of them worked at least 30 hours a week.

6. Almost every student in their higher studies takes up internships and works part time after clearing 12th grade, through this they gain knowledge of the outside world. Their learning is not limited to books and courses they take up.

USA has a vast number of academic options offered to students. Since the USA is such a large country with vast resources, almost every field of study is available in the country. One can study everything from Russian history to nuclear physics.

3.1.A. Hypothesis 1.

Higher educational qualifications attained in the US stimulates a student's critical and flexible thinking over rigid thinking.

With reference to the above given hypothesis, various factors in American education inculcates critical and analytical skills among students. These factors include approach to teaching and learning, technological exposure, advanced teaching methods, practical experience given to students, independence and vast opportunities provided to the students.

The grade segregation process in a typical classroom representing education system of the United States involves 50% score allotted to daily homework, performance in pop quizzes assigned with each chapters will count for 20%, the comprehensive final exam will count for 20% and a major project will count for remaining 10%. Such a grading system is a well-organized way of evaluating a student's complex understanding of the course material. In this way a student's progress is measured with his/her overall performance and not just examination scores.

In addition, the culture of a US college classroom tends to be more egalitarian and less authoritarian. The use of internet and devices like tablets and laptops in a classroom is common and provides unlimited sources of information. The students are encouraged to take up part time jobs and internships along with their studies. Sports and extra-curricular activities also play a major role in a student's academic selection, especially when the activity is in some way related to the field they are pursuing. When it comes to importance of extracurricular activities in admission process, quality matters over number.

In contrast, Indian education has a very different approach towards academics. Although projects and assignments are a part of a student's grading system, it is more or less just a formality and generally does not involve much quality. The grades attached to projects or practical work are also very less. The grading system largely focuses on terminal examinations and compels students to memorize textbook pages over critical analysis of concepts. There is not scoring based on class participation and active interest taken by students in a particular subject. Additionally, attendance of students becomes a major concern in many colleges. In this way, Indian education system lags behind in overall evaluation of a student's progress and is a poor measure for it.

TABLE 3.1.A.(1)

FACTORS	USA	INDIA
Approach to learning	Student-centred approach to learning: - teachers and students play an equally active role in the learning process.	Teacher-centred approach to learning: - Student learning as measured through objectively scored tests and examinations.

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Use of technology	High-tech approach to learning: - The internet is a beneficial tool in a classroom setting as it provides unlimited resources. Some tech tools used in classrooms today are: - . G suite(Gmail, Docs, Drive, and Calendar) . Tablets/Laptops . Gamification software(Such as 3D Game Lab and Classcraft) . Education- focused social media platforms . Technology for accessibility for students with disabilities	Low-tech approach to learning: - Students who take handwritten notes have a better recall than students who take typed notes. Examples of low technology usage in different methodologies: - . Kinaesthetic learners have a need for movement while learning. . Vocational or practical training cannot be learned virtually.
Teaching methods for English language acquisition	. Sheltered instruction . Scaffolded learning . Active learning	Textual and as instructed by teachers.
Job-readiness and practical experience	Promotes students to take up part- time jobs and internships. Some courses require students to have practical knowledge of the subject	While some courses require students to take up summer internships or such, a large population of students only understands job requirements at a later stage.
Independent thinking	The education framework encourages students to think independently.	Focus is greater on grades and testing.
Opportunities	Greater opportunities for students who desire to pursue non- academic careers such as dance and music. Presence of numerous performing art schools and film- making institutes.	Indian culture and education lay more importance on academic subjects
Cognitive advancement	Teaching methods promote critical and creative thinking.	Teaching methods are more theory-based and textbook oriented.
Culture	American Culture encourages students to be financially independent by taking up part-time jobs which develops skills and induces a sense of responsibility and value for money.	Indian Culture is very much family oriented and students usually depend on their parents until they acquire jobs. Although there is a visible trend of college students taking up internships.

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Grading System in USA

	"Normal" courses		Honors/AP courses	
Grade	**Percentage**	**GPA**	**Percentage**	**GPA**
A	90–100	3.67–4.00	94-100	4.5–5.0
B	80–89	2.67–3.66	87-93	3.5–4.49
C	70–79	1.67–2.66	80-86	2.5–3.49
D	60–69	0.67–1.66	75-79	1.5-2.49
E / F	0–59	0.0–0.66	0–74	0.0–1.49

Sr.no	Advantages	Disadvantages
1	Takes the pressure off from the students at certain levels	It doesn't instill a sense of competition
2	Grading Pattern description	Not an accurate representation of the performance and the knowledge gained
3	Gives the students an obvious idea about their weaknesses and strengths	It is not an exact scoring system
4	Make class work easier	Lack of incentives
5	Leads to a better rendezvous of ideas	

3.1.B.Hypothesis 2

USA gives more importance to work experience with a degree for professional development of a student.

With reference to the above hypothesis, the following data can be considered:
According to AISHE (All India Survey of Higher Education), Gross Enrolment Ratio (GER) in Higher education in India is 26.3%, which is calculated for 18-23 years of age group. GER for male population is 26.3% and for females, it is 26.4%. For Scheduled Castes, it is 23% and for Scheduled Tribes, it is 17.2% as compared to the national GER of 26.3%.
On average, the world has developed only 62% of its human capital as measured by this Index. Or, conversely, nations are neglecting or wasting, on average, 38% of their talent. Across the Index, there are only 25 nations that have tapped 70% of their people's human capital or more. In addition, 50 countries score between 60% and 70%. A further 41 countries score between 50% and 60%, while 14 countries remain below 50%, meaning these nations are currently leveraging less than half of their human capital.

Formal education enhances people's capacity, and while applying and acquiring skills through work further develops people's human capital.

LinkedIn membership by field of study and geography, percent:

Arts and humanitie	Business, administr	Education	Engineeri ng,	Health and	Informati on and	Natural sciences,	Services	Social sciences,

s	ation and law		manufacturing and construction	welfare	communication technologies	mathematics and statistics			journalism and information
9.0	15.0	8.0	8.0	21.0	12.0	8.0	4.0	14.0	100.0

(SOURCE:WORLD ECONOMIC FORUM)

Vocational education in the United States varies from state to state. Vocational schools, also popularly known as trade schools, are post-secondary schools (students usually enroll after graduating from high school or obtaining their GEDs) that teach the skills necessary to help students acquire jobs in specific industries. The majority of postsecondary technical and vocational training is provided by proprietary (privately-owned) career schools. About 30 percent of all credentials in career training are provided by two-year community colleges, which also offer courses transferable to four-year universities. Other programs are offered through military technical training or government-operated adult education centers.

Several states operate their own institutes of technology, which are on an equal accreditational footing with other state universities.

Federal involvement is carried out principally through the **Carl D. Perkins Vocational and Technical Education Act.** Accountability requirements tied to the receipt of federal funds under the act help to provide some overall leadership. The Office of Career, Technical, and Adult Education in the US Department of Education also supervises activities funded by the act, along with grants to individual states and other local programs. Persons wishing to teach vocational education may pursue a **Bachelor of Vocational Education**, which qualifies one to teach vocational education.

The Association for Career and Technical Education (ACTE) is the largest private association dedicated to the advancement of education that prepares youths and adults for careers. Its members include Career and Technical Education (CTE) teachers, administrators, and researchers .**Career training schools**, also known as vocational, technical or trade schools, provide postsecondary instruction in many different areas like Computer technology, nursing, Auto repair, Masonry, Culinary arts, Electronics etc.

India has shown remarkable progress in the sector of education in recent times but vocational training courses are still not regulated in many schools.

This has resulted in a major gap between the supply and demand of skilled manpower in the region.The shortage of skilled workforce has led to an increase in the number of unemployed labor in the country.In India, vocational training is provided as a part-time and full-time basis.

Full-time training is typically provided to the Industrial Training Institute which is also known as ITI while the part-time programs are offered to the students at the board of State Technical Education.The vocational training in India has been only successful at the industrial level, that too at the engineering level.
Vocational Training in India is imparted by 2 main different bodies:

- Private owned Industrial Training Centre (polytechnics)
- Public Industrial Training Institutes

Courses offered by Government of India:

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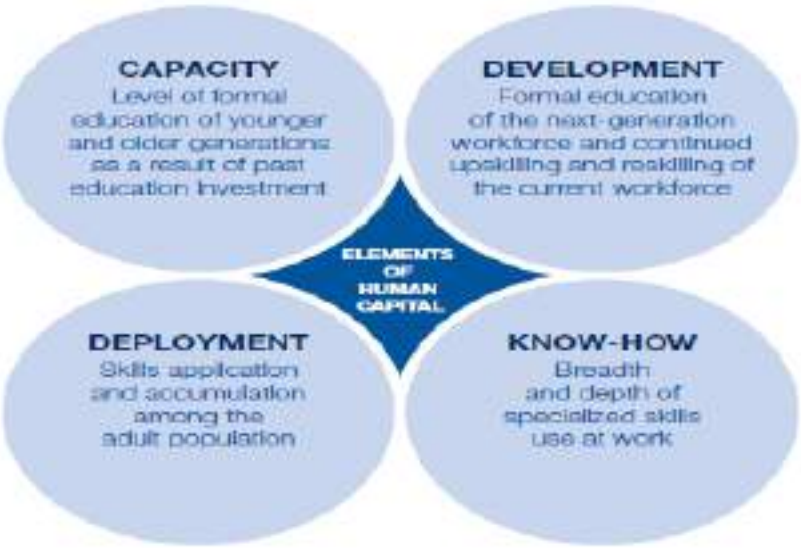
1. **Udaan**: The vocational training program is specially designed for the students studying in the north side of India that is in Jammu and Kashmir. The program is for 5 years and in various sectors such as IT, BPO, and retail
2. **Polytechnic**: It provides three years of diploma course in traditional subjects such as engineering and computer science. The minimum eligibility of appearing for polytechnics courses is secondary level;
3. **Parvaaz**: The secondary aim of the program is comprised of minority students, BPL, dropouts or left-outs.
4. **National Urban Livelihood Mission**: The chief objective of this program is to provide vocational training to special students such as, disables, women, below the poverty line, and handicapped.
5. **Training programs based on modular employable skill**: the aim of the program is to provide a set of minimum skills that is just optimum to enter into the employment sector.
9. **Craftsmen Training Scheme**: the purpose of this scheme is to provide vocational education and training to the educated school leaving youths.

Durations of different programs:
There are two types of vocational programs in India:

- Part-time program: offered for industrial training
- Full-time programs: Offered through state educational technical boards.

There is a three tire system in Human Resource (HR) vocational training program in India:

- Certification level: for 10+2 students, they are trained through formal types of apprenticeships.
- Diploma level graduations program: for students trained under the Polytechnics as supervisors or technicians



3.1.C.Hypothesis 3

US Education system is free from reservations, quotas and discrimination apart from merit

With reference to the above given hypothesis, US education system is more of a merit based system which gives admissions, scholarships, fee subsidization and other benefits to deserving students. USA accepts the Common Application, the Universal College Application, and the Coalition Application. Each Application is treated equally by the Admissions Committee and they are selected on the basis of their grade secured.

Major Institutes in USA like Harvard, MIT, and University of California Berkeley etc. accept applications, admissions and provides scholarships on the basis of their (GPA) Grade Point Average along with (SAT)

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Scholastic Assessment Test score. Even Extra Curriculum Activities can act as a significant eligibility factor.

On the other hand, the Indian education system gives similar benefits but majorly through reservations based on criteria of one's caste and linguistic group. The percentage of reservation in any government aided educational institute in India is generally 15% for SCs and 7.5% for STs. 3% seats are reserved for Persons with Disability (PWD) as per PWD Act 1995. A 27% quota for Other Backward Classes has been recently proposed which is under consideration by the Parliament of India.

In contrast with USA flagship universities, the admissions in major universities in India are affected by reservations. Unlike US Universities, institutes like IIT's, IIM's, JNU, DU, Indian Institute of Science etc. though have soaring cut offs, relax their expectations with reserved students. This many-a-times denies opportunities to deserving students and this continues even when they seek jobs.
Another form of reservation in Indian education is for linguistic groups. Language is extremely diverse in India and varies from region to region and will deny opportunities to many others. The following is a list of colleges in Mumbai that provide these benefits to particular linguistic group as a minority group: -

Examples of Linguistic Minority Quota across the Country's college:-		
College Name	**City**	**Linguistic Minority**
Shri Vile Parle Kelvani Mandal College	Mumbai	Gujrati Minority
South Indian Education Society	Mumbai	South Indain Minority
Thadomal Sahani Engineering College	Mumbai	Sindhi Minority
Calcutta Busniess School	Kolkata	Marwari Minority
Jaya Engineering College	Chennai	Telugu Minority

Table 3.1 C (a)

Examples of Religious Minority Quota across the Country's college :-		
College Name	**City**	**Religious Minority**
Sri Guru Gobind Singh College	Delhi	Sikh Minority
Mata Sundri College	Delhi	Sikh Minority
St Stephens College	Delhi	Christian Minority
Rizvi Education Society	Mumbai	Muslim Minority
St Xaviers College	Mumbai	Roman Catholic
St Andrews College	Mumbai	Christian Minority
Guru Nanak Institute of Technology	Kolkata	Sikh Minority
St Mary's Technical Campus	Kolkata	Christian Minority

Table 3.1 C (b)

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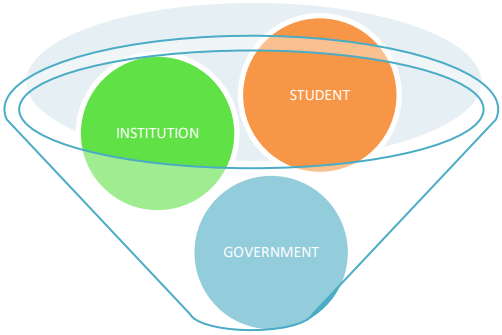
CHAPTER 10

SUGGESTION MODEL



GSI MODEL

FOR STUDENTS

1. ANALYSIS OF STUDENTS BASED ON HYPOTHETICAL SITUATIONS: (Students are individually provided with hypothetical workplace situations in which they have to take measures to resolve it.)

- On the spot thinking
- Out of the box thinking
- Boosts imagination
- Builds confidence
- Critical thinking

2. PERFROMANCE BASED CLASSIFICATION OF STUDENTS: (Evaluating and classifying the students on the basis of their performance to the hypothetical situations)

- Measuring the aptitude of individual students
- Training and career guidance of students based on their aptitude

3. INCULCATING SOFT SKILLS AS A PART OF CURRICULUM: (For overall personality development of students)

- Enhancing communication skills
- Flexibility
- Time management
- Crisis management
- Teamwork
- Presentation skills

4. CONDUCTING MOCK INTERVIEWS AND VIVAS: (Which resembles closely with interviews in the corporate world)

- To normalize interviews for students
- Build confidence

- Increase smoothness in presenting oneself
- Reduces nervousness
-

FOR INSTITUTE/UNIVERSITY

1. REFORMED WAYS OF GRADING AND MARKS SEGREGATION : (Grading on the basis of class participation, assignments , homework , presentations etc. along with terminal exams)

- Fair grading system
- Overall performance evaluation

2. RESEARCH ORIENTED UNIVERSITY: (With more emphasis on practical world)

- Updating syllabus from time to time
- Staying relevant to current affairs and job requirements.
- Making progress in the field of education.

3. MANDATING TRAINING OF COMPUTERS AND TECHNOLOGY: (Including the use of computers as a compulsory part of education)

- Keeping pace with modern technology.
- Increasing efficiency of education with the use of computers.
- Exposure to new forms of technological learning.
- Preparing students for better job opportunities.

4. FLEXIBILITY OF CHANGING MAJORS: (Opportunities to shift the field of education as per students requirements)

- To ease the rigidness of the education system
- Giving importance to individual choice with respect to education.

FOR GOVERNMENT

1. INDUSTRIAL TRAINING AND SYSTEMATIC EDUCATI0N FOR BROADER OCCUPATIONALAREAS: (Developing various occupational fields that add to our country's economic progress by providing sophisticated systematic education to them)

- Promotion of vocational courses
- Proper industrial training in various fields to improve the quality of human resource in every field)

2. CENTRALISATION OF THE BOARD FOR PRIMARY EDUCATION: (Establishing single educational board in order to establish homogeneity of primary education)

- Equal access to quality education for every student.
- Reducing bias for admissions in higher education and job opportunities.
- Eliminating confusion.

3. MERIT BASED ADMISSION: (To avoid biases towards any class, caste, sub caste, race etc.)

- Fair system of admissions in educational institutes
- Fair opportunities for jobs

4. VOCATIONAL TRAINING :

- Stenography
- Retail
- Accounting and Auditing
- Banking

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