

INTRODUCTION

1.1 Education System in India

With the rise of modernization and industrialization processes post-Independence, Indian educational system witnessed crucial changes. As India declared its principle of social justice and equality, the universities became institute of closed academic learning for only a limited number of people. The doors of the higher educational institutes opened up to every citizen irrespective of their socio-economic position. Despite the heightened stress on non-discriminate nature of higher education, the situation has not changed drastically in terms of advantage to the population in higher education representing the genders other than the men. This adds to the existing gender differences in the academic space. Gender is not only about the men and the women but also the inextricable mix of the social institutions existing. Gender Gap in education refers predominantly to the less representation of either the female or male gender from the education system, a situation that requires intervention as well as rectification. Gender and sex are used interchangeably in education research, especially in Higher education where male and female is used to denote man and woman. However, this needs to be identified as sex assigned at birth and gender identity of people are not the same always.

In undertaking explorations regarding the large and complex gamut of issues under the rubric of gender and education in India, the location of the educational institutions, the class, caste, religion of students, teacher student relationship would necessarily have to be taken into account. The higher educational spaces play a predominant role in identity formation of individuals, where they find a voice of equality, having spent substantial amount of time in these spaces. Various socio - cultural movements aimed at improving the status of women have stressed the role of education in this regard. The University Education Commission of 1948-1949 by Dr. Radhakrishnan commented “There are many ways in which women’s interests or fields of work diverge from those of men and educational programmes should therefore, take these facts into account.” This was however rectified after sixteen years when Kothari Commission of 1964-1965 pointed out that it would be wrong to restrict women students’ choice or to compel them to take particular courses and that woman should have all the opportunities and incentives to enter non-traditional courses such as technology and medicine. The commission recognised that in the modern world, the role of women goes much beyond the home and raising up of children. In 1986, the National Policy on Education had a separate chapter on ‘Education for Equality’. The national education system played a positive interventionist role in the empowerment of women.

1.1.1 Education: A Concurrent Subject and Basic Human Right

The role of Government of India (during the British rule and post - independence) in addressing education has varied from time to time. The introduction of the Charter Act, 1833 (Introduction of unitary system of government) all revenues and expenditure were

made under the approval of the Central government. Under this Act education too was purely a Central subject. In 1870, the situation altered when Lord Mayo introduced a system of administrative decentralization, and both the Central and the Provincial Legislature had Concurrent¹ powers to legislate on educational matters (Government of India could pass the Universities Act of 1904 because of this Concurrent Legislative jurisdiction and the Indian Education Service was created). Post this there have been numerous other changes in the government policies of East India Company until independence that resulted in various changes in the education sector and the stake holders responsible for it.

Post-Independence while the constitution was framed with three lists: the Union List², the State List³ and the Concurrent List⁴ on the basis of which the laws and regulations are made for proper functioning of the country. Until the 42nd Amendment of the India Constitution (1976), in which education was included in the Concurrent List, it remained as the subject of the State List. The decision was made to treat education as a state topic and to vest the states with residuary powers by emphasizing the authority that was reserved for the union government. According to Entry 11 of List II of the Seventh Schedule of the Constitution, "education, including universities, should be a state subject, subject to the provisions of Entries 63, 64, 65, and 66 of List I and Entry 25 of List III." (Naik, 1963). The Concurrent list of India contains 52 (initially 49) subjects that are legislated by both the national and state legislatures. Education continues to be primarily a state subject; both elementary and secondary education fall under this category. The function of the federal government is limited to facilitating cooperation and support of various types, including financial resources, from the state.

On the one hand, the Constitution adopts the straightforward position that education, including all residual powers, is a state responsibility, with the exception of a few components specifically outlined in the Constitution. Through these significant exceptions, however, it granted the union government a vast number of residual authorities and responsibilities. Instances include the union government's provision of free and compulsory education, due to its cost and significance (Article 45); the

¹ The meaning of Concurrent is 'running together in time or space; covering the same ground'. (Source: <https://legislative.gov.in/sites/default/files/legal-glossary/A%20to%20C.pdf>)

² Parliament has exclusive power to make laws with respect to any of the matters enumerated in List I of the Seventh Schedule (in this Constitution, referred to as the "Union List"). (Source: <https://legalaffairs.gov.in/sites/default/files/Concurrent%20Power%20of%20Legislation%20under%20List%20III%20of%20the%20Indian%20Constitution.pdf>)

³ The Legislature of any State has exclusive power to make laws for such State or any part thereof with respect to any of the matters enumerated in List II in the Seventh Schedule (in this Constitution, referred to as the "State List"). (Source: <https://legalaffairs.gov.in/sites/default/files/Concurrent%20Power%20of%20Legislation%20under%20List%20III%20of%20the%20Indian%20Constitution.pdf>)

⁴ The Parliament and the Legislature of any State also, shall have power to make laws with respect to any of the matters enumerated in List III in the Seventh Schedule (in this Constitution, referred to as the "Concurrent List"). (Source: <https://legalaffairs.gov.in/sites/default/files/Concurrent%20Power%20of%20Legislation%20under%20List%20III%20of%20the%20Indian%20Constitution.pdf>)

equalisation of educational opportunities between different geographical areas or sections of society (Article 46); the protection of the cultural interests of the minority and the provision of adequate facilities for them to receive at least primary education in their mother tongue (Article 350A); and other such provisions. Finally, a highly effective control mechanism for the union government was established when economic and social planning "became concurrent responsibility" (Entry 20 of List III). With the 42nd Constitutional Amendment, there was a significant deviation from the initial intent of placing education under the state list, as the whole education system in India was brought under concurrent authority. By including education in its entirety on the concurrent list, the federal government became a permanent collaborator of state governments in education development (Tilak, 2017).

In the 86th Constitutional Amendment, 2002, education was included as one of the fundamental rights⁵. Article 21- A (Right to Freedom) was implemented to provide free and compulsory elementary education to all children in the 6-14 years age cohort. Educating the youth of the nation means that other rights that are guaranteed to them, are also protected. Article 21 of the Fundamental Right (i.e., Protection of life and personal liberty) cannot be violated if the mass is educated. The Cultural and Educational Rights (Article 30) guarantee that no one is left behind, which makes provision for the minorities of the country to establish and administer educational institutes.

Education as a human right made its place in Article 26 of Universal Declaration of Human Rights (UDHR), 1948 which states that: *“Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.”*

Education is both a means and an end, with a domino effect that leads to the realisation and enjoyment of other human rights, a critical and differentiating aspect for sustained human progress. Individually and collectively, learning and development are fundamental to the human experience and life. The process of learning and the process of development are two processes and concepts that are interconnected and interrelated (Savi, 2018). To avoid the marginalisation of certain groups from mainstream society, education must be both inclusive and nondiscriminatory; ideally, it should be tolerant of diversity. (Chowdhury and Rohatgi, 2021)

1.2 Conceptual Framework

Education: the meaning of the term education has more of psychological and philosophical basis, which varies from one individual to another. Etymologically, the

⁵ Articles 12 through 35 of Part III (the Magna Carta of India) of the Indian Constitution outline the Fundamental Rights. The Fundamental Rights are justiciable and are guaranteed to all people without exception by the Constitution. Fundamental Rights are recognised as fundamental to the material, intellectual, moral, and spiritual growth of humans.

word “education is derived from the Latin word “e” and “duco” meaning “out of” and “to lead” respectively. The word education means to lead the inside to outside. This brings out the meaning as the drawing of the inner capacities and capabilities of a student and thus highlighting and using the aspect for the development of the self and the peers.

Higher Education: Higher Education is defined as education received after 12 years of schooling or equivalent and lasting at least nine months (full-time) or after 10 years of schooling and lasting at least three years. The education could be of a general, vocational, professional, or technical nature. Higher education refers to education at post-high school, college, and university levels. It is higher education because, firstly, it is the highest level of formal education and, secondly, it focuses on processes in the most advanced phases of human learning. The contestants are approximately eighteen years old, so they are cognitively mature and competent to function at the abstract level. They can analyse, synthesise, and comprehend diverse concepts and ideas. Their creative capacity is also well developed. Therefore, the content, methods of interaction, and structure of the work must be drastically different from those at school. Higher education is not only the pinnacle of the education system; it is also the level that prepares students for all other levels of education and competence, as well as a vast array of employment in the social, economic, and cultural sectors.

University: The Higher Educational Institute that provides the highest level of education. Universities have the authority to provide bachelors and master’s degree, usually having research facilities. In India, according to the University Grants Commission (UGC) Act, 1956, a university is an HEI established or incorporated by or under a Central Act, Provincial Act, or State Act, and includes any institutions that may, in consultation with the university in question, be recognised by the commission in accordance with the regulations made in this regard under the Act.

College: These are Higher Education Institutions that can operate a degree programme but are not able to award degrees on their own; they must be affiliated with a university or university-level institution in order to award degrees. College is defined as any institution, which provides a course of study for obtaining a qualification from the affiliated university and which, according to the rules and regulations of such university, is recognised as competent to provide such a course of study. After the completion of graduation from colleges the candidates are eligible to get into universities. They can be of two types:

- a) University/ Constituent College: A college maintained by the University
- b) Affiliated College

Certain colleges are granted autonomy. UGC has introduced a programme for autonomous colleges in consideration of the NEP's goals (1986 – 1992). The Parent University confers degrees on students who have been reviewed and recommended by institutions. Colleges that have completed three-year periods can confer degrees under their own name and with the university's seal.

Central University: A university established or incorporated by a Central Act.

State University: A university established or incorporated by the Provincial Act or by the State Act.

Private University: A university established through a State/Central Act by a sponsoring body, such as a Society registered under the Societies Registration Act 1860, or any other corresponding law in force at the time in a State, or a Public Trust, or a Company registered under Section 25 of the Companies Act, 1956⁶, is eligible for recognition as a university.

Institute of National Importance: An institution founded by Act of Parliament and deemed to be of national importance, such as the Indian Institute of Technology (IIT) and the National Institute of Technology (NIT).

Deemed University: refers to high performing institute, which has, been so declared by the Central Government under Section 3⁷ of the UGC Act, 1956.

Faculty: A Faculty of Studies of the University

Department: A Department of Studies and includes a Centre of Studies.

Programme: It is a course of study for which the institution awards a degree or certificate. A Programme of Study is the recognised curriculum that an individual student follows, such as B.A., B.Sc., M.A., etc.

Levels of Programme:

- a) **Under Graduate:** Programme after 10+2 and generally having the duration of 3/4/5/ years in, General or Professional courses.
- b) **Post Graduate:** Programme after Post – Graduation and generally having the duration of 2/3 years in General / Professional courses.
- c) **M.Phil:** Programme after Post Graduation and generally having the duration of ½ years and are pre – research courses.
- d) **Ph. D:** Programme after M. Phil or Post Graduation and generally having the duration of 2/3/4/5 years.
- e) **Integrated/ Dual Degree:** It is Programme leading to Post – Graduate Degree and/or Research Degree. Generally, it is a combination of two – degree programmes.

Discipline: A discipline or field of study is a branch of knowledge taught and explored at the institution. There are numerous disciplines taught in different institutions, and the names vary from institution to institution.

Students: A person enrolled in any Higher Educational Institutions for pursuing any study conducted by the Institution.

Students' enrolment: Total students on roll in a Programme as on a particular time of the year.

⁶ <https://www.ugc.ac.in/privatuniversity.aspx>

⁷ <https://www.ugc.ac.in/page/deemed-universities.aspx>

Academic Year: The period, during which one year or two semesters or three trimester of a Programme is completed.

Sex: Sex refers to the biological distinction between the sexes. In contrast, what it means to be male or female is determined by physical traits acquired from chromosomes and genetic makeup. The idea underlines chromosomal, anatomical, hormonal, reproductive, and other physiological distinctions between males and females. Sex determines if the person born is male, female or other and is a status ascribed during birth.

Gender: Cultural notions of masculinity and femininity come into play when determining the significance of a person's gender. Gender is highly cultural, just as race is; it is a social creation with real-world effects, especially for people who do not comply to gender binaries. It refers to the continuum of individuals' complex psychosocial self-perceptions, attitudes, and expectations regarding members of both sexes. Gender is understood as a concept that implies masculine, feminine and other gender identities which is achieved by every individual. Gender is taught and learned by the individual as a member of the society with different cultural settings.

Gender Expression: This can be feminine, masculine, androgynous, or anywhere on a range (depending on traditional gender role conventions associated with clothes, behaviour, and interactions). The dichotomous perspective of gender (the notion that an individual is either male or female) is culturally particular and not universal. In some cultures, gender is considered as being fluid. In the past, some anthropologists used the term berdache to describe people who occasionally or continuously dressed and lived as another gender. Among several Native American tribes, the practise has been observed (Jacobs, Thomas, and Lang 1997). Two-Spirit is the contemporary term used by indigenous people in the United States (Estrada, Gabriel S. 2011). Additionally, some of these indigenous groups believe that there are at least four genders in this regard. Two-Spirits are accorded higher social rank in some tribes due to the belief that they possess supernatural abilities. As opposed to the dichotomous perspective held by European colonists, Native American groups understood sex and gender as a spectrum. Samoan culture recognises what Samoans call a "third gender." Fa'afafine, which translates to "the way of the woman," is a word used to describe biologically male individuals who exhibit both masculine and feminine characteristics. Fa'afafines are a significant aspect of Samoan culture. Individuals from other cultures may mislabel fa'afafines as homosexuals due to their diverse sexual life, which may include both men and women (Poasa 1992).

Gender Role: Gender Roles in a society are ways in which a person is act, speak, dress, groom and conduct themselves based upon sex assigned at birth. Existing gender roles are believing the binary concept of men and women, the ways they are supposed to represent themselves in the social space in everyday lives. The gender roles vary according to the society, ethnic group and culture. Exhibition of gender roles and associated behaviour is reflected both in private and public realms. Regardless of a person's biological sex, gender can be considered as a continuum of qualities that they exhibit. Gender Roles are the anticipated attitudes and behaviours associated with each'sex' in a community. This situates gender firmly within the socio-cultural milieu.

Gender Socialisation: The process through which at young age people learn about social attitudes, expectations and behaviour. This is mostly in accordance to the assigned gender, determined by the sex at birth. Gender Stereotypes (discussed later) is mostly a result of gender socialization where the men and women are expected to act in certain ways that are socialized at birth.

Gender Stereotype and Gender Stereotyping: The phrase denotes a generalised perspective or preconception on features and characteristics that men and women ought to possess. In other words, it refers to the roles that men and women play or should play. At its core, a gender stereotype is a belief, which may lead its possessor to make assumptions about members of the target group, women and/or men. In contrast, gender stereotyping is the practise of attributing specific features, characteristics, or roles to an individual woman or man based only on her or his membership in the social group of women or men. In other word the imposition of the stereotypical belief to a person.

Gender equality: Gender equality implies that men and women have equal opportunities to exercise their full human rights and to contribute to and benefit from economic, social, and political development. Therefore, it is the equal valuing by society of the similarities and distinctions of men and women, as well as their respective duties.

Gender gap: The term defines the difference or disparity between the sexes. The gender gap in education refers to the possibility that males in a particular socio - cultural setup will have greater and better educational opportunity and attainment than girls.

Gender Mainstreaming: It is a process; UN ECOSOC describes main streaming as “*the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making the women’s as well as men’s concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and policies in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated*”.

Gender Disaggregated Data: Separate data collection and tabulation for women and men. The data enable the measurement of inequalities between women and men on a variety of social and economic variables and are one of the prerequisites for producing gender statistics.

Accreditation: The evaluation of higher education institutions provides an indication of the output quality. Accreditation is the review of the quality of the aspects considered to qualify an institution for certain status or recognition. It provides the following functions:

- i. Establishment of educational norms, including evaluation and institutional recognition;
- ii. Quality assurance and enhancement of standards.
- iii. Raise the stakeholders' awareness of the quality of education provided by an institution.

Gender parity: It is a statistical measure used to define ratio between the different sexes. It is a descriptive measure only, taking only the binary male – female, girl – boy to depict

representation. It is used to understand the binary distinction in the education, economic and workplace.

1.3 Higher Education

1.3.1 India

It is considered that India had a functional higher education system as early as 1000 BCE. Unlike modern colleges, these ancient educational institutions focused primarily on disseminating Vedic education. Nalanda, Vikramshila, and Takshasila were the ancient centres of learning founded between the fourth and fifth centuries A.D. The present education system in India has its origins in colonial legacy. As a means of cultural colonialism, the British government utilised the university system. Colonial initiatives in higher education were initially conducted by the East India Company, then by the British parliament, and finally by direct British authority. Calcutta Madrasa was the first school of higher education established by the British East India Company in 1781. The Asiatic Society of Bengal was founded in 1784, followed by Benaras Sanskrit College in 1791 and Fort William College in 1800. The British Parliament officially designated Indian education as one of the state's responsibilities with the Charter Act of 1813. The same act also lifted prohibitions on missionary activities in British India, paving the way for the 1818 founding of the evangelical Serampore College. Thomas Babbington Macaulay's infamously divisive Minute on Education (1835) represented the increasing preference for a Western approach to knowledge over an Eastern one. In 1857, the first three universities were established in Bombay (Mumbai), Calcutta (Kolkata), and Madras (Chennai). These universities, modelled after the University of London, emphasise English and the humanities.

The British remained to oversee the Indian education system until 1935, when the Government of India Act ceded more power to provincial legislators, initiating the "Indianization" of education. This time witnessed a rise in the importance of physical and vocational education as well as the establishment of basic education systems. When India achieved independence in 1947, there were 241,369 students enrolled in 20 universities and 489 colleges. The University Education Commission was founded by the Indian government in 1948 to monitor the expansion and advancement of higher education. In the 1960s and 1970s, the government increased its support for higher education by not only establishing state-funded universities and colleges, but also by offering financial assistance to private institutions, culminating in the establishment of private aided/ grant-in-aid schools.

In spite of the decline of the East India Company, Indian higher education continued to place an emphasis on languages and the humanities until the 1980s. There were notable exceptions to this tendency, such as the Indian Institutes of Technology (IITs), Regional Engineering Colleges (REC), and Indian Institutes of Management (IIM). These institutions were influenced by prestigious American universities and also received foreign financing. After the 1980s, the changing needs of the economy, the expansion of the middle class, and the strain on government financial resources hindered the expansion

of state-funded higher education institutions. This resulted in a greater private sector role in the education system.

1.3.1.1 Higher Education in ancient India

In Ancient India, the nature of higher education was considered sacred. The fundamental religions included Hinduism, Buddhism, and Jainism. In Ancient India, religion-based education had an exceptional role in producing, altering, and conveying knowledge to the populace. In Ancient India, there were two major educational systems: Brahminical and Buddhist.

1.3.1.2 Higher Education in medieval India (9th to early 18th century)

The history of education in mediaeval India is a component of the larger study of the history of society, social history taken broadly to include politics, economics, and religion. The mediaeval state, along with other forces such as Sufism and Bhakti philosophy, played a significant part in the lengthy process of integration and coexistence. Despite their varied religions and cultures, these organisations brought individuals together via their shared public and private experiences. During the Middle Ages, early Indian education and many of its centres remained, but Madrasa emerged as the most prominent centre of education. Thus, the early Indian tradition of learning coexisted with the newly established Madrasa, making both continuity and change significant characteristics of higher education throughout this time (Alam, 1991).

1.3.1.3 Higher Education in Colonial India

It is widely believed that the British colonial influence is responsible for the existing university system in India. Long before, the East India Company did not attempt to impose a western system of education on its Indian subjects (Basu, 1991). The foundation of a Hindu College in Calcutta in 1817, the first "Europeanized" institution of higher education in India, marked the beginning of English-language higher education in India. In fact, the modern system of higher education in India can be traced back to "Mount Stuart Elphinstone's minute" of 1823, in which he advocated for the formation of schools for teaching English and European Sciences. In 1835, Macaulay wrote in his "minute" that the British government's mission should be "the development of European literature and science among the people of India." From 1813 to 1835, however, there was an ongoing dispute between orientalist and the western school. Since the orientalist held the upper hand, there was no official support for English instruction (Power, 1995); therefore, it had to be conducted by private enterprise. Macaulay was of the opinion that English instruction was essential for the Indian higher education system. McCully (1940) said that Indians increasingly desired an English-style higher education because it offered prestige professions in the British bureaucracy and the expanding commercial sector. Consequently, the British were persuaded that they required a class of educated Indians to hold secondary-level positions in the government and to serve as intermediaries

between the Raj and the Indian populace. English education was desired by the urban elite of India, not only for employment and career opportunities, but also because it promoted the western secular education's unique role in the social and political regeneration of India towards self-rule. This system benefited the elite, who have a strong stake in its continuation (Choudhury, 2008)

1.3.1.4 Post – independence Higher Education in India and the present times

The AISHE report for 2018-2019 indicates that there are 993 universities, 39931 colleges, and 10725 Stand Alone institutions. Higher education enrolment is estimated to be 37.4 million, with 19.2 million male and 18.8 million female students. Social segregation and stratification in higher education began with the mediaeval ideologies of the upper classes of society and persists to the present day. The Gross Enrolment Ratio (GER) for 18-23 year old in India's higher education institutions is 26.3%. GER is 26.3% for the male population and 26.4% for the female population. Compared to the national GER of 26.3%, it is 23% for Scheduled Castes and 17.2% for Scheduled Tribes for Scheduled Castes and Tribes. Other than the traditional method of higher education, distance education accounts for just 10.62% of overall enrolment in higher education, of which 44.15 percent are female. According to the AISHE, the majority of students are enrolled in Bachelor of Arts programmes, followed by Bachelor of Science and Bachelor of Commerce.

Post-independence the country had seen a total enrolment of 174000 students in HE, of which only 17000 women, that was 10% of the total enrolled population as can be seen in Table 1. In the year 2005 there were 11028000 students who were enrolled in HE in the country with 6562000 men and 4466000 women (Table 1.1). There is however no data keeping of the transgender population whose existence seemed to have been denied till the census of 2011, even though the data regarding the third gender remains unshared for interpretation and use while discussing gender.

Table 1.1 Table showing the gender wise and total enrolment of students in Higher Education in India

Year	Men (000's)	Women (000's)	Total enrolment
1950-51	157	17	174
1955-56	252	43	295
1960-61	468	89	557
1965-66	849	218	1067
1970-71	1563	391	1954
1975-76	2131	595	2426
1980-81	2003	749	2752
1958-86	2512	1059	3571
1990-91	2986	1439	4425
1995-96	4235	2191	6426
2000-01	4988	3012	8001
2005-06	6562	4466	11028

Source: AISHE (1950-2006)

1.3.1.5 Present scenario of Higher Education in India

The country has 1042 universities in total out of which the institute are divided into various types, the universities either come under the aegis of the central government or of the state (Table A1). There were 44 Central Universities in the country till 2010 with four other Central Universities established one each in 2011 and 2014, 2 in the year 2018. There is only one Central Open University, i.e., Indira Gandhi Open University (1985), functioning and meeting the educational needs of the students who opt for distance education for various reasons. The IITs, NITs and the like are the Institute of National Importance which are 386 in number. There are 13 state open universities and only one State Private Open University in the state of Andhra Pradesh that was established in the year 2013 (Venkateshwara Open University). Growth of Higher Educational Institutes have not seen significant change over the years in the recent decade (2010 – present) as can be clearly seen in Table A1. Till 2010 there were 625 universities in India, after which there have been newly established State Private Universities. There were 58 universities established in the year 2016 which is the highest in a year in the current decade. As can be seen in Table A2 414 universities were established in this decade. 2000 – 2010 was the decade that saw the highest number of universities being established, i.e. 357.

While taking the colleges into consideration there were 1060 college in colonial India (i.e. prior to 1951. In the decade 2000 – 2010 highest number of colleges were established, 16921 colleges. Which again saw a decline in this decade with only 12025 colleges established in the country. (Table A3)

1.3.2 Regulating Higher Education in India: Relevance of Assessment and Accreditation

Post - independence higher education played an important role in the creation of an educationally and technologically sound India and since then the HE sector has undergone transformations both in the quantitative and the qualitative aspect. The most important of it all was, as has been mentioned in section 1.1, the shift and transition of the HEIs to educating everyone and anyone rather than the elite students only. Over the years India has seen the inclusion of the socially excluded, economically backward and the geographically disadvantaged in HE. The sector over the years has constantly taken charge of identity building of young people irrespective of their socio – cultural, economic and gender identities. It is seen that the Gender Parity Index (GPI) increased from 0.1 in 1951 (the beginning of 1st Five Year Plan) to 0.74 in 2011 (the end of 11th Five Year Plan) and the Gross Enrolment Ratio (GER) to about 26 percent. Education has helped in building a quantified knowledge society over the years but has a long way to go in ensuring equitable growth focusing both on quantity and quality, to build an inclusive society. Like the National Knowledge Commission Report (2006) brought out the crisis in HE *‘that runs deep. Pockets of excellence remain but the general impression is one of mediocrity’*. This is still prevalent at present times when quality ensures an era of competent human resource. Often quality is conceptualized as a ‘relative aspect’, it is determined by the geographical existence of the HEI. HEI built in a place that was for a

long period of time deprived from the exposure to HE, here quality has a different meaning compared to areas where the facility of HE has been in existence for a long period of time. Here in the areas under the influence and presence of HEI, quality is judged by the availability of technology and a space that promotes critical thinking, helps build reflective capacity and independent learning (Ahmed and Garg, 2015).

The sweeping wave of globalization has impacted every individual in the society and has influenced the HE sectors as well. The effect of globalization so widespread that it has initiated the idea of internationalization of education across geo – political boundaries and through General Agreement in Trade and Services (GATS), education became a marketable commodity. This requires for every HEI to perform to highest standards and continue its march towards excellence. With the private stakeholders entering HE, quality became the key driver for extreme competition among students.

In many countries, dedicated agencies are tasked with ensuring the quality of instruction, training, scholarship, and research. In India, publicly funded regulators evaluate the quality of conventional institutions/programmes using external quality assurance mechanisms; the University Grants Commission (UGC) is the largest and most influential higher education (HE) regulator with the mandate to promote, coordinate, and determine the standards for teaching, research, and certification. The All India Council for Technical Education (AICTE) initially was expected to regulate private institutions but federal funds for technical education were channelized through this body and it began to exert authority even on public institutions.

However, the diversity of regulators, which invariably function independently and occasionally in opposition to one another, is primarily responsible for overlap in their respective domains. Each regulator attempts to establish an exclusive space and sphere of influence, exerting unnecessary pressure on institutions. Recognizing the deficiency, the UGC Review Committee (GoI, 1977) suggested creation of an apex national body of coordination of Higher Education. The National Education Policy (NPE, 1986) and Plan of Action (POA, 1992) also suggested that a National Council for Higher Education (NCHE) be set up for coordination of Higher Education among various regulating councils.

The NKC also analysed the regulatory structures in the country and noted that failure of regulatory structure was eroding the credibility of Indian Higher Education. The NKC (2006) suggested for an Independent Regulatory Authority for Higher Education (IRAHE) be created and endowed with overarching authority to advise the government on education reforms, coordinate the activities of different regulators, promote interface between them and allocate resources according to national policies and plans for development of competent and competitive human resources.

Assessment and accreditation (A&A) of Higher Educational Institutions serve as a catalyst for the development and quality assurance of HEIs in the future. The entire process and concept of A & A bolsters the learners' assurance that the programme they are pursuing and the institution they are attending are acceptable; the public, including employer groups, receives reassurance that the institution is meeting certain expectations;

and the institution in question receives a boost to its reputation and legitimacy through societal, regional, national, and international recognition. The process of drafting guidelines for the regulation of infrastructure, human capital, fees to be charged, and admissions should take a holistic approach, so that private providers can earn acceptable profits and the society has equal access to high-quality higher education.

1.3.3 Agencies Involved in Higher Education

In India, the Ministry of Education (MoE)⁸, formerly known as the Ministry of Human Resource Development (MHRD), is responsible for all education-related endeavours. Department of Higher Education (HE) and Department of School Education and Literacy perform the ministry's duties (SE & L). The education minister is aided by ministers of state (MoS). Each department is led by a Secretary to the Government of India (GOI), who is aided by special secretaries and additional secretaries. The departments are divided into bureaus, divisions, branches, desks, and sections. Each bureau is overseen by a Joint Secretary who is aided by divisional heads who hold the rank of Deputy Secretary/Director. In addition to handling concerns pertaining to the secretariats of both Departments of Education, the administration division of each department is responsible for education wings in Indian embassies. The Central Advising Board of Education (CABE) serves as the ministry's advisory body on topics pertaining to both departments. The CABE was instrumental in establishing the National Education Policy, 2020. (NEP)

1.3.3.1 Apex Bodies in Higher Education

- a) All India Council for Technical Education (AICTE)
- b) University Grants Commission (UGC)
- c) Distance Education Council (DEC)
- d) National Council for Teacher Education (NCTE)
- e) Medical Council of India
- f) Bar Council of India
- g) Indian Council for Agricultural Research (ICAR)
- h) Council of Architecture (COA)
- i) Indian Council of Historical Research (ICHR)
- j) Indian Council of Philosophical Research (ICPR)
- k) Indian Council of Social Science Research (ICSSR)

1.3.3.2 Degree Structure in Higher Education

After a student leave their school, the colleges and universities are the spaces they enrol themselves to in order to attain higher levels of education in respective fields and subjects.

⁸ Ministry of Education was created on 26th September, 1985 through the 174th amendment to the Government of India (Allocation of Business) Rules, 1961. (<https://www.education.gov.in/en/about-moe>)

The courses offered to the students in the HEIs, at the completion of which students are awarded with a degree, are:

- a) Bachelor's / Undergraduation
- b) Master's / Post - Graduation
- c) Doctoral/ pre – Doctoral

There are integrated courses and diploma courses that students take up while choosing courses in the HEIs.

The under - graduation degree is obtained at the end of three years of study either majoring in a particular subject or studying a number of subjects on the course. The structure of the course has seen changes in the past years from 1+1+1 system of examination to the Choice Based Credit System (CBCS). The under-graduation examination is conducted on a semester basis rather than year wise. These are not necessarily longer in duration, but they show higher study depth. Generally, a bachelor's degree in agriculture, dentistry, engineering, pharmacy, technology, and veterinary medicine takes four years, although architecture and medical require five and five and a half years, respectively. There are further bachelor's degrees that are second degrees in teaching, journalism, and librarianship. A bachelor's degree in law can be earned either as a five-year integrated degree or as a three-year second degree.

Master's programmes typically last two years. It could be based on coursework without thesis or research. Admission to postgraduate engineering and technology programmes is determined by the Graduate Aptitude Test in Engineering or the Combined Medical Test.

Master of Philosophy (M.Phil.) is a pre-doctoral programme taken after completion of the Master's Degree. This may consist solely of research or may also incorporate coursework. Two years after the M.Phil. or three years after the Master's degree, the Ph.D. is conferred. Students are expected to compose a lengthy thesis based on unique research, which typically requires more time.

1.3.4 Financing Higher Education in India

The core principle of financing education in India since independence have been of 'socialist concept of welfare state' for 'social good'. The Education Commission (GoI, 1966) headed by Prof Kothari had suggested that the government should commit to finance up 6 per cent of GDP in education. Initially accepted by the government, non – availability of funds forced the state to fall short of expectations. In the year 1989 – 90, according to an assessment made by the Committee for Review of the National Policy on Education, the expenditure on education was about 4.2% of the GNP. Beginning of the liberalization era in 1990's marked a transition as far as support for Higher Education was concerned. As Ahmed and Garg (2015) puts forward in their work that higher education was not given the same priority as envisaged in the early years of the republic. A discussion paper by the Department of Economic Affairs (Ministry of Finance, GOI) argued the benefit of subsidies on HE was appropriated by the middle and the high-

income groups. Education began to be seen increasingly as a marketable commodity and non – merit economic good that benefitted inly an individual than the society at large. So, the concept of fees or paying for education was initiated which failed to accommodate the multiplier effect of HE,that was empathically emphasized by the Education Commission (1966). The sharp decline in Plan allocation was witnessed, which was extremely unwelcome and retrograde. The reason for this as said by Ahmed and Garg (2015) was increased outlay for universal primary education, since India was signatory to Jomtien treaty⁹. An inadequate attention to primary education in formative years of the Republic and reducing expenditure on HE in the era of liberalization and globalization was a lapse on the part of the state and the central governments at both the ends of educational spectrum (Kulundai Swamy, 2003; Ahmed and Garg, 2015). Moreover, the presumption that benefits of subsidies in HE accrues primarily to the recipients does not strictly hold because HE produces learned citizens and leaders in every area of activity, thereby benefitting the whole society. Further the growth in school pass outs will also generate pressure on HE and hence there will be greater need for higher investment in it. Arguing against public subsidy on higher education Tilak (2005) held the view that the elite and the affluent were the major beneficiaries. Viewed in this perspective, public funding of universities promotes inequalities and is considered regressive. Moreover, because of public subsidization by the state, the higher education institutions have become vulnerable to government (politico – bureaucratic) interference, which is counter – productive and hence least desirable (Agarwal, 2009).

India has the greatest demographic dividend, which, if properly trained, could serve as a source of human capital. For the betterment of society and the nation, suitable educational facilities should be provided in order to maximise the potential of human capital. For this to be possible, it is essential that higher education be adequately funded. The funding of public sectors is comprised of contributions from the federal government, state governments, and municipal entities. Public philanthropy refers to the various methods through which private sectors contribute to funding processes, such as donations, subscriptions, gifts, bequests, fines, sale proceeds, interest on available bank accounts, rent from buildings, etc (Sharma, 2013). The country's central universities are primarily the responsibility of the central government, which provides the necessary funds through various programmes and organisations. However, there has always been a complaint from government agencies that inadequate funding in the higher education sector hinders the quality and quantitative development of this level of education. But it is also clear that the rate of private investments in the higher education industry is accelerating, expanding 12.8-fold over the past decade (Ahir and Joshi, 2013). The policymaking component of higher education places a premium on the manner of public funding for higher education, since it represents how education is supplied to society and at what expense (Chattopadhyay, 2007). In light of the significance of higher education for a better tomorrow and the growing demand among the populace for quality higher education, the

⁹ Every child, adolescent, and adult shall have access to educational opportunities designed to suit their fundamental learning needs (Jomtien, Thailand, 5-9 March 1990: World Declaration Education For All and Framework for Action to Meet Basic Learning Needs)

government has taken great steps in recent years to improve the quality and quantity of higher education. Official of NITI Aayog V K Saraswat stated, "If we disregard higher education, we neglect the progress of the nation as a whole, as higher education contributes to the growth of the nation." If we are to change our demographics, we must take a close look at higher education, as the situation is dire and not a cheerful one when viewed globally. Comparing India's funding to the higher education sector with that of China, he continued, "India has spent four percent of its GDP on education, while China spends approximately 565 billion dollars, of which 145 billion dollars is spent on higher education. However, India only spent 12.5 billion dollars on education overall, with 4.5 billion dollars going to higher education. In its three-year action agenda for 2017-18 to 2019-20, the NITI Aayog stated that the government must establish 20 world-class universities, grant autonomy to top colleges and universities, reform the regulatory system for project/researcher-specific grants, and increase the emphasis on vocational and profession-led education. Due to the suggestions of various committees and commissions constituted from time to time, the higher education sector's financing has undergone significant transformations from its early years to the present. During the post-independence period, the Commission on University Education has recommended educational finance policy, the Kothari Commission (1964-66) has recommended state-specific issues in financing education, the National Policy of Education (1986) has recommended allocation of resources and financial management, the Justice Punnaya Committee report (1992-93) has recommended UGC funding of HEIs and cost sharing by increasing fees, and the National Knowledgeability Commission has recommended UGC funding of HEIs and cost sharing by increasing fees (Panigrahi, 2018). In recent years, it has been observed that, due to the privatisation of the higher education sector, the private sector spends more money on higher education than the public sector. In the meantime, we cannot disregard the reality that an increase in the number of institutions does not indicate an improvement in the sector's quality.

1.3.5 West Bengal

Kolkata was the birthplace of higher education in West Bengal (erstwhile Calcutta). The state capital has played a pioneering role in the formation of India's contemporary educational system. Sir William Jones founded the Asiatic Society in 1784 to promote eastern studies. Lord Wellesly¹⁰ established Fort William College in 1800 at the intersection of Council House Street and Maidan (formerly the parade ground). Also known as the College of Fort William, this institution originated as both a research and publication unit. The institute was established to instruct probationary Britons in the languages and culture of the conquered nation. The college provided university-level services in fostering modern Indian literatures, Bengali in particular... The College might also claim credit for bringing together Sanskrit pandits and Persian-Arabic munshis to create Bengali writing under the direction of William Carey. In 1855, the Hindu college that had been established in 1817 was renamed Presidency College. William Carrey built

¹⁰ Governor General of British India.

the Sreerampore College in the city of Sreerampore, 30 kilometres from Calcutta. This institute became India's first modern university in 1827, when it was founded as a Danish university by Royal Charter. Despite the charter, the institution was not a university in the contemporary sense. Lord Amherst founded the Sanskrit College in 1824 on the advice of HT James Prinsep and Thomas Babington Macaulay, among others. The institution grew to popularity during Ishwar Chandra Vidyasagar's 1851 stint as principal, when he welcomed students from castes other than brahmin. Specifically, in the 1870s, the *tol*¹¹ or traditional Indian training school concept was adopted as a department. In 2015, the college obtained university status and is currently known as the Sanskrit College and University¹². In 1835, Lord William Bentinck founded the Medical College, Bengal (Calcutta Medical College), the oldest English-language medical institution in Asia. Not until 1879 was a separate institute for women formed. Drinkwater Bethune founded a school for Indian girls during a time when women's education was stigmatised by society. In 1850, he founded Bethune school, and in 1879, he founded Bethune Institution, the oldest women's college in Kolkata. Prior to the establishment of the college for women, the University of Calcutta was founded in 1857 in the style of London University. During its early years, the university's authority extended from Lahore to Rangoon and Ceylon. Dr. Kadambini Ganguly¹³ and Chandramukhi Basu¹⁴ were the first Indian women to graduate from the University of Calcutta. The foundation of a civil engineering college or department in 1856 marked the beginning of technical and engineering education. The Bengal Engineering College¹⁵ was established in 1921. (IEST, Shibpur). The city also boasts the establishment of the first homoeopathic college in 1880. After the partition of Bengal in 1906, nationalistic and anti-British sentiment increased, leading to the formation of the National Council of Education, Bengal. This eventually became Jadavpur University in 1955. Post-independence, numerous new institutes of Higher Education were established, and Calcutta remained a leader in the educational industry. In 1951, the Government College of Art & Craft was founded. In 1962, the Rabindra Bharati University was founded. This institution provides instruction in the visual and performing arts. The Indian Institute of Social Welfare and Business Management was founded in 1953 as the country's first management institute and is also the first university in India to provide an MBA. The first Indian Institute of Technology was established in Kharagpur, around 120 kilometres from Kolkata. Regional Engineering College (now National Institute of Technology) at Durgapur was established in 1960. The first of the Indian Institutes of Management, Indian Institute of Management

¹¹ In mediaeval India, *tol* (Bengali: "school"), also known as *Pāthasālā*, was an unofficial Bengali institution that taught subjects like grammar, law, logic, and philosophy.

¹² West Bengal Bill 2015.

¹³ Founded a prosperous medical practice in India after receiving training in Scotland and being the first woman to be admitted to Calcutta Medical College in 1884.

¹⁴ One of the first two female graduates of British India was Chandramukhi Bose, a Bengali from Dehradun in the United Provinces of Agra and Oudh.

¹⁵ The institute was established as an independent entity in 1880 as *Government College, Howrah* in the premises of Bishop's College in Shibpur, Howrah. In 1921, the name of the college space was changed to *Bengal Engineering College*. B.E. College was previously affiliated to the University of Calcutta. At this time it contained only civil and mechanical engineering departments

Calcutta was founded in 1961 in Joka. It was the nation's first institution for graduate study and research in management sciences.

The concentration and growth of HEI in West Bengal was in and around the British Capital, Kolkata while the other places were not considered for the development of HE. In Derjiling however, there was a growth of school education.

1.3.6 Gendered Representation in the Higher Education System

In higher education research or to say in education research the term sex and gender are used interchangeably. The gender is considered binary in lieu with the sex assigned at birth: 'male' and 'female', 'man' and 'woman'. The concept of accepting the myriad of gender identity in higher education is still not considered as a practice. Some institutes, however classify their application forms in which student can opt out of 'Male', 'Female' and 'Others'. The people conforming to identities other than birth assigned identities, are categorized as 'others' which in gendered terms would mean the LGBTQI+¹⁶ community. The people of this community are non-binary¹⁷, who make themselves recognizable in the group of 'others'. So, while discussing gender representation in a space, in this case the higher educational institutes, which aims at 'Leaving No One Behind' fails in data collection and dissemination of a particular section of the society whose existence cannot be denied. The 'gender minorities'¹⁸ are left out of the picture in terms of representation as well as their identity spaces. The reporting on gender by policy making bodies are usually on terms of women and men. The gap, inequality and differences in the social, economic and cultural spaces are denoted by the women and men. In this research work most of the interpretations are based on using sex and gender interchangeably, while analysing secondary data that does not distinguish between sex and gender as two different concepts.

1.3.6.1 India

As has been discussed in the previous section, the inclusiveness of gender in reports and policy making. The higher education reports use male and female, both as gender and sex of the students involved. Despite the legalisation of article 377 and the inclusion of 'third gender' in the 2011 Census, the third gender still finds no inclusiveness. According to the 2011 census, 4.8 million Indians identified as transgender. However, almost all major official data sources in India publish sex-related information in a binary male-female format, omitting those with transgender, intersex, and other non-binary sexual identities (Raman, 2021). This problem however comes with the kind of treatment the society has meted out to the gender minorities and the taboos associated with the non- linear gender

¹⁶ LGBTQI communities as well as people whose sexual orientation or gender identity differs are all included under the term "sexual and gender minority"

¹⁷ Non-exclusively male or female gender identities or identities that do not fit the gender binary are collectively referred to as non-binary or genderqueer.

¹⁸ The term "sexual and gender minority" encompasses both LGBTQI communities and individuals whose sexual orientation or gender identification differs.

identities. (GOI, 2011) The unavailability of data impacts the employment scenario and social integration of the people belonging to the non – binary gender identities. Similar is with the AISHE reports that consider sex oriented binary data as gender data. According to a report by the Centre for Internet and Society: "*Gender-disaggregated data does not reflect the reality of all gender minorities and so cannot be utilised to make development decisions, particularly for the inclusion of transgender and intersex individuals, who are frequently misrepresented or absent from this data.*" (K, 2020)

Despite collecting data that has been disaggregated by gender, AISHE defines the data as male and female. The representation of women in India's higher education system has fluctuated over time. According to the AISHE Report 2020, 49% of all pupils are female. The Gross Enrolment Ratio for girls in India is 27.3, surpassing the GER for boys, which is 26.9. There is a mismatch between the percentage of female students enrolled in the Institute of National Importance, the Deemed to be University, and the State Private Universities, which enroll more male students in the provided courses. In India, just 10.75% of colleges are reserved solely for women. Student enrolment at Under Graduate level has 50.8% male and 49.2% female. The distribution of Diploma is lopsided, with 65.1% male and 34.9% female. 55% of Ph.D. students are male and 45% are female. Integrated levels consist of 56.2% men and 43.8% women. PG Diploma student enrolment is 53.6% for male students and 46.4% for female students. In the majority of states, male enrolment is proportionally higher than female enrolment at all educational levels (AISHE 2020).

However, there are only 74 female instructors for every 100 male teachers, with 57.5% male teachers and 42.5% female teachers making up the Higher Education System teaching faculty in India.

1.3.6.2 West Bengal

Dr. Kadambini Ganguly, the first female graduate and the first woman physician in India, came from West Bengal. Despite coming from a Bengali upper-class background that disliked educated women, she acquired an English education and went on to earn a master's degree in First Arts (FA). In those times, her decision to attend clinical school was also not simple. In 1875, only Madras Medical College began admitting women to its undergraduate programme. Before Dr. Kadambini Ganguly and her husband, Dwarkanath Ganguly, agreed to change this standard, Calcutta Medical College did not allow the admission of women to its undergraduate programmes. Eventually, she enrolled in medical school against harsh opposition from a society opposed to women's liberation. Chandramukhi Basu, along with Dr. Ganguly, was the first woman to earn a Bachelor of Arts degree, and after graduating, she became the first and only woman in British India to earn a Master's degree.

These women were pioneers, but the reception they encountered in their educational environments had grave ramifications for the gender norms that society had established for individuals it did not deem to be 'male/man'. Dr. Ganguly enrolled in medical school on June 23, 1883, against harsh opposition from a society opposed to women's

independence. She was awarded a Rs. 15 scholarship for two years. In 1886, she was awarded the GBMC and became the first woman physician in South Asia to get a degree in modern medicine. The thought of a woman becoming a specialist was not welcomed by the traditional culture; in fact, even some teachers at the CMC were not pleased with the incorporation of women; one teacher refused to let Ganguly pass one of her classes. In 1886, Ganguly was awarded the Graduate of Medical College of Bengal (GMCB) degree instead of the MB degree. In 1876, Chandramukhi Basu required special permission to sit for the F.A. exams due to discriminatory official views towards gender. She ranked first since she was the only girl to take the exam that year, but the institution had to hold a series of meetings to determine whether her results could be released. Prior to Kadambini Ganguly, Chandramukhi Bose passed her Entrance Examination in 1876, despite the university's refusal to admit her. Only the 1878 change in university policy permitted her to continue her education. We've gone a long way from stories like these, yet gender-segregated educational places are still a reality today.

1.4 Literature reviews

1.4.1 State and position of woman and man in the Indian society

The ancient Hindu texts reveal the ways which prove to be derogatory for women at some point; the scholars praise women as “superior to men as all men are born from women, because women are more faithful to their spouses than men”. There seems to be a set of guidelines that have been put onto the woman acting out of these norms would render negative judgments towards a woman. In Harita Dharma sutra, there is a mention of how a woman could choose their own life, but they either had to choose a life of domestic bliss through marriage or attain intellectual and philosophical knowledge through the Vedic studies, either way the women were bound in their role, their life was determined by the two options and that was their only liberty or independence. While there were times, the women were held at high esteem, the scenario slowly deteriorated for the worst. The conditions that started to prevail in the Mughal period was later tried the Bhakti Movement followers to be restored, trying to advocate equality between men and women. It was much later that the in Bengal the men felt the need of social reform, that too because they needed partners who could match their western thought and education, and promoted the women should be educated. Education till today remains a process of cultivating domestic qualities in women so that they can be good wives and mother, the fact is just that the line has assimilated along with modernity. The regressive thought still remains deep rooted into the minds, where women become the discouraged section, they come into the scene only when the society and the men need. (Rawat, 2015)

The missionaries in India are the harbingers of women’s education, if not them the battle for education by the Indian women would not have reached to where it is today. It was the Hindu social reformers and the men missionaries of the British government officials who had initiated the idea of educating the women of India. Being taught by the missionaries the instruction for women in Tamil Nadu was quite foreign to the tradition and usages of people, but indigenous education was given in the play schools

(Thinnaipallikoodam), meant only for boys. The missionaries took up the Herculean task of educating the Hindu girls, resisting the socio-cultural and religious obstacles. The positive initiative taken by the missionaries to educate the female and bring them up socially, in its initial days failed to recognise the women who acted as helpmates of their missionary husbands or fathers, these women were neither paid nor acknowledged for their work, unlike the single women missionaries. (Nesabai, 2015)

The Dravidians and the Aryans are the part players in determination of the culture in our nation, however history and other world civilization forces have contributed towards the creation of our world of women as much as our culture. Myth has it that women was to represent sexuality, sensuality and energy of creation, while man, the purusha, represented Power, it seems the constant conflict of rights and prejudices among the two sects are solely on the myth, where the powerful wants to keep the rest in control. Hinduism out of its humongous counts of the Almighty's puts God as the seat of power and the Goddess were as could be termed the "Beneficial Goddesses", who were created and vested special power by the ones who were the actual possessors of power. No religion saw the mention of goddesses other than Hinduism, Lord Buddha accepted female "bhikshunis" reluctantly and later female devotees were accepted like the males. However during the Vedic period special mantras were prescribed for the birth of "learned daughter", which none would practice in "modern" India today. Atharva Veda finds evidence of Upanayana ceremony for the women as well, post which the women had full right to education with the pronouncement of the mantra. The women were also allowed to remain unmarried and remain Brahma Vadinis devoted to the pursuit of Knowledge and self-realisation. The women were expected to be educated in astrology, geography and veterinary science and even in martial arts. Manusmriti does not find mention of such duties and power bestowed on women, later in the 11th century when the women from the Islamic countries started accompanying the husbands as a part of their invading hordes, the Islamic concept of women began to influence the Indian Muslims as well as Hindus. During the Mughal period the girls belonging to the Mughal class received education as most of the poor girls did not receive any education. It can be said that the status of the women did not remain constant throughout but it so a transition from time to time, Social Reform Movement was initiated because a certain section of the elite male felt the need of to do away with the Western criticism of the denial of knowledge to the Indian Women, while this was considered the main reason that the reformists took interest in grooming the upper and the middle class women, there was yet another reason that the men had in mind was to meet the new needs of their own professional and service status. Along with the persuasion, to get the women schooled, the parents also had to be reassured that education would not lead women into a state where they would give up their 'traditional' roles. It was not the duty of the mother, but of the father to be informed and most of all 'educated' about the advantages of female education. While the missionaries were the early players in the game, driven by their urge to focus on poor and low caste women, the women of the upper caste Vaishnavite families were taught to read. Women of respectable families often studied classical or vernacular literature as recreation, Muslim girls were meant to read the Quran. What was exceptional is that the

men were more responsible for oral transmission of knowledge which came in the form of 'Shruti literature, music, ballads and folklore'. Women's learning and their role in generational transmission was more crucial to cultural survival than the maintenance of Vedic tradition by the men. Annie Besant (1901) wrote the Indian Ladies Magazine, Mataji Tapaswini (1893) established Mahakali Pathsalain Calcutta and set out to systematize the traditional education girls received at home. In 1867 Maulana Abdul Halim of the Calcutta Madrasah dismissed the idea of school education for girls, however in the early 20th century Kujasta Akhter Bano founded the Suhrawardiya Girls School (1909) in Calcutta. Begum Rokiya Sakhawat, set up school for the Muslim women behind purdah in the year 1911. The logic of gender segregation led to women's entry into teaching profession, i.e. women students needed women teachers (Bhattacharya, 2002) depending on the religio-cultural aspects more than any other factor. (Seth, 2001)

1.4.2 Society and Culture

Every society has a distinctive tradition of its own, a product of its own history, modern studies support the idea that modern Western Culture represents a kind of Universal Constant towards which other traditions must aspire. These ideas were instilled among the Indians by the virtue of education the British government established during the 19th century. The author rightly points out as to how education should be channelized for simultaneous imbibitions of culture and technological innovation among the students. Education should be of such a form which directs towards inculcation of values and at the same time encourage criticism and innovation; this would in time lead to social direction and control. (Pande, 2002)

Cultural socialization is deeply rooted in the patriarchal society which comes in the way of liberalization of the educated masses as well. Since the mid-18th century there are schemes for Women Studies centres and cells in the universities and the colleges respectively. However, it is only met by gender blindness, the main standpoint is not the competitive nature of the genders but how one is over represented and the other underrepresented. There is an urgent need to involve women and let them make place in the decision – making processes in the educational institutes. There lay a misconception of not all women being good representatives, and thus men, this idea has to be done away with as women do not feel free enough to voice their super necessary opinion in a male dominated programme, due to the ignorance meted towards their female colleagues in position most of the times. (Desai, 2012)

Bhutan is a country which largely owes its existence to the religious culture, even the education system was rooted to religion. In the late 20th century that modern education was introduced in the country, and India, a natural ally came up to help the nation to educate its population. What holds key attention is that in Bhutan the education system can be categorized on the basis of what he people can connect most with. Alongside with the modern system based on the European model, the citizens may also opt to pursue the traditional or the oldest form aimed at preserving the nations religious traditions and culture (the monastic system) or the Dzongkha education which while bearing similarity

with the monastic education differs in the aspect that, it is developed for the population in 'flung' areas and whose needs were not served by either the monastic or modern education. It seems from what the author has to say, people could choose any form to educate themselves, there was no pretentiousness in attaching themselves to only one form of education. However like India, in Bhutan as well the ones' with modern education, with scientific know how and spoken English skills were the ones' who would be competent for the global market and not the rest, even though the whole process of categorizing the education system is to improve the quality and relevance of education.

A lady pursuing an education is caught between two concurrent processes. On the one hand, official policy and public discourse on education place a premium on the need to promote education among girls and women in order to generate favourable macro-level dynamics. On the other hand, the educational policies, programmes, and the capacity of girls and women to access them are determined by the micro level dynamics entrenched in the family, the kin group, and culture. The education of women cannot be considered in isolation from its social framework, which is steeped in culture, religion, and "patrifocal family structure and ideology." Every facet of women's development centres around the safeguarding of female sexuality, notions of female purity/impurity, and their connections to caste status. The honour of the kin group and family rests completely "with and on" the women of the household. When a girl reaches puberty, there is a practise of isolating and segregating her so that her sexuality can be kept under control, so limiting her in terms of TIME and SPACE. Formal education or schooling entails moving into public spaces, interacting with guys (in coeducational settings and with male teachers), or being socialised (via the curriculum) and, ostensibly, moving away from the ultimate objective of WIFEHOOD and MOTHERHOOD. The protection of female sexuality determines whether or not a girl has access to education. How the female sexuality can be protected will impact the quality, type, and duration of their education, as well as what they will do with their education. (Chanana, 2003)

The intellectual growth and, thus, the academic achievement of schoolchildren are negatively affected by environments deficient in cultural resources. There was a correlation between economic adversity and the development of cognitive and perceptual skills and levels of motivation. Culturally and socially disadvantaged individuals are 'deficient' in terms of intelligence, motivation, physique, and personality. There lay a notion among the people of the various groups of people as to what should be the 'appropriate' level of girls' education. Owing to all the odds, the initiation is the social stereotyping that prevails when it comes to the people of the other sexes, other than men (Velaskar, 2003).

Education is seen merely as a process that involves the art of learning to read and write, the processes are not sheer tasks but involves more than skill development. While the society and the policy maker view education to be neutral and skill delivery section, the feminists view it as an enhancer to the women both at social and individual level. The very thought needed that women should feel empowered within the educational practices that prevail, the power which women lack in their daily lives and is an asset for their

oppressors. Keeping aside these facts it is also important that the 'teacher' has to be educated enough to instill among the pupils a correct flow of thought. Language roles is a major decisive factor in order to bridge the gaps present in the system. (Ghosh M. , 2002)

1.4.3 Gender Stereotypes and Choice of subject

The term "stereotyping" has been defined as complex representations of different types of people, containing all the information we know or think, which may or may not be accurate generalisations about gender roles. In some cultures, it is difficult for women to exercise authority over men; in advanced industrialised societies as well as in the developing world, old paradigms of thought persist that women are too emotional or illogical for senior management, or that they are best suited for the domestic maintenance aspects of administration. To a significant extent, gender stereotypes can impact people's attitudes and behaviours, even if they do not believe in the stereotypes themselves. When people notice the presence of stereotypes, they may act differently, even if they do not believe in them. Moreover, gender roles and stereotypes can have a detrimental effect on women's desire to work efficiently and successfully; therefore, the elimination of these barriers will benefit women in various ways.

The social mind set is important in choice of subjects by girls during their higher studies and does not depend solely on the aspect of gender differences. According to the author it is incorrect to think that women do not have aptitude for mathematics, physical and engineering sciences, but women prefer biological sciences and medicine due to their societal perception. (Bamji, 2012)

Masculinity and femininity are correlated with societal gender roles. Men are said to be more preoccupied with the successes they are expected to represent: competitive, assertive, and tough (Hofstede et al., 2010). In masculine societies, men's accomplishment culture fosters the assertiveness and rivalry. In contrast, women play a considerably more nurturing role in society. In a feminine society, relationships and the living environment are of greater importance to women (Hofstede et al., 2010). Furthermore, neither men nor women are supposed to be ambitious or competitive in feminine society.

Papa, (1999) tries to say what if home making would be taught as a subject with rigorous analysis, concepts, theories and methods. Home making is a human activity, common for both women and men and hence to be commonly shared. However the danger zone is formed when an attempt is made to make home-making an exclusive subject for women without changing the value hierarchy and still retaining discriminating stereo-types roles for men and women. If girls alone are to be educated in home making as a corollary boys are expected to be educated in areas of knowledge. This will in turn curtail women in their job opportunities, their status much reduced they will be denied of justifiable and equitable roles as social agents.

1.4.4 Parental Roles in educational attainment of the Children and Choice of Educational Institutions

Mothers are the major role players on who relies a child's education, alongside the educational attainment the mother acts as an instrument in the child's success. The urban middle class women are considered relatively more educated and are often loaded with the 'literate' duties, otherwise done by men. They do not consider academic learning as the sole responsibility of the educational institutes but view it as a shared responsibility. It can be said that the success of a student also goes on in the form of a hierarchical economic pattern, the middle class mothers being more conscious about their children's education than their lower counterparts. Mothers with no formal education do care about their wards' education but unable to guide, they merely become disciplinarians. (Panda, 2015)

In spite of the rise in the number of institutions, the choice of institution is still guided by gendered spaces. Parents consider the proximity, security and discipline, other than the cost. While choosing an institution for the girl child there is an intersection of class, community and gender, these factors, act as variants in the enrolment norms. The idea of the kind of 'Mix' also comes into the scene as parents are also concerned about how the peer group would shape the girl child's quality. (Goswami, 2015)

Higher education is a key to socio economic changes but it is linked with various social indicators and comes as a package. In case of the women the social indices come in the way of acquiring education. The author brings out how in spite of being economically progressive participation of the females in Higher education is low in the state of Haryana. Here the Khaps are in control of the freedom and liberty that will be given to or be taken away from the women in that particular cultural group. The thought process of the parents are also guided by the members of the Khaps, and they view co-education as a transgression of the decency of women. The parents would rather opt for schools with separate timings for the girls and the boys, which they feel would secure the girls in the institutional space. (Ishtiyaque, 2016)

When there is a question of the girl child in India moving out of the home there is a state of additional discomfort among the parents, owing to the rising number of atrocities against the female masses of any age. This in turn leads to a series of events which by no means is a very positive for the development of the women. There is a very stark difference between the amount spent on the women and the male, there is always a tendency of underinvestment in female education. The space between the home and the institute play a very important factor as to how the female shall perceive her knowledge she attains, insecurity in this space requires immediate attention of the educational institutes and the policy makers, but there is a certain gap in understanding and implementing an idea about the situation. To do away with the rising violence and sexual harassment, the initiative taken to provide self-defense or cycling, is no doubt good components of gender sensitive education, that too which is not promoted in proper sense, the work however finds no mention of the male being trained and taught how to perceive the other elements of the society. It has been pinpointed what the youth in India aspires,

is deep seated in the two motives one is salaried occupation and the other is the marriage market, these two are interlinked when it comes to gender sensitivity. Gender stereotyping in the school text books finds very important mention in the work, the enrolment is largely affected by the perception of importance of female education. In the rural areas a large proportion of the female have never attended educational institutes because they did not feel the need to do so. (Bandyopadhyay, 2011)

Gender-related attribution pattern," whereby parents attribute their son's mathematics ability to talent and their daughter's to effort. The parents of boys judge their child's mathematical ability to be greater than the parents of girls, while also considering talent as a more significant factor in their child's mathematical success (Vallejo, 2015).

1.4.5 Family Background and Women in Higher Education

In the Indian context education is distributed in a pyramidal shape where university education is attained only by a few. The participation of women in higher education is shaped not only by economic conditions but mostly by patriarchal ideologies. These ideologies stand in the way of physical and psychological mobility of women and shape their educational aspirations towards career or occupation that will either not contradict motherhood or take a secondary position to motherhood. Even in middle class families the women are socialized to a modest education/career since the cultural factor demands that wives are less qualified than husbands. In developing countries like India the gap between men and women is greatest at the university level that critically determines access to professions and positions of responsibility and prestige. (Shanthi & Lakshmanasamy, 1999) In the whole world the region with the lowest female participation at university level is Asia (World Bank, 1988, 'Education in Sub-Saharan Africa: Policies for Adjustment, Privatisation and Expansion', Washington D.C.)

1.4.6 Globalization and Education

The structure of a sustainable society lay in the role of education provided and gained by the builders. The vision of education for sustainable development envisages a set of fundamental type of learning to provide quality education which is learning to know, to be, to live together, to do and to transform oneself and society. To attain this, Higher Education in India has to reach effectively to the traditionally underprivileged and disadvantaged section of the society. Major attention is to be paid to the female students and the first generation learners. Female enrolment in the arts stream is seen to be at a high of 41.91% and lowest in Veterinary Science at 0.08%. The gender gap needs to be addressed; this is where the concept of discouraged choice of stream to study comes in. (Kaur, 2016)\

The technological advancement has made man neighbours to one another, information; knowledge sources are just a click away. It is also noteworthy no matter how westernized influences work, the Indian feel exists, the cultural aspects and the social structures exist. However these aspects are largely influenced by globalization, while some portion of the

people are still on the sphere of exploitation in India and some are not, all of them are touched by a name called globalization. The global phenomenon expects that gaining knowledge should meet the international standards, this has impacted the educated class in India, finding themselves content with their westernized living and traditions, without actually considering their own indigenous cultures and practices, a country like India may stand to lose its own local resources and culture to a very attractive abstraction called Westernization. Education leads to a change in thought so shall be rooted to a nations culture and in the process progress, a form of education is necessary which shall be exemplified form what our culture gives us, this may render positive as the population which has not been touched by development may connect to the everyday life situations and have an understanding of the world in their own way. With the highest Demographic Dividend India is at the cross roads, she shall stand to gain if they can reap the benefits of globalization without diluting or losing the essential Indianness or identity, else it shall not be of much a benefit. The scenario however may worsen with the existing system of education, in the downward slide of quality, while some feel the need to hold on to the identity some just try to impose a single uniform identity on all the Plebeians. There is a need to aim the Indian education system to result into a welfare for the globe rather than just putting the cultural identity at stake.

India is a global name for the varied cultural and socio-economic prospects, however when it comes to the education industry there is still a long distance India has to cover. In spite of the brain drain from the country there is very little brain gain in this country. The real challenges that India faces in drawing the international students are access, equity and quality. Due to globalization the challenge posed by access can be done away with, but quality still remains and is the real challenge. The perception of the parents, students and various first-hand information rate the Indian educational institutes at their lows, which in turn affects the attraction of the global students. Even when it comes to private higher educational institutes, the cost is high but the quality does not match so rather than drawing international students the young brains of the country move out for Higher Education. India with her highest Demographic dividend, can overcome the outflow of the young minds, with the building of quality institutes, which needs to draw public attention with all that the institutes have to offer MACAULAY MINDSET towards Indian education.

The universalization of the primary (and partly secondary education) has led to the spill over in the sectors of tertiary and higher education, a large number of students are directing themselves towards the institutes of higher education. It is true that the amount spent, for education, across the various strata of the society in India is among the highest in the world (Sujatha, 2012).

1.4.7 International Framework for Gender Equality in Education

On the international level there are various committees and bodies which are working to eliminate any types of discrimination prevalent in the world. The need of achieving gender equality in education is underlined in a variety of internationally recognised goals

and gatherings. Education for All (EFA) is a global initiative to provide educational opportunities to "every citizen in every society." By focusing especially on the various levels of education, the EFA goals aim to address the requirements of all children, adolescents, and adults by 2015. (Gardner, 2008). The EFA objectives to be attained by 2015 are as follows:

- a) Expand and improve comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children.
- b) Ensure that by 2015, all children, particularly girls, those in difficult circumstances, and those belonging to ethnic minorities, have access to a complete, free, and compulsory primary education of good quality.
- c) Achieve a 50 percent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults.
- d) Eliminate gender disparities in primary and secondary education by 2005, and achieve gender equality in education by 2015, with focus on ensuring girls' full and equal access to and achievement in basic education of good quality.
- e) Improve all aspects of the quality education and ensure excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

At the 1990 World Conference on Education for All, held in Jomtein, Thailand, representatives from 155 countries and over 150 organisations attended. The development agencies UNICEF, UNESCO, UNDP, and the World Bank sponsored the conference. The United Nations Girls Education Initiative (UNGEI) was established in 2000 during the World Education Forum in Dakar. UNICEF is the main agency for the UNGEI, which employs global, national, district, and community-level efforts to eliminate gender discrimination and inequity in education. The Dakar framework highlighted that "the heart of EFA is at the country level." The participants of the World Education Forum were responsible for achieving EFA's goals and targets, and they required the governments to do so as well. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) offered guidelines to assist countries in achieving their education-related goals for girls and increasing their efforts. The Guidelines for Preparing Gender Responsive EFA Plans and the Preparation of National Plans of Action Country Guidelines are two important texts.

The United Nations Commission on the Status of Women, an organisation created in 1946 to monitor the status of women and promote their rights. This Commission's primary objective is to shed light on every area in which women are denied equality with men. Adopted by the United Nations General Assembly on 18 December 1979, the CONVENTION ON THE ELIMINATION OF ALL FORMS OF DISCRIMINATION AGAINST WOMEN (CEDAW) was the culmination of the Commission's efforts. Article 5 (a) of CEDAW requires States Parties to take "all appropriate measures" to "modify the social and cultural patterns of conduct of men and women" in an effort to eliminate practices "based on the notion of the inferiority or superiority of either sexes or

on stereotypical roles for men and women." Article 2(f) extends article 5 by urging States Parties to adopt "all relevant steps" to "modify or eradicate" discriminatory laws, rules, customs, and practices against women.

The Committee has read these provisions as requiring States Parties to change and reform gender preconceptions and eradicate erroneous gender stereotypes. This distinction is significant because it recognises that while it is difficult to require States Parties to "eradicate" a (stereotypical) view, it is essential to "alter and reform" beliefs that are damaging to women. It also states that States Parties must eliminate the practice of applying stereotyped ideas to women and men in a manner that violates their human rights.

Art. 10 of CEDAW stipulates that states must take all appropriate measures to "ensure, on the basis of equality of men and women, the elimination of any stereotyped concept of the roles of men and women at all levels and in all forms of education by encouraging coeducation and other types of education which will help to achieve this goal and, in particular, by the revision of textbooks and school programmes and the adaptation of teaching methods."

Aside from the Convention on the Elimination of All Forms of Discrimination Against Women, the Universal Declaration of Human Rights affirms the principle of non-discrimination and says that every individual has the right to education, as discrimination in education is a violation of rights. Under the principles of its Constitution, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) is charged with fostering international cooperation for the aim of promoting universal respect for human rights and educational opportunity for all. The UNESCO adopted the Convention against Discrimination in Education on December 14, 1960. Article 1(d) of the Convention defines "discrimination" as any distinction, exclusion, limitation, or preference that, based on race, colour, sex, language, religion, political or other opinion, national or social origin, economic condition, or birth, has the purpose or effect of nullifying or impairing equality of treatment in education and, in particular, of inflicting on any person or group of persons conditions that are incompatible with the enjoyment of equal rights. Article 3(a) mandates the state party to repeal any statutory laws and administrative instructions including discrimination in education, as well as terminate any administrative practices involving such discrimination. According to Article 4(a) of the convention, the State Party shall take various steps to make higher education equally available to all on the basis of individual capacity (<https://www.ohchr.org/EN/ProfessionalInterest/Pages/CEDAW.aspx>).

1.4.8 Plans and Policies

In India, seven out of every ten individuals reside in rural areas. This is what makes the discrepancy between rural and urban higher education even more unsettling. According to 2004-05 NSSO statistics, the GER in rural areas is only 6.74 percent, compared to 19.88 percent in metropolitan areas. b) Interstate Disparities: GER is far from uniform between states and regions. In 19 states and territories, GER is below the national average

(10.84 percent). Among the many religious groups, Muslims have the lowest GER rate (6.84 percent), which is half the national average. In contrast, several religious organisations have higher GER than the national norm. While the national average of GER is 10.84 percent, Scheduled Castes have GER rates of 6.52 percent, Scheduled Tribes have GER rates of 6.57 percent, and Other Backward Classes have GER rates of 8.77 percent. If one focuses on rural areas, these differences are amplified even further. e) Gender Disparities: the GER rate for females is 9.11 percent, whereas it is 12.42 percent for boys. It is important to mention that the GER for women from lower castes and some social groups (especially Muslims) is even lower. f) Disparities across Occupation Groups: The GER for rural labourers (1.41 percent) and casual employees in urban areas (3.26 percent) is significantly lower than that of the self-employed and regular wage- and salary-earners. (g) Poor-Non-Poor Disparities: The GER for the 'poor' is appallingly low, at 2.41 percent, compared to 12.81 percent for the 'non-poor'

Women's illiteracy has a severe impact not just on women's lives, but also on society and its institutions, according to a large body of literature. Therefore, for the preservation of society, it is essential that women continue their education by becoming educated. The Preamble to the Constitution of India states that "EQUALITY OF STATUS AND OPPORTUNITIES" will be guaranteed to all citizens. Article 39 of the Constitution directs the State Policy to ensure that men and women have equal access to appropriate means of subsistence. Government of India has also undertaken a number of programmes at both the central and state levels to transform the educational landscape for girls in India (Mishra, 2013).

The progression towards a knowledge society needs more focus on the Quality of education, which would in turn play the most significant role in national development. The eventual goal is to integrate all forms of education into a more compressive and unified view of learning that will recognize the relationship of learning human actions and aspirations. (Misra, 2013)

The educational policy pursued after India gained independence was built upon the ideology generally manifest in mercantile form during the mid-eighteenth century but has emerged in its full potential with the unfolding of the modern capitalism in the 19th century through the advanced global capitalism of the late 20th century. In this process of structural and utilitarian evolution, the Indian educational system has given a short shift to the real needs and ambitions of the regional communities and aspired to become international from its earlier feudal and hierarchical form. In attempting this, the system has not only eroded its credibility base, but also alienated itself considerably from the common an. The system of higher education has been all the more a victim of this foreign syndrome that needs to be critically examined and reviewed now. (Bhat V. N., 1999)

The University Grants Commission has mandated that universities include experiential and outcome-based learning into their curricula. According to Aditya Berlia, vice-chancellor of Apeejay Stya University, the 21st century has prompted universities to reconsider their role in society and the way they educate, conduct research, and define learning. "Three macro trends are becoming the defining characteristics of those who are

fast evolving. The first is an extreme emphasis on students. Curriculum is now individualised for each student rather than mass-produced. The second is an emphasis on five-year and longer-term results. This is upsetting previously established universities that have never been required to demonstrate their value over the long term or in terms of outcomes. The final and most crucial realisation is that a PhD does not inevitably make someone an excellent teacher. Even at the highest levels, there is a shift toward teacher training in recognition of the need for a higher benchmark for teaching skills" (Thomas, 2019).

1.4.9 Gender and technology

Though technology and development are viewed in conjunction, the benefits are not consistent over society as a whole. As a part of the larger development process change, needs to bring about equality among different segments of the society, including gender equality. Even though technologies are neither gender specific nor have any inherent gender bias, the uneven distribution of assets, resources and knowledge across genders create situations where the impact of technologies becomes imbalanced. Technological interventions have affected women in varied ways, but seldom worked towards improving the quality of their lives. Often new technologies have displaced women from their traditional areas of employment, while leaving the activities where women predominate untouched, as in the subsistence sector. The existing gender dynamics are such that only men have access to the jobs created by mechanization. Even when the technology is actually used for tasks that are carried out by women, its control continues to rest with men. Imbalances in technological up gradation status relate not only to the ability to purchase technology but also access to information regarding technology, both of which are significant regarding the adoption of technology. Social impacts of technological interventions are profound, as the social status of woman not only marginalize them from access to technology, the marginalization further widens the gender gap and reinforces women's subordinate status. When men gain access to technology and to mechanized jobs, in fact gain control over technologies aimed at tasks performed by women, men's dominant position within the household are further strengthened.

The Department of Science and Technology (DST) and SEWA, are the two organisations that have worked towards developing and/or disseminating appropriate technology for women. The department of science and technology, during the 6th Plan Period initiated a scheme called 'Science and Technology for Women', with the objective of improving the life and status of women through the application of science and technology. Every technical change necessarily needs to be accompanied with changes in attitude, values and beliefs of the people who are affected by such change. The community towards which the technology is directed, needs to be educated and trained, so that it becomes easier for them to accept the new technology. (Venkateswaran, 1995)

1.4.10 Relation between gender and sex

Numerous 20th-century intellectuals made an explicit distinction between sex and gender. They argued that the term 'sex' refers to the biological differences between males and females and that chromosomes, hormones, sex organs, etc. determine a person's sex. Alternatively, one's gender, which may or may not be associated with one's sex, is mostly a question of personal preference. The fact that a person is naturally female does not obligate her to show exclusively culturally related feminine characteristics, such as dependence, cooperation, and nurturing. It also does not imply that female must be a primary caregiver in the kitchen, church, or nursery. Similarly, just because a person is biologically male does not indicate that he can or should only show culturally masculine characteristics such as independence, competition, and hostility. It also does not imply that he must work in one of the major professions (business, medicine, or law) or engage in heavy labour like as construction. Numerous feminists of the 1970s were among those most adamant about the sex-gender divide. They were vehemently opposed to the orthodox doctrine that "biology determines fate." In opposition to this idea, they claimed that, unlike sex, which is a biological truth, gender is a social creation that is not always determined by nature. Gender roles are subject to change, and there is no natural law requiring biological males or females to exhibit exclusively masculine or feminine characteristics. In fact, according to some feminists, individuals should strive to be androgynous, establishing a personality type that combines the best both male and feminine characteristics. Other feminists argued that because people disagree about which gender qualities are positive and which are negative, people should be encouraged to adopt whichever gender features they like in their daily lives. This form of androgynous existence was presented as being especially freeing. Although many current natural and social scientists continue to embrace some variation of the sex-gender difference, the majority of contemporary feminists today dismiss it as mistaken or even incoherent. They argue that sex, like gender, is socially created, mostly on the basis of the presence of intersexes, trans-sexed, and transgendered individuals. Infants are referred to as 'girls' or 'boys' depending on the appearance of their genitalia at birth. This proclamation is basically a social judgement over which aspect of a person's body should best characterise their essential personhood. In a civilization that did not emphasise the reproductive duties of humans, children would be referred to at birth as 'blue-eyed' or 'brown-eyed' instead of 'girls' or 'boys' In most countries, children are labelled 'girls' or 'boys' at birth, and then everyone behaves as if sex assignment were an exact science and there were just two sexes. However, as stated above, there are more than two sexes, and sex assignment is frequently an issue of parental choice, professional intervention, or, slightly later, individual autonomy (Tong, 2012).

1.4.11 Gender Free Socialization

The more egalitarian a society is, the less significant gender roles become. Additionally, when a society becomes more accepting of intersexual, transsexual, and transgender individuals, gender roles become weaker. But to what extent should gender roles be

diminished? Can cultures devoid of all gender roles survive, much less thrive? In the 1970s, radical feminist Shulamith Firestone asserted that societies would be significantly better off without gender and sex roles. She hypothesised that once technology is able to give the tools for individuals to reproduce artificially, the need to impose genital heterosexuality as a means of assuring human reproduction will be eliminated. Lesbianism and homosexuality would no longer be regarded as freely chosen alternatives to heterosexuality as the norm. In place of this, the categories of homosexuality and heterosexuality would be deconstructed, and institutionalised sexual intercourse, in which men and women play well-defined gender roles, would cease to exist. Firestone stated that the end of the institution of heterosexuality would be accompanied by the loss of the biological family as both a reproductive and economic unit. She reasoned that the traditional reproductive function of women made it simple for civilizations to rationalise relegating women to the home sphere and sending males out to work in the public sphere. Over time, the biological family transformed into an economic unit in which women performed unpaid productive labour such as child care, elder care, and housework. However, once women are no longer need to procreate, the major reason for keeping them at home no longer exists. Women can join men in the paid labour, a workforce that includes domestic work, child care, and care for the elderly in addition to the tasks that women have historically undertaken. However, Firestone was not sure that women's employment in the paid economy would be an unqualified boon. According to her, the workplace as we have known it is not a particularly desirable location. As a result of how societies have been constituted, males have been required to conduct the majority of the labour-intensive job in the workplace. Therefore, Firestone reasoned that if technology could destroy the function of the woman-as-reproducer, it could equally eliminate the role of the man-as-producer. Computers and robots can be trained to perform a significant portion of men's conventional employment, freeing men and women to conduct more meaningful work.

Firestone felt that it would be possible to overcome all interactions, institutions, and beliefs that have divided the human community, such as the categories of male and female on the one hand and technology and art on the other. She envisioned a completely androgynous culture that would mix male and female, technology and art. She viewed this occurrence as greater than the sum of these categories. She viewed it as an abolition: a "matter-antimatter explosion" that ended with a poof'.

1.5 Research Gap

There are very negligible number of research carried out on gender gap in higher education in North Bengal. Academic research on location and distribution of higher educational institutes, choice of the institutes and higher educational institutes as important geographical spaces is yet to be explored extensively. There are researches under taken separately on gender gap, gender perception by sociologists, psychologists and educationists but all of it lacks the geographical perspective encompassing space. Most of the research that comes close is women empowerment and women in higher

education, which deals mostly with the number of women who are there in this sector or the socio – economic empowerment of the women. The female representation in HE is more than males, though stream specific, but the work participation of women is less. There are no academic attempts made to understand the dynamics of gender opinions, space and the role higher educational institutes can play in reducing the gap that are deeply socio – cultural.

1.6 Statement of Problem

There is still a long way to go in addressing ‘gender’. With the myriad of factuality that comes with the idea. Social, cultural and individual identities is embedded in the concept of gender. However, there is a ranging dichotomy in usage of the term gender and data available for research on ‘gender’, often used interchangeably with the term ‘sex’. The underlying problem of invisibilisation of the idea of gender in a proper way has led to improper understanding of Gender Imbalance, Gender Disparity and Gender Inequality. It is not enough to look at the numerical representations only, to put an end to gendered divisions in our everyday life. Documentation and quantification of gender data is essential in a judicious and clear way. In the higher educational institutes of the study area there exist regional differences in the enrolment pattern based on gender/sex. In spite of the government initiatives the education of students, their choice of subject and streams remain stereotyped. There is definite structure in plotting the enrolment ratio in the different higher educational institutions especially in most of the professional degree colleges, where the female representation still remains low and invisible population identifying as gender minority. Along with existing differences in the pattern of enrolment there are prevailing gender roles in the institutional spaces. Despite the fact that the number of women remaining in education has increased in both urban and rural areas in particular fields of study, keeping them out of the workforce for longer, the proportion of women in the labour force remains lower than that of men. As colleges compete globally to attract students, the demand for higher education continues to rise. However, do students choose private or public institutions? Are women entering traditionally male-dominated industries like science and computing? These are but a few of the problems policymakers face as they seek to develop and diversify their national tertiary education systems (<http://uis.unesco.org/en/topic/higher-education>). The geographic location of colleges is one of the most fundamental and obvious determinants of opportunity, yet politicians and scholars frequently ignore how geography influences students' educational choices. Nevertheless, gender statistics are more than just data categorised by gender. Having data by sex does not ensure, for instance, that concepts, definitions, and procedures used in data generation reflect gender roles, relationships, and disparities in society (<https://eige.europa.eu/gender-mainstreaming/methods-tools/sex-disaggregated-data>).

1.7 Objectives

In terms of objective the study aims to achieve the following:

- i. To analyse the location of various types of higher educational institutions present in the study area.
- ii. To examine the factors that play important role in choice of higher educational institutes by students.
- iii. Analysis of the trend in enrolment status of students in higher educational institutions in different streams of education and their choice of subject depending on their gender.
- iv. To study the existence of gender stereotypes and gender roles in the higher educational space.
- v. Awareness of the students about the government welfare schemes in higher education.

1.8 Hypothesis

- i. School leaving examination grades is one of the major factors in the choice of the students' higher educational institutes.
- ii. The socio-economic convenience of students influences the choice of higher educational institutes.
- iii. The enrolment of the female students is more in the subjects that fall under the category of arts and social science.
- iv. Gender Stereotyping leads to a gender differentiated space in the higher educational institutions.
- v. Awareness of the welfare schemes would bring change towards the representation of students in Higher Education on the basis of social groups and gender.

1.9 Data and Methods

In order to carry out the study both qualitative and quantitative data have been used. The quantitative data has been acquired from government reports and the website of the institutes to be surveyed. Data has also been acquired from various journal, books and periodicals. The important sources of secondary data in the work are AISHE Annual Reports, UGC Annual Reports, and Census of India (2011) policy documents by the government. The literacy and educational attainment tables from the Census of India (2011) have been used in order to determine the quantitative variability of literates in the various districts of North Bengal. The primary data has been collected on the basis of sample survey with the help of questionnaire and schedule. 586 students from 40 different HEI (36 colleges and 4 universities) in the different districts has been surveyed.

Table 1.2 Sample Selection

Items	Male	Female	Others
No. of students surveyed	226	353	7
Courses			
B.A.	123	221	3
B.Sc.	75	95	1
B.Com	2	2	
Others	4		
M.A.	7	15	1
M.Sc	15	20	2
Marital Status			
Married	1	2	
Unmarried	225	351	7
Religion			
Hindu	176	287	7
Muslim	42	47	
Christian	3	6	
Buddhist	2	5	
Others	3	8	
Social Status			
General	56	104	2
SC	81	116	3
ST	10	21	
OBC-A	32	40	1
OBC-B	47	72	1
Home Location			
Rural	183	261	3
Urban	43	92	4
Family Type			
Joint	77	95	2
Nuclear	149	258	5
Economic Status of Students			
Self- Dependent	7	4	
Dependent	162	295	6
Partially Dependent	57	54	1

Source: Primary Survey, 2021

To understand the gendered perception the questionnaire was directed toward both the male and the female students of the institutions selected for surveying. Multistage Random Sampling without Replacement (SRWR) was used in order to determine the sample colleges and to survey the students. To understand the existence or nonexistence of gender stereotypes and the different gender roles in the HEI space, gender – role inventory has been used. Survey of students has been conducted over a period of three years from 2019 to 2021. Due to the breakout of a pandemic the survey has been conducted both synchronously and asynchronously. Visiting different HEIs and surveying students were mostly done during 2019 and 2021. The data then collected, has been subjected to compilation and analysis with the help of various statistical techniques and mapping with the help of GIS. The base map has been acquired from DivaGIS and Census Abstracts. Entire study has been done in three different stages, such as:

Pre – Field Stage: Prior to the field visit literature review was conducted to prepare the questionnaire and schedule for pilot survey. The pilot survey results were used to set the

objectives, formulate hypothesis and sample design. The final questionnaire and schedule was prepared done to survey the students from the different HEI. Chapter 1 – 4 is based on secondary data sources, so the compilation and analysis of these chapters were completed prior to field visit. The methods used in the chapters are numerical values from different reports, percentage analysis, descriptive statistics, Location Quotient, Density of HEI and Chi – square test.

Field Stage: The distribution of the HEI in the rural and the urban areas are highly skewed. The HEI of the urban and the rural set up are selected at random for conducting the survey, from the six districts of North Bengal. In the study area most of the HEI are located in the rural areas so the sample HEIs have a rural set up (Figure 1.1.) Urban HEIs are less compared to the rural (detailed discussion in Chapter 3). The students of the selected HEIs have also been selected at random during the HEI visits. The students surveyed were enrolled in different courses in the college and were present in the HEI during the survey. The students were surveyed with the help of a schedule (Appendix II). For the study all the universities were visited and students were surveyed. Students were surveyed from 33-degree colleges and 3 professional degree colleges. All the eight female colleges of North Bengal were visited during the survey but students from only three female colleges were taken as samples. During the survey and HEI visits thorough documentation of infrastructure, neighborhood and communication facilities was done. Interaction with the students was done individually or in groups in the sample colleges. Primary data was collected by surveying the students in the selected colleges.

Post – field Stage: On completion of the survey tabulation was done for analyzing the data and interpreting the result to establish the objectives and hypothesis of Chapter 5, 6 and 7. Various statistical tests have been conducted for the completion of the analysis. In Chapter 5 which largely deals with the choice of HEI by the students and factors that are deemed important by the students while selecting their respective institutes. Spearman's Rank Correlation is used to establish the relationship between the Socio – economic (SE) scores and the infrastructural facilities of the colleges to study the SE convenience and choice of HEI by the students. To establish the relation between a factor and students' choice of HEI, Point Biserial Correlation (r_{pb}) is used. To establish that the factors are important in students' decision taking t-test has been used.

The sixth chapter is based on gender perceptions of the students and the gender roles in the HEI. Percentage analysis has been used to study the opinion about different gender and the representation of students in the HEI. A 52-item schedule is used to study the existing stereotypes among the students and Chronbach's Alpha is calculated to determine the internal consistency of the items. Gender opinion is shown with percentage analysis. In order to test association of students' gender and gender differentiated space Chi – Square test is used. Further Cramer's V is calculated to establish the magnitude of association.

The seventh chapter is predominantly based on primary survey in which percentage analysis is done to show the awareness of the students about the various schemes and programmes of the government in HE. In order to establish that there is difference in the

enrolment prior to and after the implementation of any scheme t- test comparing mean is used. The detailed methodologies have been discussed in the respective chapters.

Age group of the selected respondents: While the survey it was ensured that the respondents are students enrolled in the college and belong to 18 – 23 age cohort. The students doing graduation from the degree colleges and professional colleges were taken as samples. Also, students doing post-graduation from the different universities of the study are who belong to the aforesaid age group was surveyed during the study. The formal age for completing at least masters is 23 years and the age of enrolling in the HEIs after completing school is 18 years. Formal age to complete MBBS degree is 23, which is a five year course and B.Tech. is a four year course. Students from the Teacher’s Training HEIs were kept out from the survey as there are students beyond the age cohort who attend this institutes or complete their training in distance mode. A separate questionnaire was prepared for the LGBTQA+ students (Appendix III), there are 10 students who had agreed to be a part of the study. These students during the survey belonged to the age cohort 18-23 and were enrolled in courses in the different HEIs of North Bengal. As the queer identities face serious societal issues many students either have kept it hidden or denied to be a part of the study despite sharing their problems. There were 7 students who have been documented as other gender during the survey, but they were not comfortable filling in the separate schedule for the queer.

Selection criteria of the colleges: All the universities were considered for the study. The colleges were randomly selected from the rural and the urban locations. 37.08 percent general degree colleges have been used as a sample of which 19.32 percent colleges are from rural area and 18.18 percent from the urban. From the professional colleges 14.29 percent were surveyed, out of which 9.53 percent is rural and 4.76 percent is urban sample. All the universities were a part of the study despite not surveying students from each university. Other than surveying the students’ certain institutes were visited to only understand the locational set – up and the physical set – up of the institutes (i.e., the infrastructure and the physical ambience, cleanliness practices and campus culture)

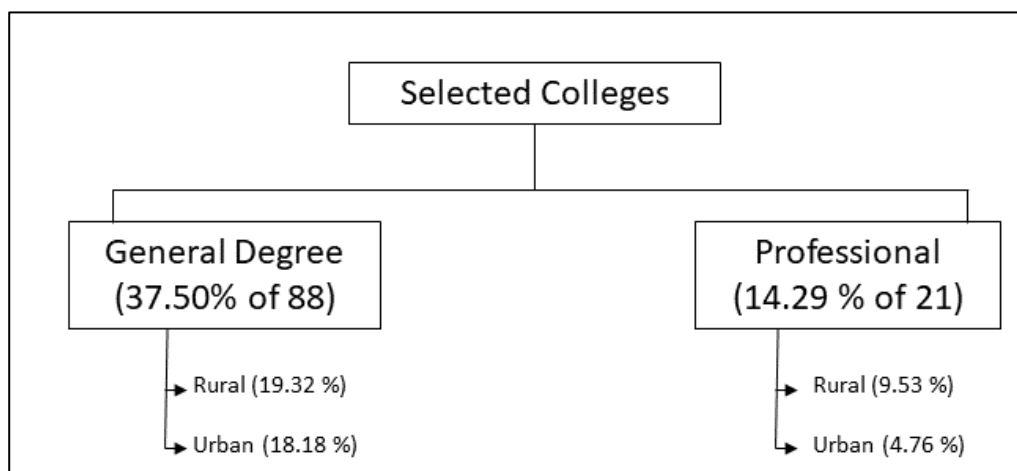


Figure 1.1 Sampling different colleges of the study area.

1.10 Significance of the Study

North Bengal as a region is insufficiently developed in terms of Tertiary Education (TE) despite the strategic importance it has held. With the constant overlooking over the years northern districts of North Bengal has developed serious socio – economic back draws. This study has taken up motivation from the concept of ‘PADHEGA INDIA TABHI TOH BADHEGA INDIA’ and the fact that education people of all the gender led to a tolerant development of the nation. As the topic revolves around ‘gender’, the study would become highly significant how the youth of North Bengal representing the higher educational space perceive gender identities beyond the binary. How the young adults going to the HEIs of North Bengal think beyond the usual unequal representation while thinking gender, which of course exists. Attempt has been made to represent voices of the ‘other’ gender in the HEI space who are often invisible. The study is significant in including everyone well in higher education irrespective of their social identities. This will help policy making keeping in mind the gender parameters and perception of students representing HE spaces.

Understanding the perceptions and ideas about HE shall be indispensable for equitable measures and implementation by the policy maker. It is also important to mete out development in the sector of Higher Education spaces of the region that is yet to reach the national and global levels. This study also signifies how the HEIs can help students in perception building. While increased participation of women in the HE was thought to be a solution to existing gender inequalities, the argument is that the number alone is not an inevitable outcome and there are people who identify beyond the binary, often invisibilised in number as well as representation.

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