IMPACT OF EDUCATION IN THE LIGHT OF DIFFERENT PEDAGOGICAL SUBJECTS

Edited by : Dr. Somnath Das

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PREFACE

The idea was conceived some time ago. But to carry it out required a lot of work. Despite my best efforts, I wasn't really sure how things would turn out. I'm simultaneously relieved and upset that the book is about to be published. The sole credit belongs to the authors who enhanced their own perceptive remarks to this volume. Any advice I can offer the contributors, however minor, I will be pleased to do so. The contributors have written Book Chapters on a range of topics that are all related to the general issue of education. Each flower glows brightly in its unique way. I assemble the wreath. Impact of Education in the Light of different Pedagogical subjects is a collection of writings that I hope will open up new meanings, add new aspects to education, and inspire everyone.

Dr. Somnath Das

Dedicated to our beloved "KAKAJI" Sri Sri 108 Swami Banamali Das Kathiya Babaji Maharaj - Parampadakamaleshu

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OPEN ACCESS

A Study on Rabindranath Tagore's '*Sahaj Path*' in the Light of Child Psychology

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Abstract:

Modern Education has incorporated several theories and concepts of Learning - a learning approach is a *life-long process* that can be developed within a person by his personal experiences and interaction with the present. On the other hand, theories of child psychology are nothing but the theories of Learning. So, presenting the suitable subjects in a gradually accepted procedure can easily reach the learner's perception. But it should be necessary to determine that imposed ideas and introspection cannot be tied together. Imposition of thoughts, values, and ideas can obstruct the process of self-actualization. For that reason, Tagore consciously denied presenting any kind of moral exudation. Henceforth, the journey of "Sahaj Path" has begun.

Introduction:

The world is going through great turmoil. No one knows what is presented for us in the near future. We all know that day by day, we are losing our direction, our hope. If we fail to find any turn-off, the whole of humanity will come to its end, and the 'end' will be a never-ending process. There is only hope, the hope of light that can save our humanity from our sin: education. Tagore wrote the same thing in his 'Unity of Education':

"Today's main task of education is to rid one of this chauvinistic prides. Because tomorrow History will begin a new chapter: that of international cooperation. All proclivities, ideas and practices of the country will make us unfit for tomorrow. I am well aware of a sense of pride in the glory of our motherland, but at the same time, I earnestly wish that such sense should not let us forget that all our sages and saints always preached against disunity. I can hear the people across the sea asking themselves, 'Which of our education, ideas and deeds was under a spell of delusion that landed us in this sad stage? Let the answer to this question from our country reach everywhere. Your delusion springs from the fact that you ignored the basic unity of humankind in setting your goals, which has brought you to this sorry state (Tagore, 1960/2012, p-258)."*

According to Tagore, unity brings us to the light of humanity, where we all are the children of the same unified omnipotent. In most cases, wealth causes discontinuity, but Unity gives us a

sense of truth. On the other hand, Singlehood is worthless if there is no unity. Truth always comprises many. One cannot express it without any sense of feeling the truth. But, it does not mean unity snatched our self-identity. If one is truly independent, one can unite with others, with the innermost self. *"Those who rob others of their independence also destroy the unity of all nations. Imperialism follows python's idea of unity. It advocates swallowing whole as uniting… if the material usurps the spiritual, it cannot be called assimilation. A true union can emerge if each remains independent in their own spheres* (Tagore, 1960/2012, p-257)."

True education consists of the concept of expression, which comprises the nature of knowing and applying when it comes to hand; in securing the sustenance of life and living. Tagore always said that if education fails to communicate with the temporal concept of living, there would be nothing left except the worse. Education is only the way that can open up the closed doors of knowledge; knowledge to him is nothing but the combination of both reasoning capacity and imagination. These two are very much essential for our modern-day living and man-making. *"There is no denying that intellect and imagination are two faculties essential to sail through life. In other words, one cannot develop into a real man if these two are absent from one's life. It is evident that unless thinking and imagination are encouraged from childhood, one cannot find them handy when one needs them* (Tagore, 1960/2012, p-17-18)."

But our current educational system, blindly following the flock of the ship, has given us some strict norms & procedures. So, when we enter the realms of ideas, there is nothing left to nurture an infant to take him into real manhood, and that is why the whole system is preparing some deaf and dumb for the future with no independent view on matters and ideas. Tagore watched the Russians' lifestyle and living conditions on his journey to Russia. He said before the revolution of 1917, the entire condition of Russia was as same as ours. But, after the revolt, everything changed for the betterment. Now, within a minimum level of living conditions, they mainly are stressing over three major factors: Education, Agriculture and Machineries. They are worshipping the god of power but worshipping it unitarily. He was amused by seeing that in their country, they truly are trying to unite education with their way of life and to some extent, they are succeeding. *"Their method of imparting education is a live one. I have always believed that education must harmonize with real living. If they are separated, then education becomes only material for storage, not an ingredient for sustenance* (Tagore, 1960/2012, p-262)."

Their education became lively because they didn't draw any boundaries between the household and the school. There everything is as open as the mind. Education for them is not passing the exams and having a good certificate for future increment; it is larger than all these cheap and petty matters. It is only a tool used for making a real human being for the nation. If gathering information becomes superior to intellect and ability, it becomes a burden for the human mind. In our country, our so-called educational system always tempted the learners to become well-informed, whereby they draw a boundary-wall between the outer world and the inner self; however, there a bridge is more needed in place of the boundary walls.

At present in India, from the time of Tagore till today, the concept of school is as same as it was in the nineteenth & twentieth centuries. *"School is a kind of machine for delivering education. The teacher is a part of this machine. The workshop starts with the ringing of the bell at half-past ten. The machine starts working and so does the teacher's mouth. At four, the machine stops and the teacher machine also shut its mouth. The students go home with a couple of pages of machine-made learning. Then at the time of examination, this learning is adjudged and awarded marks* (Tagore, 1960/2012, p-104)."

Is it satiric? Perhaps it is. Like venom, school spreads the concept of discipline where no one knows its proper utility. Our so-called Educationists brought it from foreign schools and tried to impart it through moral instructions. Even the guardians, too, also like it to be imparted. *"Moral instructions are adversarial in nature. The one who is being instructed is in the docks like a prisoner. It cannot be pleasant. The instructions either go over his head or hit him. It is not only ineffective but may even be harmful. Nothing could be more counter-productive for the human society than to render words of wisdom dry and distasteful* (Tagore, 1960/2012, p-108)."

Tagore knew it from his own experiences and believed that it would be like building a castle in the sky if we imagined an innocent school surrounded by a sinful society. There is a make-believe that discipline exaggerates the capacity for control. Tagore also believed so because there is also a concept of punishment that coincides with discipline. Distributing prizes or punishing students cannot motivate oneself to give up all his insanity up rather than it's him. If he wants to achieve his own self-actualization, he would be motivated by his own sake. In regard, Tagore said, *"Offending students should atone by penance according to our old tradition. An outsider whilst observance of penance, inflict punishment as a voluntary correction of an offence committed. From childhood, one must learn the lesson that to accept punishment is one's duty which, if not done, cannot absolve one of the feelings of guilt. It is not manly to stoop to the indignity of presenting oneself as an accused before others* (Tagore, 1960/2012, p-112)."

Tagore was not completely against bringing ideas from west to east rather, he believed in exchange. But the exchange should be proper and respectful with each other by leaving its dominating nature. On the one hand, leaving its materialistic approach, he wanted the "Tapobana" system of education a convergence with western Science. Education cannot be achieved by being limited by a boundary. There should be needed an open sky where the sun and clouds disports, greenery were dew drops and nature brings an eternity in an amalgamation with mysticism, where the bright hues of rainbow sparse and birds crackle in curiosity should be the ideal place for education. *"That is why I say that forests and a guru in residence are still necessary for our educational system. The woods are our living habitant and a guru is our benign teacher. Children will still need to complete their education, staying with the guru in the groves. Time may have changed many things for us, but the utility of this education system has*

not diminished one bit because it is based on the eternal realities of human nature (Tagore, 1960/2012, p-111)."

He wanted this education system to bring happiness to all children by leaving all its materialistic living conditions, which can bring a dazzling display of what true nature is. *"The Indian mind has always grown in close association with the universe of Nature. It has become natural for India to totally identify itself with the inanimate, the plant and the conscious life around us…This education is not possible to be had properly in urban schools where in the education factory we only learn to visualize the world as a huge machine* (Tagore, 1960/2012, p-109)."

Tagore survived his entire life living in a colonial phase. He knew how it hurts when everything is determined previously before claiming it. Freedom is such a thing that everyone wants, but when it costs sacrifice, no one comes forward. Digging deep into it, Tagore felt that education could make oneself independent and self-reliant. If we take a look at the cart, we can see the force always comes from the horses but the direction, the path to choose, always comes from the driver. Education is such a driver which can lead us in the proper direction. But the system should have to follow the development of the mind**.** *"As the path of change is complicated, it is not clearly apparent for everyone… Therefore the best way for every Nation to discover its true path is to keep it open for trial and error* (Tagore, 1960/2012, p-181)."

Thus, education has to be congruent with the objectives of the times. Otherwise, there would be nothing left to remorse. From his visit to Russia, Tagore viewed that their education is not confined to textbooks rather, they stressed the concept of man-making. They are molding their pupil's personal behavior to bring them a greater perspective on their life. The idea is not everything to develop one's educational base rather, it needs to be applied and behind every application, we need a proper idea. Russia was doing the same thing. They have changed their teaching procedure. They encouraged their students to do whatever they read. They must draw the subject matters on their drawing book simultaneously. It creates a visual interpretation of the subject texts and also nurtures their drawing capacity as a means of creativity. But in India, we are blindly following the European concept of education. There is something new in European education that we can adopt, but our Indian nature presumes that all they impart is pure and healthy. From childhood, our teacher makes us learn the book by rote. But, it is not our general instinct. We are forced to do so. If one comes about the concreteness of the object, he would learn far better than those who imitate because it is not our natural instinct to garner knowledge from books. Our minds responses more easily to oral communication with others; *"Because it is not just the words, but the spoken word, word of mouth. It is a live thing with the facial expression, the modulation of voice the gesture of hands which gives the heard language, music and form and thus a treat for both eyes and ears. When we realize that one is not reading from a book but giving us something straight from his heart, then there is a direct contact between the minds which adds an extra relish to knowledge (Tagore, 1960/2012, p-134)."*

We have entered the world of imitation where our concept of schools, books and poetry are imitated from a foreign concept. However, we did not generate it. Nowadays, we are carrying it more generously than the British. Unfortunately, our teachers are merely an instrument for teaching books and the students are also an excuse for reading them. How much a pupil learns, he must have to imply them. Otherwise, education would be a burden. In our current school educational system, teachers often believe that education should be imparted through maintaining a proper procedure like as examination. But how could we understand that they are improving in a social condition? Can education reflect such matters? To Tagore, education cannot be distracted from our children's souls; if so happens, then the whole thing is just like making bricks without straw. In this regard, Tagore said, *"Whatever control the child's mind can have over his learning is true education, however little it might be. And in the name of education overcasts, the mind may be termed 'teaching one to read, but it is not 'educating* (Tagore, 1960/2012, p-142).*"*

A pre-assumed concept of civilization is that cities are developed to bring all humanity within a protected wall. But, in India, it is quite different. The sources of civilization are not the city but the forest. Their people did not live closely to form a solid mass; rather, they lived in harmony with trees and plants, rivers and lakes *"but this empty space did not render the Indian mind inert; on the contrary, it was illuminated* (Tagore, 1960/2012, p-143-144).*"*

The isolation of the forest did not bring them to an isolated state of mind, but, on the contrary, it made a solid harmony between the souls, man and nature; of course, it brought a genuine understanding for humankind. Indian civilization did not bring ownership of material wealth; through meditation, the dwellers of solitude brought the universe within a harmonious mind. India's contribution, which is still valid and nurtured, originated in the Ashramas or forest hermitages. Thus Tagore also tried to set an Ashramic pattern at Shantiniketan where the heart will be broader, and the mind will be open and pure as it was anciently. He had the plan to impart the systems of the forest hermitage— at the Centre of the hermitage, he visualized a "Guru," an active dynamic soul who would share his realization of his own self with the pupils and achieve their objectives of humanity, the students will be engaged to achieve the contiguity to be awake and alive (Tagore, 1960/2012, p-318).*"*

Tagore, being a believer in the ancient Tapabana system, did not refuse the West. He believed in harmony, a harmonious living hood between East and West where East will give them the internal sources of force and West will give us the humanoid. To live in this world, it is necessary for all of us to learn the system of the universe, how it works as a huge machine without deviating from its fixed rules, and if we want to learn these laws of matter, we have to learn Science. For that reason, now, we have to spread our hands to the West to receive the blessings of Science. Tagore knew that India is such a country where superstition is still an impediment to education. In this regard, he shared his experience visiting a village in an uplift mission[15]**.** He asked the villagers why they could not save at least a single hut from the fire. They immediately replied that only 'fate' distracted them from pure water to those burnt huts.

What a reason they have delivered! Is it possible to cross the sea merely by standing and starring at the water?

Tagore knew the root of this problem was much dipped. Here, we have found the same thing. Tagore, for that reason, claimed Science emerged in the process of Indian education as a beacon to illuminate its light on the dark side of our knowledge. In the East, specifically in India, there still are some rituals like calling the witch-doctor to cure an illness, chanting mantras of black magic to punish one's enemy or worshipping Shitala (a local goddess) to cure small-pox disease, but in the West, all these superstitions are rarely seen. Tagore coted Voltaire's answer to a small girl regarding the killing of a flock of a ship by enchanting the mantras of black-magic. The girl asked him, "*it is true that one could kill a whole flock of a ship by magic incantations?' Voltaire replied 'Sure one could, but along with the incantation, there has to be an adequate quantity of arsenic* (Tagore, 1960/2012, p-242)."

Behind the magical representation, only Voltaire's saying is calculated as science which discloses the door of a new panorama: if one does not know the reason behind it, it is magic to him; if he knows the reason, then it becomes science. The man started their quest for magical powers far beyond history have started, and now the quest has ended with the cultivation of Science, and those who succeed in this regard have become the ruler of the external world.

But it is true, and someday, the east was the ruler of the external world when the west, wearing clothes of animal skins, were savages and hunting for survival. The time has now totally changed. They developed themselves not merely depending on magic but through the cultivation of science. They have not only succeeded over the material obstacles, but matter itself has come to their aid. Therefore if we want to sit on the same chair as them, we also have to be equal in science and education with them.

But, he believed that it would not happen so easily. The British would not allow us to have a proper education to become the controller of the universe. We have to earn it, and we can. If we fail to keep our faith in humanity, it would be a greater sin, an unforgiving deceit. He always believed that someday, those of the Imperialist who cursed our humanity with their power of knowledge and machine should have to leave our country. And on that day, what would they leave for us, A broken image of the almighty or a heap of garbage after extracting the pure thing? He didn't know it. He only knew it was education that could show us the path to the future as a pioneer.

Objectives of the Study:

1. To find out the relationship between the content matters presented in "Sahaj Path" and children-centric Psychology.
2. To identify the value of the book as a Primer.
3. To find out the importance of the book about the present time.

Research   Questions:

As all we know, Tagore remembered as a poet and Author, had an insightful stand-point about

child-centric education. His famously known Primer, "Sahaj Path," was written to state his insights. Here, in this case, we are in a position to rectify his stand-points in the light of Psychological theories. The present study is also intended to investigate the same. The research Questions are given below:

1. Does "Sohoj Path" relate to an infant's Psychology?
2. What kind of value does it generate?

Discussion and Interpretation in the light of Psychology

In Human life, development is a continuous and life-long process. Emotions, Intensions, Perceptions and Discriminations are not static; if the environment changes, they all are in a position to change. Several psychological theories have developed based on the developmental approach to Human life.

Areas of Learning
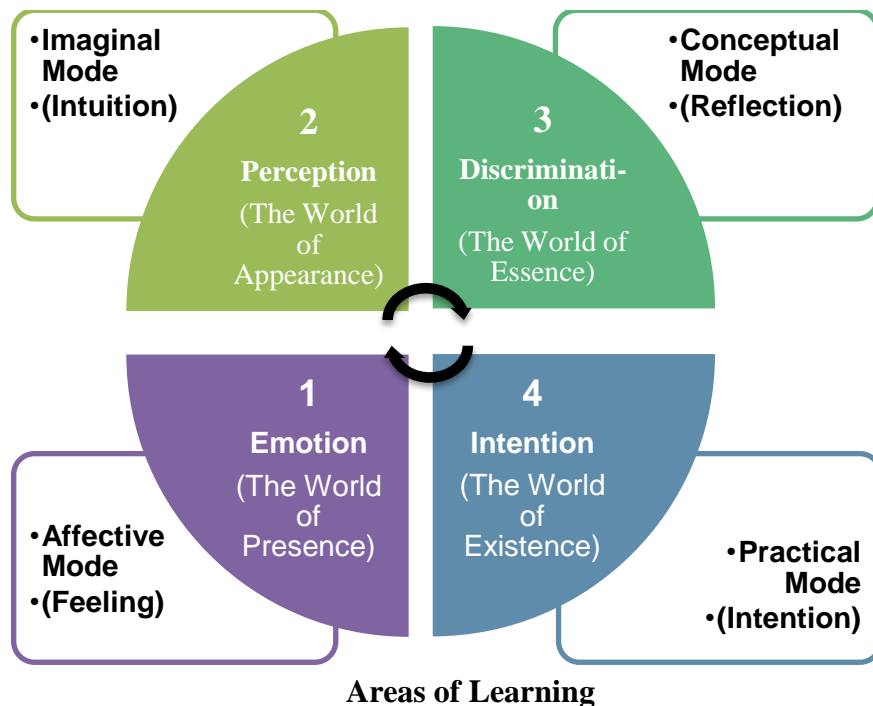
These theories are parted into three broader sections:

1. Endogenous Theories (Sigmund Freud & Erik Ericson)
2. Exogenous Theories (Albert Bandura & Skinner) &
3. Constructivist Theories (Piaget, Kohlberg & Vigotsky).

Endogenous Theories:

Based on Descartes's thought exogenous theory of Psychology has developed. From this point of view, Maturation is the reason for Human development. Sigmund Freud, Erik Erikson etc., developed these theories.

Psycho-Analytical Theory:

The father of Psycho-analysis, Sigmund Freud, developed this theory. His Psycho-analytical theory is based on some psychological propositions. Those are

A) Physical Determinism

B) Life and Death Polarity

C) Infantile sexuality &

D) The unconscious

The factor of pleasure principle derives from Freud's Psychoanalytical theory, but in a broader sense, his theory of sexuality is not to be considered in the cheapest sense of erotic mechanisms rather, it is related to a major perspective— the complete development of the human being. According to Freud, sexuality is the drive or motive to lead a person in his developmental personality structure. He called it 'instincts.' These instincts are internal driving forces that motivate human behavior to fulfill wishes or desires in a proper direction. From his earlier study, by observing his patients, Freud concluded that human instincts are the life-forces aroused in a body and transformed into a mental state of desire. He called it the life-instinct or 'Eros.' But, from the time of the First World War and experience of the death of his 26-year-old daughter, living in a state of horror and longing, Freud discovered that there are also some killing- instincts that motivate one to conquer, kill or take revenge in an animalistic way. He postulated it as the aggressive force, the death instincts, or the *Thanatos*. Now the million dollar question is what is imparted in *Sahaj Path*? Was Tagore conscious of these instincts?

First of all, Tagore was a strong believer in independence; if the development process takes an animalistic way, then we must not interrupt it. Rather, we leave the learners free to achieve their basic needs. These all are necessary for their entire development. Actually, civilization needs some artificial aids, but if we cover ourselves in those artificial habits from the very beginning of our childhood, then we never know our basic instincts. Henceforth, Tagore never wanted to distract the learner's attention which is biological and instinctive. In his "A Veil," Tagore wrote: *"Somehow we must come to terms with the demands of civilization. At least it should be limited beyond a certain age. My modest suggestion is the age of seven. Till then, the child has no need for clothes or a sense of disgrace and till then, let the training is essential barbarism be completed in the hands of nature* (Tagore, 1960/2012, p-132)."

According to Tagore, open space is always needed for the learners to decide what is good or evil. If we impose our ideas about good or evil, about 'to do' or 'not to do,' then the process of Humanization would be interrupted. Let us clear one thing, Tagore was never inclined to death instincts. He believed that we could win over all those evil by our goodness, but before that, we must experience it.

"Sahaj Path," 2nd Part, 12th Readings upholds the concept of both life and death instincts when Bishwambhar babu and his follower Shambhu faced a gang of dacoits whose faces were the symbol of destruction and whose eyes were heavily blood-shot. *"They are coming towards them, roaring with laughter. Sambhu took the broken palanquin-stick from the soil and threw it*

toward them. Three of them were declined instantly. After that, twirling the stick speedily, Sambhu jumped on them and, overwhelmed with fear, the rest of those dacoits escaped (Sahaj Path, 2nd part p- 45-46)."

The laughter of those dacoits describes nothing but the form of destruction that they bear with their attitude - it is the state of death instinct that is inclined to take life from others. On the contrary, if we observe the same state from Sambhu's point of view, his reaction and attacking motivation, it is disclosed that Shambhu is a survivor; all those things he did is only related to his attitude toward survival, his living hood. By presenting this story, Tagore proved his faith in life instincts over death instincts.

Life instincts serve the purpose of survival, which means it produces the condition of having food, water, air and sex. When the submissive force of life instincts generated from the psychic energy is called *"Libido (Theories of personality, 52)"*. In his "Three Essays on the Theory of Sexuality," he described *"libido as a qualitatively variable force which could serve as a measure of processes and transformations occurring in the field of sexual excitation. (Three Essays on the Theory of Sexuality, the libido theory, 1531)."* When the libido is attached to an object or concept, Freud called it *Cathexis*. Cathexis is investing mental or emotional energy in a person, object or idea. There are two types of cathexis — one is *"anaclitic or attachment, based on the attachment to the early infantile prototypes, and the other one is narcissistic, which seeks the subject's own ego and finds it again on other people* (Three Essays on the Theory of Sexuality, the libido theory, 1531)." At the time of birth, to a new-born, there are no differences between the self and the non-self— it is the undifferentiated or objectless stage to him. Then, a transitional stage comes when the differentiation between self and object is not distinguished, but a sense of difference is quitely developed. After that, 'Mother' becomes his first object in the world at the stage of object relations. There, a child clearly perceives the differences between him and his mother. After that, objects are shifted following age development by changing their sexual positions. A completely developed infant can differentiate persons, objects or ideas. According to Freud, a child is developed completely when the period of normal sexuality arrives (10-12 years of age). At this age, one can presume the concept of the world.

Tagore's "Sahaj Path" is also written for those living in latency or normal sexuality. In his primer, he incorporated so many names with their different world-view and lifestyles, so many concepts and ideas with different kinds of complexity and adaptation, and so many objects with their usefulness for the learners who can wander in the wonderland of wonderfulness.

At the time of birth, a child is nothing but a pure "Id"; at that stage, they have no sense of "Ego" development. But, when they are accommodated and associated with their society and adopt some social norms to live in, they consider their innermost wishes derived from the "Id" and try to adjust to their society by following its code of conduct, then the sense of ego develops. Generally, humans are confined to some social and moral ethics— these ethics are the result of social learning and to some extent, the personal learning process also helps them to

achieve those ethics. Freud called it "Super-ego." Actually, It is an imaginary stage, while the super-ego relates to the moral stage. Both are expressed and harmonized by the "Ego" by examining the social consequences. But, sometimes, imposed morality or ethics cannot help one achieve complete development, as we see in Ishwarchandra Vidyasagar's "Barnaparichaya." In his primer, there is a boy whose name is Gopal. He is six years of age. He obeys everything instructed by his guardians. He is very much punctual and lawful. He loves everyone and receives more in return. In contrast with Gopal, Rakhal is very much undisciplined and indiscreet. He disobeys everyone and everything. As a result, he receives nothing from his fellows and his guardians. Morally, Gopal is directed by Eros and Rakhal is directed by Thanatos. But according to Freud, a person is a compound of both Eros and Thanatos. It only differs in the percentage of presence in the human body. Actually, both Gopal and Rakhal are the different sides of the same coin where Id and Gopal derive Super-ego derives Rakhal.

So, Vidyasagar's characters are either soulful or heartless bodies without a shadow. On the contrary, Tagore had tried to build up an alternative way to induce himself to hide those moral or ethical reflections. Therefore, he presented us with some moving visual images where we can find the viewers. Even the visual adventure is also presented there, but everything is excluded directly from any moral debts, but not everywhere he succeeded as an observer. Like as -

"The day is passing through. I am going for a bath after massaging my whole body with oil. Then we will play… I have no playing ball. (It doesn't matter) we shall bring the marvelous down from a tree. We shall play at Telipara ground… then I will return home. It won't be late (first part, sixth readings, 37)."

Now, if we analyze this example, we can be able to pursuit the desire of his play and his moral position. The boy who is very much intended to play has no playing ball. So, what did he? He discovered an alternative by bringing down the marmelos from the tree, which can be used similarly as a playing object. Here, the boy is completely derived by his Id; all his desires are focused on only one thing: playing. But, by observing this current situation, his Ego finds a solution by replacing the original with a marvelous one. As a result, he got accustomed to his situation. On the other side of this example, it clarifies that the boy also has a concept of morality in the form of punctuality - if he became late, every one of his family would be worried about him. So he has to return home timely.

In the Freudian theory of personality, anxiety got huge importance. *"Freud described anxiety as an objectless fear; often, we cannot point to its source, to a specific object that induced it (Theories of Personality, 57)."* Anxiety arrives in a hostile environment when a person feels that he is being threatened by some unknown fear or, more specifically, when Id is threatened without an obvious cause. According to Freud, Anxiety is defined into three types: Reality, Neurotic anxiety and moral anxiety. Freud believed anxiety is the fundamental neurotic or psychotic behavior of a person. In this regard, our study focuses on ensuring these anxieties'

influence on Tagore's Sahaj Path. So, to explain this influence, we have inducted a table that could help understand the entire relationship -

Types of Anxiety	Reason of happening	Citations/ Quotations	Discussion
Reality Anxiety	Fear of tangible dangers.		Reality Anxiety is also termed Objective anxiety. When a person sees a threat in his real objective world, he becomes anxious. So, at that moment to release his fear he has to find a way to skip out from the actual situation. Internal world or the self is not the reason of this kind of Reality anxiety- actually, it is the result of a particular reason what has happened in the real world. The fear of fire, wild animals, hurricane, speeding cars and burning buildings can make oneself anxious. On the other way, this reality-based anxiety serves a positive purpose by helping us to escape or protect ourselves from an actual danger, and when the danger gone away, our fear subsides. Now, if we discuss these quoted citations, it proves the presence and essentiality of objective anxiety.

		1. A monkey is sitting on a bamboo tree… Panchu fears the monkey if it scratches… God knows when it jumps over on our neck. (10th Reading, 1st part, 51)	1. Panchu fears the monkey because it can harm him. So, he tried to keep a safe distance from the monkey and when the dog named Vonda arrived and barked on it, Panchu's fear subsided.
		2. Shaktinath babu felt asleep; suddenly, he woke up in palpitation by hearing a thud. He saw, being untied from his tether Akram had fallen from the tree. Shaktinath babu got down from the tree to see Akram and suddenly saw two sparking eyes. Oh god! It's a Tiger. There is no time to bring a gun. Fortunately, they both have a flambeau. They lightened it up, and the tiger fled away."	2. Shaktinath babu, woking up from his sleep, saw that Akram had fallen down from the tree. So, he got down from the tree to wake Akram up, and suddenly, he saw a tiger at a nearer distance. It made both of them scare. But there is no time to bring a gun. So, they lightened the flambeau, which was easy to reach and hold towards the tiger and the tiger, being scared by the flambeau, escaped. When Shaktinath babu and Akram felt that they were safe now, their fear also subsided.

		3. It's raining. Sridhar searched for my umbrella and brought it to me; if you failed to find it, it would be distressing.	3. The third citation expresses the fear of heavy rain and its after-effects like cough or cold. So, Siddheswar ordered them to search for the umbrella for his master.
Neurotic Anxiety	The conflict between the Id and Ego	According to our reading, we did not get any example that reflects the concept of Neurotic anxiety.	When the conflict between instinctual gratification and reality occurs, it leads a person to neurotic anxiety. Children are often Punished for overtly expressing sexual or aggressive impulses. So, the unconscious fear arises within the self of being punished for mastering those Id-dominated behaviour. In our reading on Tagore, we have found no clue to establish this anxiety. Actually, Tagore not directly but inherently pushed his ethical position, which is a denial of any kind of sexual or aggressive impulses and exhibitions
Moral Anxiety	The conflict between Id and Super-ego		Generally, when a conflict between Id and Super-ego occurs, it makes a person anxious, morally. In our society, there are some social norms that are further

			reflected and constructed in our conscience. These moral codes, when comes into conflict with our instinctual impulses, create a feeling of guilty or shame. Reality is the basis of this kind of anxiety but the concept of guilt-feeling arises from within. Actually, Super-ego punishes the Id for violating society's or parent's tenets. Tagore had never wanted to influence the children with an imposed concept of morality rather, he believed in free development. But, sometimes, probably not consciously, he incorporated these moral codes or social ethics in his Primer "Sahaj Path." Therefore, what we call moral anxiety is reflected in it. The quoted examples are the result of moral anxiety.
		1. Ananda-babu is coming from chandannagar. He wants to have a visit to our locality to examine its improvement. Be careful of condemnation. Tell Indu that there he	1. Here, the writer is completely anxious if Ananda babu feels discomfort with his hospitality. Because, it is a matter of his prestige issue. So, he ordered his servants to observe everything carefully and solve

		would not find any fault in our hospitality. Put a beautiful flower vase in his room and spread resin when evening arrives.	every problem before his arrival.
		2. "If the rain stops, I would be relieved. I'm still suffering. I had a headache, and it made me unpleasant. The cooking for lunch before my office-time is still incomplete. Hey, you please stir up the fire." (2nd, 8 readings, 24-25)	2. First of all, the writer is not completely well. He has a headache, but he has to go to the office before the bell rings. Every day he completes his lunch before going to the office. But today, his cooking was not completed, and it made him anxious. If he became late, then it would be very insulting and disappointing.

Psycho-social Theory:

As a Sigmund Freud student, German Psychologist Erik Erikson was deeply influenced by his Psycho-analytical Theory. Freud's Physical Determinism, Concept of Sexuality and the theory of Unconscious influenced him sometimes in his life. Lately, he refused all these theories and described his own thought on the Psycho-Social development of man. His important statements are:

1. The "Ego" exists at the time of birth without being influenced by the "Id."
2. At the time of birth, "Ego" exists without any conflict.
3. Society plays an important role in the development of the "Ego." Erikson identified three interrelated aspects of ego:

a) **Body ego:** experiences with our body, a way of seeing the physical self as different from other people.

b) **Ego ideal:** the image we have of ourselves compared to an established ideal; it is responsible for our being satisfied or not satisfied with our physical self and our entire personal identity.

c) **Ego identity is the image we have of ourselves in our social roles.**

4. The adaptation process in society formulates the development of the "Ego".

5. When a conflict between 'Ego" and society happens, a psycho-social conflict is generated— by this conflict, a person learns how to adopt and live. Each stage of psychosocial struggle or crisis contributes to the formation of a personality. From adolescence, everyone falls into the crisis of identity, which may either strengthens or weakens their pattern personality.

According to Erikson, Conflict is the reason for all kinds of human development. Freud identified five Psycho-sexual stages of development. Erikson, being more specific, has identified eight stages of human development. To him, at every stage of human development, we fall into some psychological crisis that takes us to some psychological virtues. If we fail to achieve it, it brings some maladaptive behavior.

Stage (Age)	Psychosocial crisis	Significant relations	Psychosocial modalities	Psychosocial virtues	Maladaptation & malignancies
I (0-1) - infant	Trust vs. mistrust	Mother	to get, to give in	return hope, faith, sensory	distortion – withdrawal
II (2-3) - toddler	Autonomy vs. shame and doubt	Parents	to hold on, to let go	will, determination	impulsivity – compulsion
III (3-6) - Pre-schooler	Initiative vs. guilt	Family	to go after, to play	purpose, courage	ruthlessness– inhibition
IV (7-12 or so) - school-age child	Industry vs. inferiority	Neighbor-hood and school	to complete, to make things together	Competence	narrow virtuosity– inertia
V (12-18 or so) - adolescence	Ego-identity vs. role-confusion	peer groups, role models	to be oneself, to share oneself	fidelity, loyalty	fanaticism– repudiation
VI (the 20's) - young adult	Intimacy vs. isolation	partners, friends	to lose and find oneself in a another	Love	promiscuity – exclusivity

VII (late 20's to 50's) - middle adult	Generativity vs. self-absorption	household, workmates	to make be, to take care of	Care	Overextension—rejectivity
VIII (50's and beyond) - old	integrity vs. despair	mankind or "my kind"	to be, through having been, to face not being	Adult Wisdom	presumption – despair

Chart adopted from Erikson's Identity and the Life Cycle (Psychological Issues Volume 1, # 1) [2] Pt. Erikson

He gave importance to society and its impact on a child's learning. Let's see how his theory discusses the inner concept of Tagore's "Sahaj Path" -

Extraction/ Citation	Psycho-social Conflict	Adopted Behaviour	Development of "Ego"
1st part, 9th Reading "Come Gour, and please come. Hey Kolu, go quickly and bring the cot for our guest."	Here a conflict happened between sociableness & self-respect.	• Addressing and inviting Gour to come into his house. • Ordered Kolu to bring a four-legged cot because his guest had arrived from a farther distance.	A) Development of sociableness. B) Development of self-respected.
2nd Part, 4th Reading Ananda-babu is coming from chandannagar. He wants to have a visit to our locality to examine its improvement. Be careful of condemnation. Tell Indu that there he would not find any fault in our hospitality. Put beautiful flower-vase in his room and spread	Here also a conflict happened between sociableness & self-respect.	• Gave Indu the responsibility to host their guest. • Ordered Indu to bring a beautiful flower-vase at guest-room. • Ordered her to spread resin when evening arrived.	Development of self-respectness by being sociable.

resin when evening arrives.			
2nd Part, 6th Reading We shall go to see the waterfall of river Usri… If rain begins in the mid-way we shall take shelter to Mishra's house.	At the time of rain a conflict happened between rain and shelterdness.	Decided to take shelter at Mishra's house.	Development of self-defence.
2nd Part, 7th Reading This year Potato is very cheap. Before it becomes unavailable in the market, buy some if possible. We have prepare it if it requires to cook in the street. Just remember— we have to arrange cauldron, spud and water pot.	A) Conflict between dearth and desire. B) To bring a set-up to cook on the road if there is no other alternative available.	• If Potatos are costly, a decision has made to bringing up turnips in a low-cost would be a better option. • Arrangement of cauldron, spud and water-pot.	Development of planning.
2nd Part, 11th Reading Suddenly he saw two eyes glittered in the dark. Oh god! This is tiger. They do not have the time to shot the gun. Fortunately, they had two flambeaus. When the flames are lightened, the tiger dispersed. They spend their night on the tree.	Here a conflict happened between the fear of a Tiger and self-defence.	• Tiger fears flame. So, decided to light a flambeau for the night. • If the Tiger attacks once more, they decided to pass the night riding on a tree.	Development quick-deceiveness when reverse circumstances arrives.

Analysis of "Sahaj Path" based on Psycho-social Theory

Exogenous Theories:

According to Exogenous Theory of Psychology Environment is the key factor of Human development. Based on the philosophical deduction of John Lock and David Hume Exogenous Theory of Psychology has emerged.

Social-cognitive Theory:

According to Albert Bandura "Learning" is induced by the society. By birth, there are some inner capacities in human-body. Those are: Symbolizing capacity, Forethought, Vicarious Learning and Self-analysing capacity. These capacities are developed in a specific stage of human development and increased day-by-day. These capacities, individually or collectively, plays their role in Learning.

"Sahaj Path" in the light of Social-Cognitive Theory

Extraction/ Citation	Bandura's capacities by birth	Interpretation
1.Bangshibadan is driving the cart. 2. Carrying a heap of dry straw grass/ the boat is driven by a farmer's lass 3. Boys gathered like a group flock/sprinkled water with a dancing stroke. 4. Jaynal steers the boat. Abinash cuts the grass. Harihar dwells in a house. Patu Pal brings rice. Dinanath cooks rice. Gurudas were farming the land.	Reflexes	Bandura's theory on Reflexes is seen in Bangshibadan, Farmer's daughter, Local boys, Joynal, Abinash, Harihar, Patu Pal, Dinanath and Gurudas. In social life, all these reflexes are known as 'Learning." Children can learn these reflexes by studying "Sahaj Path".
1. Lowering the mystery of the darkish veil/ our town is a shadow's tale. 2. Amloki groves startled high, trembling with fear--/ time has come, o my dear, defoliating cheer. Got the letter from winter.	Symbolizing capacity	According to Acharya Avinabagupta, 'Meaning' is of three types: A)Lexicon (Avidha) B)Indicative (Lakshana) C)Metaphorical (by Anjana) Symbolizing capacity is the conceptual capacity of the Indicative & Metaphorical senses.

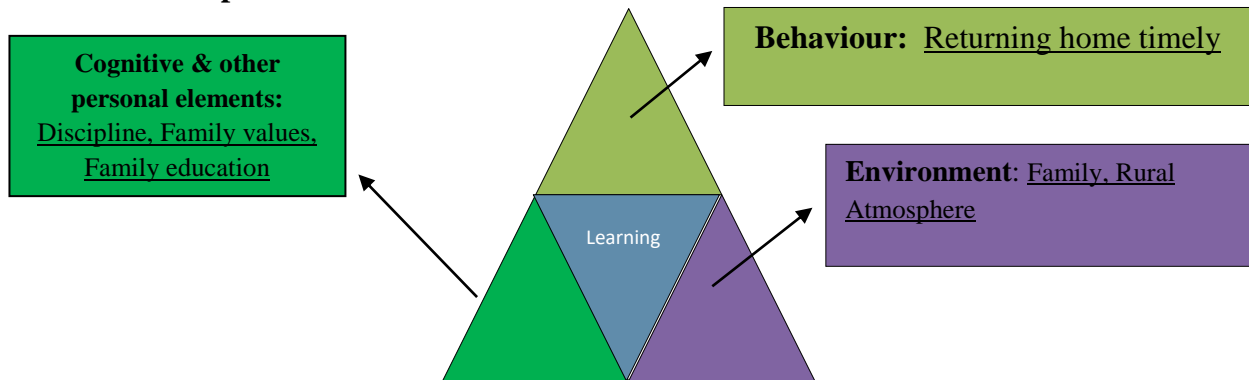|		
		Suppose an abstract meaning derives the original meaning of words or sentences. In that case, it symbolizes something which is Indicative rather than Metaphorical in a sense—Imagination generates from this kind of symbolization.
1. Ass likes to eat chickpea. Give it more chickpea. **Where form I get it? That horse eats chickpeas. The stable is open.**	**Forethought**	In every example, the capacity of decision-making is determined by some forethought.
		<u>Example 1</u> Ass likes to eat vetch. But, in this case, there is no scope to bring it out. So, by using forethought, a decision has been taken. As Horse also likes Vetch, there is a probability of vetch at the stable.
2. Our small river drives in a restless track, Summer is summoned with a scarcity track.		<u>Example 2</u> The Baisakhi (as per the Bengali calendar) is a month in summer. The scarcity of water is all-around. So, a decision is taken by using forethought that in the time of Baisakhi water level in the river is very low.
3. Ram plunks flowers. They worships today at home.... so, he plucks flowers.)		<u>Example 3</u> Ram is plucking flowers from the Garden. So, based on this forethought, the taken decision is— today, they are offering worship to their deity.

1. Observation **Guptiupara's** **Bisshambhar babu...** **Bisshambhar babu is wearing a thick blanket. Servant Sambhu is walking alongside it, holding a stick** *in* **his hand.** **2. Imitation** **After listening Doctor became anxious. He called "Shambhu."** **Sambhu said, "yes, master."** **The doctor said, "what is the remedy now?"** **Shambhu said, "don't worry, master, I'm here.")**	**Vicarious Learning**	Imitation and observation are the two most important means of learning. All these characteristics are properly stated in the Primer; taken citations are the token of proof of vicarious learning. For example, the description of Bisshambhar babu and his attendant Shambhu or the description of the sky represents the quality of observation. On the other hand, a conversation is presented between Doctor and Shambhu, which is written in the form of imitation.
1. Little baby said a,b, c, d **ha**dn't **learn**ed **anything to speak.** **2. Sun rises** **fear disperses.**	Self Evaluation capability	The little baby, what he speaks, is meaningless. That is why his pronunciation seemed meaningless. Light is the source of bravery. A boy has become capable of understanding it.

Triadic reciprocity:

According to Bandura, the structured and proper relationship between Behaviour, Cognitive, and other personal elements & Environment can only lead a person to his real learning. 'Behaviour' to him is a compound of Complexity, Duration and Skill. Cognitive and Other Personal factors uphold a person's concepts and beliefs about an object or the material world. Self-conception, Motivation, Intensions and personality are also included in Cognitive and Other Personal factors. The environment is an external factor that explains the interpersonal relationship, the role of other persons etc. If the relationship between these three factors is exact and proper, it can lead a person to his learning. Now having an example of the Primer "Sahaj Path," we can easily explain it.

Example: "I shall return home after the game. I would not be late." ("খেলা শেষে ঘরে ফিরে যাব। দেরি হবে না।").

The relationship is:

| Cognitive & other personal elements: Discipline, Family values, Family education |

Behaviour: Returning home timely

Environment: Family, Rural Atmosphere

Learning

Triadic Reciprocity in "Sahaj Path"

Now, what is the example clarifying? First of all, it clarifies that the guy is very much disciplined and punctual; he knows the value of time, and we can imagine that his guardians are also very much conscious of it. This cognitive behavior developed his behavioral pattern, which his family and society influenced.

Bandura's observational learning can be applied in every sphere of life. Two phases consolidate observational learning; one is *the Acquisition phase, where a learner experiences his world through Attention and Retention processes*. Attention determines the field of observation and retention, which is a cognitive process, that determines the symbolizing & memorizing capacity of the learner. According to Bandura, the second phase of Observational learning is the *Performance and Production phase*. The acquisition is not everything for Observational learning if it is not implied in a real consequence; that is why we need the skill of Performance. The performance phase is divided into the Production and Motivational processes. In association with the learner's previous knowledge, the *production process* explains the quality of skill, whereas *motivational skill* determines the situation or the psychological consequences.

Example: *let go, Nilu, come on. The road is from here, between the clumps of palm trees. After crossing it we will see the fields of sesame and linseed. Then there is a pond which is blue in color. It is bordered by clay. The water of the pond glisters when light illumines. The egret twinkles and catches fish.*

Here the guy who called Nilu to go between the clumps of palm trees and the fields of sesame and linseed has observed nature with his innermost attention and knows exactly the direction by keeping it in his mind through his retention process. Thus, he became the guide that represents his productive quality. The guy is motivated to explore nature and its beauty that brought him here. Now, the entire process of Observational learning should be –

He kept the entire path in his mind through retention process.

He observed the nature through attention process.

জবঃবহুঃরড় হ‍ চষ্ড়পবংং

অঃঃবহুঃরড় হ‍ চষ্ড়পবংং

Sahaj Path in the light of Observational learning

চষ্ড়ফঁপঃরড় হ‍ চষ্ড়পবংং

Experiencing his previous knowledge the boy guided his friend nilu brilliantly.

The guy observed the nature with complete attention and kept it in his mind through retention.

অপয়ঁরঃরেঃর ড়হ

The boy wants to explore the nature and its beauty and that's why he came here with his friend.

গড়ঃঃরাধঃরড় হ‍ধষ চষ্ড়পবংং

The boy showed the path to his friend Nilu by experiencing his own previous knowledge and he came the same place to explore the nature motivated by his inner-self.

চবংভড়ৎসধ হ‍পব্ চষ্ড়ফঁপঃরড় হ

Constructivist Theories:

Philosopher Kant said like space, time, causality and number concept is also a construction generated at the time of birth. But knowledge or logic is not the same thing that is generated at birth rather, it is achieved by filtration of those data which are organized by sense organs. Constructivist theories are developed form this proposition. Jean Piaget and Lawrence Kohlberg are two significant theorists in this section.

Theory of Cognitive Development:

The main propaganda in Piagetian theory is based on the philosophy of both Kant and Herbert Spencer. From his point of view, *knowledge is invented; it can originate neither in innate programming nor in discoveries of things given in reality*. Instead, knowledge is developed in a stage-by-stage procedure in relation to human development. His theory is also known as *Genetic Epistemology*. On the other hand, he was deeply influenced by Herbert Spencer's proposition of *Assimilation*, *Accommodation* and *Equilibrium,* but he developed it in association with the concept of heredity and child psychology.

From his point of view, by birth, we inherit two specific qualities— one is *reflex* or *hereditary organic reactions,* and the second one is a *biological adaptation.* In biological adaptation, there are two contradictory elements—*Assimilation* and *Accommodation*. In general, our self-preservation capacities are called Assimilation. Accommodation is a process by which a learner learns new experiences or changes his behavioral pattern to the influence of society. According to Piaget, 'play' is a process of Assimilation and 'imitation' is a process of Accommodation. He believed that the equilibrium between these two fosters the process of adaptation.
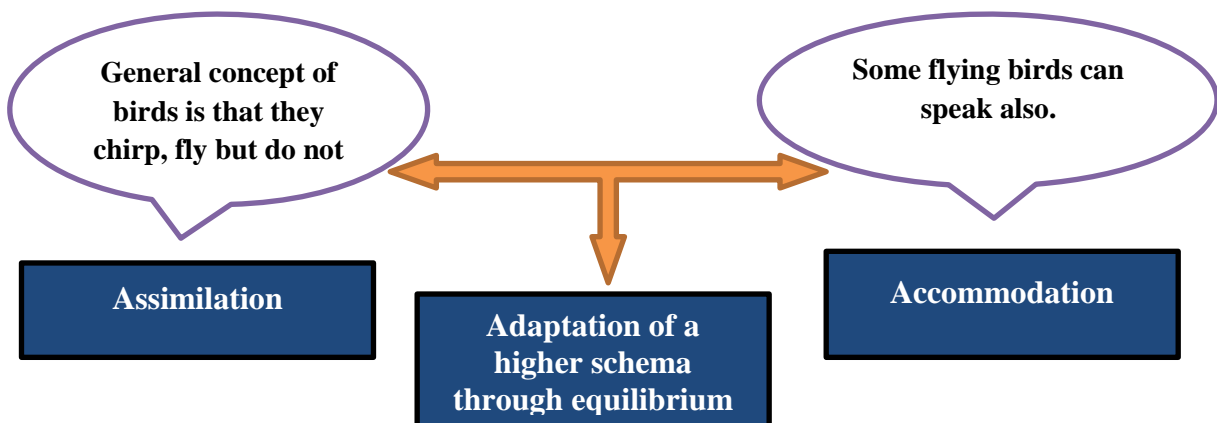
"According to Piaget (1954), children continually interact with their environment. They act on, transform, and modify the world in which they live; in turn, they are shaped and altered by the consequences of those interactions. As children have new experiences, they interact with an existing structure or mode of thought. They then alter this structure to make it more adequate. This modified structure influences the children's new perceptions, which are then incorporated into a more complex structure." In this way, the organized interaction leads them to a newer world of knowledge.

To Piaget, adaptation is the development process that starts with modifying the reflexes and leads them to develop the behavioral pattern society demands. In the process of interaction through play or other activities, children construct a series of Schemas, which are concepts to interact further with society. Now the question is, what do we mean by *Schema***?** *"Schemas are cognitive structures that people construct to deal with their environment. According to Piaget, children's thoughts mainly reflect the schemas or mental frameworks by which they interpret information from the environment rather than any bits of information they acquire (12.10 pdf)."* Assimilation is how a child gathers newer information, interprets it and enlarges the sphere of experience. But, when their experiences do not match with the current schema development, the equilibrium process is baffled. So, they must develop a newer and better concept of the world to make it stable. In this process, Accommodation plays the role of stability being adapted to the changing concept of the environment.

Tagore was conscious of the adaptive nature of the children. So, he tried to expand the endeavor of their minds by giving them some newer thoughts and perspectives of this world. He tried to bewilder them by presenting some astonishing topics. Now, how does the process work in the Primer "Sahaj Path?" Can it reflect the theory of Piaget? We can describe it by taking an example from the text.

Example: *"What kind of bird is this? It is a parrot. Can it speak? What did it speak? It speaks- Ram, Ram, Hari, Hari. What did it eat? It eats corn. Elder Sister Rani is bringing corn in a bowl for the parrot. The Aged maid-servant is bringing water. Can the parrot fly? No, it cannot fly. It is chained."*

Here, the child's knowledge is based on a previous concept of a bird (a two-legged flying

General concept of birds is that they chirp, fly but do not

Some flying birds can speak also.

Assimilation

Adaptation of a higher schema through equilibrium

Accommodation

animal- *Assimilation*) that can chirp and fly. But, he does not have any idea that some of their species can speak; even he does not know what kind of bird it is, what it eats etc. Yet on viewing Parrot, he discovers the some of their species can speak or imitate. This way, the child makes an Accommodation in his understanding and gets the equilibrium for adaptation.

<h1 style="text-align:center">Piaget's Theory of Development</h1>

In this way, our cognitive process creates a state of equilibrium by linking and developing the previous concept of things.

In his cognitive development theory, Piaget stated that the cognitive developmental process is categorized into 5 states based on their age. These are:

1. Period of Sensory-motor Thinking
2. Period of Pre-conceptual Thought
3. Period of Intuitive Thought
4. Period of Concrete Operation
5. Period of Formal Operation

A child learns the "Sahaj Path" when his age comes in the period of concrete operation e.g., from the age of 8 to 14. Now, we will explain how this stage's characteristics are reflected in "Sahaj Path".

Characteristics of Concrete operation	Example	Discussion
Development of logical thinking and the capacity of decision-making.	Bostomi has come to sing. Don't be cruel by taking her outside. She will suffer being steeped in water.	Author saw that Bostomi was singing, being steeped in the rain. Then by his logical thinking, he decided not to leave her outside the house. Otherwise, she will suffer.
The concepts which figure in logical thought are called 'Operations'. These operations are mental actions which restructure the given data into a newer form.	Sun is setting, and the sky becomes dark Lanterns are wavering in a gentle spark. Porters are moving with a burdened head The sky became dark when the sunset.	Generally, a child adapts to a new situation through the interaction between Assimilation and Accommodation. In this course, he tries to attach both his previous and newer experiences; if the previous one becomes essential during this course, he keeps it; if not, he leaves it. Sometimes, he tries to change the newer one to maintain the equilibrium. Here, in our taken citation, we see, in generally, a child knows the relationship between the setting of the sun and the rising of the dark,

but most of them don't know during this time, potters move to their home with a heap of burden after their day-long diligence. So, we can see a complete process of adaptation where the previous and the newer experience merge with each other by the process of Assimilation and accommodation, and the formation of concepts or operations takes a newer shape.

Theory of Moral Development:

Lawrence Kohlberg believed that cognitive conflict is the sole thing of human development. Now the question is how it generates. First of all, Kohlberg said childhood is when we can see some cognitive development in children and he can differentiate between the physical and social environment. In the social environment, he goes through some interactional phase with a society that initiates the base of moral development. From our layman's perspective, we generally think that morality somehow determines the emotional development of human beings, but Kohlberg defines it differently. To him, emotional development is very much logical. The sense of morality or justice everything is nothing but the development of human cognition, not the development of extinguished and unrestrained human emotion. But this development would be proper, practical and productive if a person's manifest behaviour, intentions of the behaviour and the consequences or the sense of internal impact tied up properly.

According to Kohlberg, cognitive development, cognitive conflict and Role-taking ability are the three main components of moral development in human life. Based on Piaget's stages of development, Kohlberg stated that moral development depends upon the development of the cognitive area. Kohlberg's cognitive conflict is quite the same as Piaget's concept of "Equilibrium." When two opposite beliefs or concepts arrive simultaneously in the human mind, it creates a conflict; it can be interpersonal or intra-personal. Every time the human mind tries to keep its equilibrium, but if a conflict arrives and one does not decide to cure it, it would be continued. So, role-taking ability is very much necessary for moral development.

Kohlberg divided human development into three levels which are further sub-divided into three categories or stages -

'On Level I, the individual assesses a situation from the "concrete individual perspective." The material consequences of an act determine the moral right or wrong; the guiding principle is to avoid punishment and to satisfy one's needs. On Level II, the person takes over the "member of society perspective," from which the maintenance of social relations and order becomes an important principle for assessing a dilemma situation. On Level III, the actor

makes judgments from a "prior to society perspective," i.e., based on general principles which are not tied to a particular social group or society but to humanity and human life as a whole (Kohlberg, Lind 1985".)

Now, the question is what kind of moral development the text "Sahaj Path" foresees. To discuss this, we are taking an example written in the second part, 12th reading -

"...Sambhu went to river to drink water. He saw, a calf is taken by a crocodile. He quickly plunged over its back and cuts its throat by a chopper. The river became red at a spell. ("...শম্ভু নদীতে জল খেতে গেল। এমন সময় দেখলে, একটা বাছুরকে ধরেছে কুমীরে। শম্ভু এক লম্ফে জলে প'ড়ে কুমীরের পিঠে চড়ে বসল। দা দিয়ে তার গলায় পোঁচ দিতে লাগল। জল লাল হয়ে উঠল রক্তে"।সহজ পাঠ, দ্বিতীয় ভাগ, দ্বাদশ পাঠ।)

If we take a clear look at the example, we can understand that Sambhu has served his responsibility brilliantly and with bravery. Still, according to Kohlberg, there is no cognitive conflict that is very much necessary for moral development. We found Sambhu as a doubtless person who pursues no contradiction. Why did Tagore do so? Is there any misconception? Most of the texts claimed to be valorous are derived from a concept of purity— a purity of chivalry. Those characters that represent this purity are found chivalrous; his presence is everything for bravery. Tagore wanted to display such character that represents those gallantries. He wanted them to be spirited for his nation. Thus he made Sambhu a doubtless person. But psychology displays a different kind of notion.
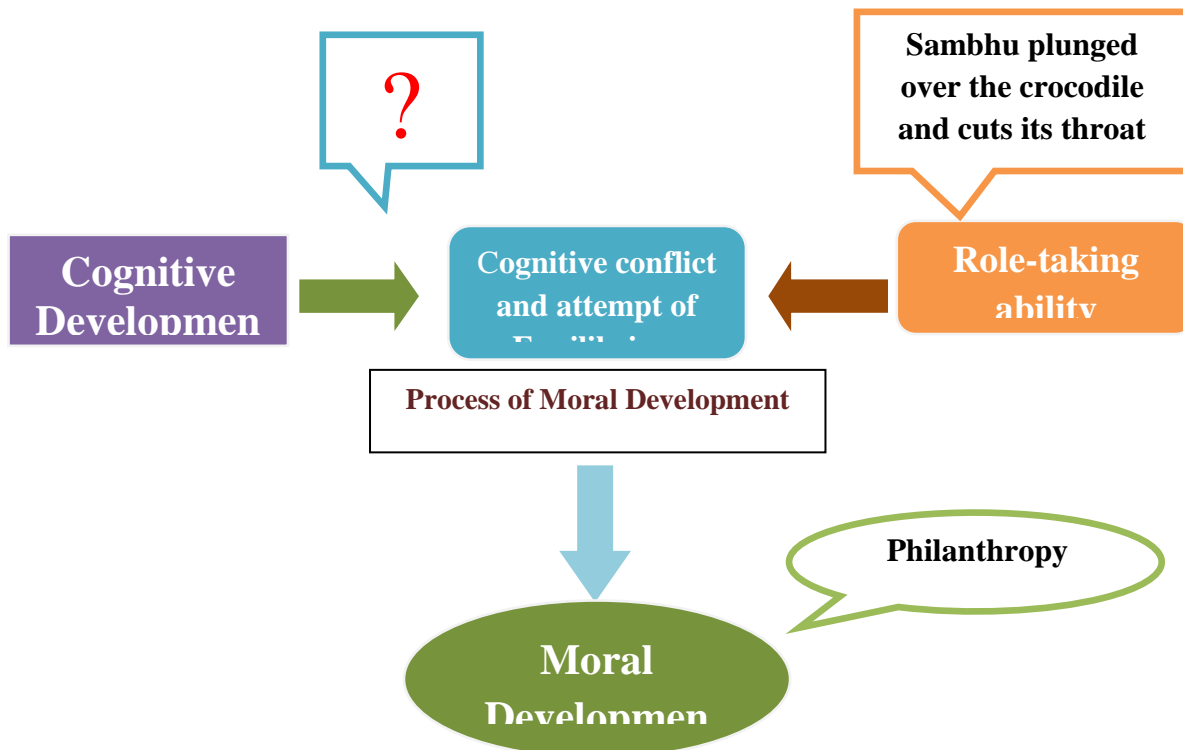
Moral Development in "Sahaj Path"

Theory of Social Constructivism:

Lev Vygotsky originated the theory of Social Constructivism. In his learning theory, he gave importance to society, culture and language, which are indispensable for human development. To him, knowledge is external, filtered in a learner's mind with the connection between society and culture, and expressed through language. He believed that without social interaction, the process of learning could not be completed. Being a Social constructivist, Vygotsky stated that there are two major aspects of cultural development in the human mind - one is Intra-psychological and another one is Inter-psychological. Intra-psychological stage deals with society and people and the Inter-psychological stage deals with the learner's own self; that means the most exalted mental process is firstly organized by the conversation of other people in the society and then the learner takes it into his personal account.

Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (inner psychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, logical memory, and the formation of concepts. All the higher functions originate as actual relationships between individuals (Vygotsky, 1978, p.57).

Vygotsky tried to treat learning in accordance with the development of the learner. In most cases, learners with the same I.Q. Differ in their achievement level for being low-motivated, low-attentive or unhealthy. Vygotsky viewed the situation that the students with the same I.Q level can learn by their own self at a specific range. After that, he needs someone who can take him further for continuity. Vygotsky called this someone a *more knowledgeable person* or *MKO*. He might be a teacher, mother, father, and friend, or even it can be a book also. With the help of MKO, the learner can continue his learning independently, and the process by which the learner completes his task, Vygotsky called Scaffolding. Scaffolding is a process that not only helps the learner to achieve his goal but also a process of problem-solving. In the process of scaffolding, the learner can perform a task at a specific range of capability and then he needs someone to help him to complete the task. Hereafter, there is a gap between the learner's exact development and his probable extreme range of development—Vygotsky called it the "zone of proximal development" which defies that the learner can reach to the extreme with the help of others. *What we call the zone of proximal development.. is the distance between the actual developmental level as determined by independent problem-solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers.[3] [(5)]* (L.S. Vygotsky: Mind in Society: Development of Higher Psychological Processes, p. 86)
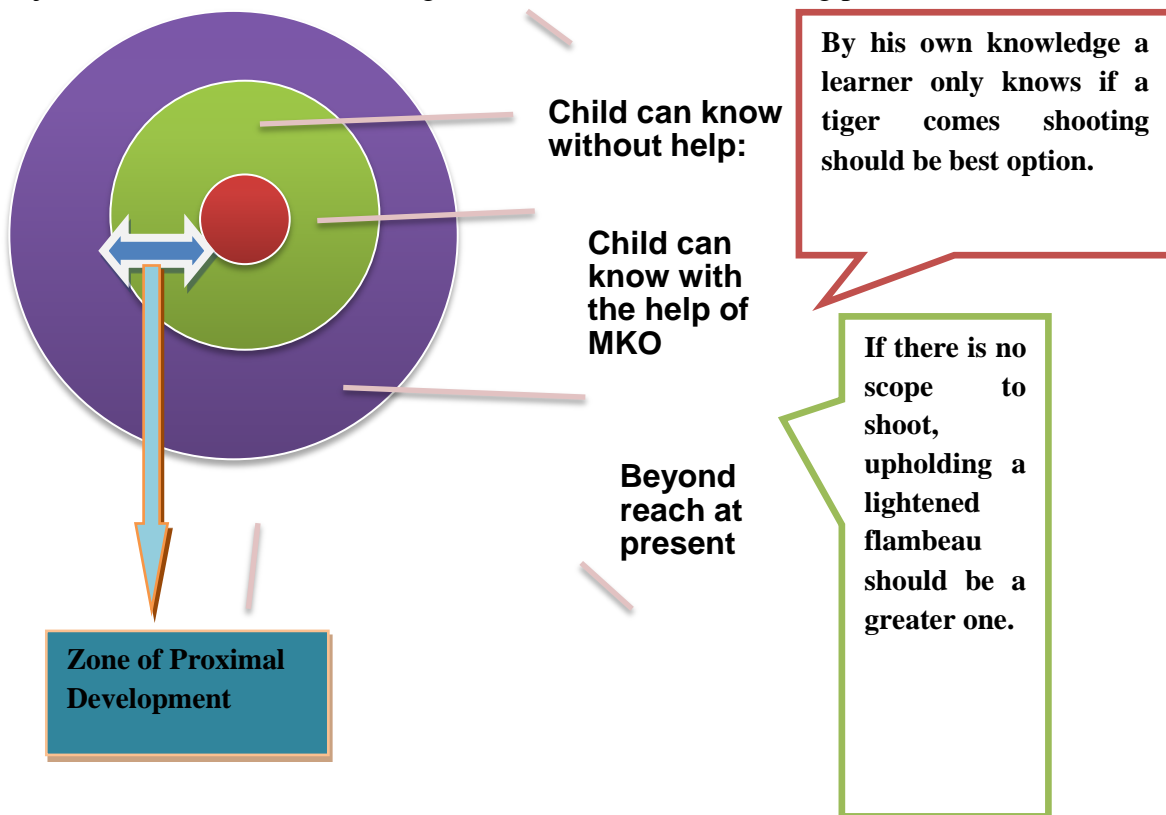
Now, if we take "Sahaj Path" in our account as a MKO, what kind of task does it perform? Let's have an example to clear this idea:

"Shaktinath babu felt asleep; suddenly, he woke up in palpitation by hearing a thud. He saw, being untied from his tether Akram had fallen from the tree. Shaktinath babu got down from the tree to see Akram and suddenly saw two sparking eyes. Oh god! It's a Tiger. There is

no time to bring a gun. Fortunately, they both have a flambeau. They lightened it up, and the tiger fled away.''

(শক্তিবাবুর একটু নিদ্রা এসেছে, এমন সময় হঠাৎ ধপ্ করে একটা শব্দ হওয়াতে চমকে জেগে উঠলেন। দেখলেন, কখন বাঁধন আল্গা হয়ে আক্রম নীচে প'ড়ে গেছে। শক্তিনাথ তাকে দেখতে তাড়াতাড়ি নেমে এলেন। হঠাৎ দেখেন, কাছেই অন্ধকারে দুটো চোখ জ্বল্ জ্বল করছে। কী সর্বনাশ! এতো বাঘের চোখ।বন্দুক তোলবার সময় নেই। ভাগ্যে দুজনের কাছে দুটো বিজলি বাতির মশাল ছিল। সে দুটো যেমনি হঠাৎ জ্বালানো, অমনি বাঘ ভয়ে দৌড় দিলে।)

If a Tiger suddenly comes in front of us within a while, and if we have a gun, then what should we do? Of course, we should fire the gun to kill it, but if we forget to bring the gun with us, then what should we do? We must try to find out a second option. A child, by his own knowledge or experience, only knows he can be safe from a tiger if he shoots the gun at it. But he doesn't know the second option to escape the situation without a gun. Here, as an MKO, "Sahaj Path" showed how an infant gets rid of it. So, the scaffolding process will be like this –

Child can know without help:

By his own knowledge a learner only knows if a tiger comes shooting should be best option.

Child can know with the help of MKO

If there is no scope to shoot, upholding a lightened flambeau should be a greater one.

Beyond reach at present

Zone of Proximal Development

"Sahaj Path" in the light of Social Constructivism

In his study on "Thought and Language," Vygotsky said that the relationship between thought and word is genetic and historical in the developmental process of human consciousness. *"A prelinguistic period in thought and an intellectual period in speech undoubtedly exist also in the child's development. However, a primary bond does not connect*

thought and word. Instead, a connection originates, changes, and grows in the evolution of thinking and speech (Thought and Language, 265, 266)."

According to Vygotsky, children use speech not only for communication but also to solve tasks through language. But, before focusing inwardly, one cannot express it through language. So, being developed independently, thought and word merges to solve the puzzle or to describe the child's opinion. Vygotsky gave a detail explanation of the language development of infantile. He has included from 6 years to 10 years of children in this stage. We generally know that the age of 10 to 12 years is the exact time for studying "Sahaj Path". At this time, they do not forget what they read previously rather. Their competency develops daily. So, what kind of language development would be seen in a 10-year-old infant, according to Vygotsky? The details are given below –

Age	Language competency according to "Sahaj Path"
6	1. They develops a huge number of vocabulary like 'গর্মি', 'ধুনো', 'মালাচন্দন', 'কর্ণফুলি' etc. 2. They can understand a complete sentence and they develop some reading cabalities, as such 'বর্ষা নেমেছে। গর্মি আর নেই' (Monsoon has come. Summer has gone away) etc.
7-8	They can understand ambiguous words or sentences, like chirping of owl's— as meant by bird's call or ill-omen.
9	<u>They can describe the content in detail and they can construct sentences based on their specific word-meaning:</u> "বৃষ্টি নামন দেখছি। সৃষ্টিধর, ছাতাটা খুঁজে নিয়ে আয়; না পেলে ভারি কষ্ট হবে।" (It's raining. Sristhdhar search **for** my umbrella and br**ought** it to me; if you fail to find it, it will be distressing.
10-12	<u>They can understand and describe the cause and effect relationship:</u> "কেষ্ট, শিষ্ট শান্ত হয়ে ঘরে ব'সে থাকো। দুষ্টুমি করো না। বৃষ্টিতে ভিজলে অসুখ করবে।" (Kesto, sit here like a good boy. Don't try to be naughty. If you are soaked, you will be ill.)

Cognitive Development Theory and Discovery Learning:

Bruner, influenced by Piaget, believed that cognitive development is nothing but the qualitative development of the human conscience. In his theory, human development occurs through three types of representative systems. Representation is a set of rules by which an event can be encountered and conserved. This representative system is a medium by which experiences are encoded and memorized permanently in memory. A system that is consolidated with Actions, Images and Symbols plays an important role in human development and upholds the entire developmental process through Enactive Representation, Iconic Representation and Symbolic Representation of the child.

In the Enactive stage, children are derived by some sensory-motor activity and explain their achieved experience through some physical activity or gesture. But, in the Iconic stage, children draw a picture of the whole incident or the event, which is further encoded in their memory. Enactive representation is always related to reality and is temporary, but Iconic representation is always experience-based, and we cannot say it is temporary. The third representative system is Symbolic Representation which generates symbols that are reflected in language. In symbolic representation, experiences become abstract and conceptual, whereas reality represents through some symbols.

Tagore's "Sahaj Path" is written for those who have crossed the age of 8. They overcome those three stages at this specific age and can conceive each kind of representation. From Piaget's point of view, we know that children reject the previous stage to achieve a newer one in the development process. But, in this regard, Bruner's viewpoint differed from Piaget's. He believed that the human developmental process is such a system where a child developed to a better and more complex stage by carrying the previous qualities. They do not reject it but often transfer the previous system into a smoother and more complicated form. Now, if we go through the Primer, we can see that Tagore started his book (First Part) with some alphabetical description. Now the question is what those alphabets are meant to be. Well, these all are symbols that represent a specific construction of a language. By which we can conceive the abstract form of a particular, like the word "Parrot" (টিয়া) — it is nothing but a part of the language. By pronouncing it or reading it, one can experience the concept or the image of the bird parrot that is abstract in nature. How could we call it abstract? Actually, a child in his developmental process conceived the form of a parrot by watching it physically or taking descriptions of it from the picture through his Enactive and Iconic representation. So, he already has an idea of the bird Parrot. Now, in the Iconic stage, he develops a better and smoother form of identification through language without physically representing the bird. He memorizes it in his brain through language. Tagore's "Sahaj Path' is a book of nature. He took his subjects from the concrete physical world and developed them in an abstract form. So, the relationship of the entire developmental process should be like this:
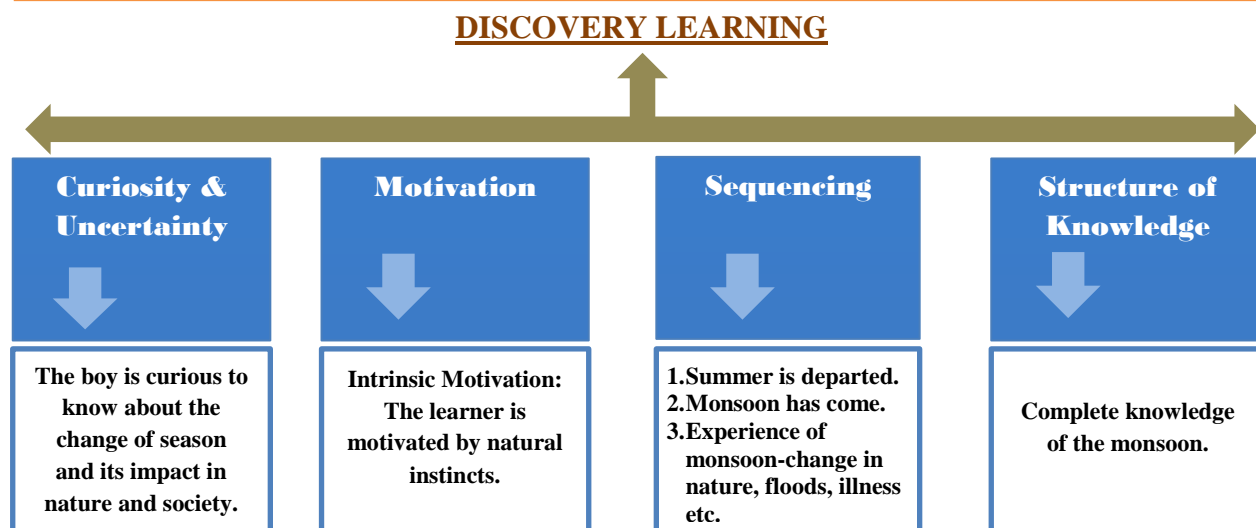
ENACTIVE	ICONIC	SYMBOLIC
?		Tiger lives in the jungle. Bird lives in the tree. Fish lives in water. (বনে থাকে বাঘ। গাছে থাকে পাখি। জলে থাকে মাছ।)

The table represents a developmental form of cognition. As we previously said, Enactive representations are derived from some physical activity by which a child imitates the original form of the object/ subject. From the period of sensory-motor thinking, these enactive skills are developed. But, "Sahaj Path" is structured for the period of concrete operational thinking. Therefore, enactive representation is deducted from this text. Actually, Tagore tried to give the learners a proper conception of the world, and his perspectives served to enable them to wonder for learning. Despite this, Tagore tried to develop their concept of Iconic and Symbolic representation. Thus, he included the great Nandalal Bose's pictures with his content matter. Those pictures give the learners a complete and concrete understanding of what they are delivered in the form of poetry and prose through images. Simultaneously, they get a sense of symbolic representation through words.

On the other hand, Bruner's concept of Discovery Learning has been considered with paramount importance in the field of education**.** Discovery Learning is consolidated with four components— Curiosity and uncertainty, Structure of knowledge, Sequencing & Motivation. Discovery Learning is an inquiry-based learning procedure where the learner takes the pioneering role of having the concept through discover. Some books are written for the reader where the writer becomes passive and the reader becomes active—mostly in detective or adventure stories, the reader finds themselves as an active detective or adventurist. Those books are written in the form of curiosity, where the learner is motivated to solve the problem through a sequential procedure and finally acquire their expected knowledge. Tagore, being experienced with the nature of the child, has imparted such kind of procedure where the learner finds themselves as a discoverer. We can discuss the theory by taking an example.

Example: *Monsoon has started. Summer has gone away. Clouds are rumbling, and thunders are lightning in regular intervals. The waterfall of mountain Shilong is oozing out. River Karnafuli is overflowed. It drowned the sesame field. It drowned Durganath's corridor. His bamboo-made fence is collapsed. Cows are fallen into a distress situation by standing continuously in the mire. Farmers stopped their work. Everyone is infected by a cold and cough. Master is going by wearing a raincoat accompanied by Turki Mia. Hollow spaces are covered by water and frogs. Drains overflow in our locality (Sahaj Path, Second Part, Fifth reading).*

The entire example is a description of the rainy season. Curiosity leads the boy to know about everything what happens in rainy times. Through observation, he discovers a sequence that happened during the course and gave him a compact knowledge of the rainy season. So, the process of Discovery Learning is

DISCOVERY LEARNING

Curiosity & Uncertainty	Motivation	Sequencing	Structure of Knowledge
The boy is curious to know about the change of season and its impact in nature and society.	Intrinsic Motivation: The learner is motivated by natural instincts.	1. Summer is departed. 2. Monsoon has come. 3. Experience of monsoon-change in nature, floods, illness etc.	Complete knowledge of the monsoon.

So, The Primer itself is a way to impart heuristics. Through this discovery learning process, one can understand the subject by sequencing the content into some small conceptual segments. Tagore's 'Sahaj Path" has defined the process of discovery learning through its content matter and psychological techniques and presents a world of wonder where a learner is motivated by his curiosity and uncertainty and finally becomes a discoverer.

Conclusion:

The problem started with a great debate about excluding "Sahaj Path" as a primer in primary-level school education. Some intellectuals have opposed it, and some have supported it, but the debate is still continuing. Hence, our main objective is to overview the primer completely in the light of child psychology to cast its necessities by considering before and after. So, in this regard, we have taken some paramount psychologists and their theories to ensure the worthiness of this primer in the field of child education.

Sigmund Freud, the father of psychoanalysis, has approached that the human mind lives in servitude to their biological instincts where morality is an imposition of society. He, in his structure of the mind, has described the nature of human conscience, where instinct is the force that motivates oneself to his destiny. His theory of Id, Ego and Super-ego has become gospel in educational psychology. *"Freud believed that we always experience a certain amount of instinctual tension and must continually act to reduce it. It is impossible to escape the pressure of our physiological needs as we might escape some annoying external stimuli. This means that instincts always influence our behavior in a cycle of need leading to a reduction of need* (Theories of Personality, page 52)*."* Tagore knew that instincts control us, but we cannot leave our hope and morals. Moreover, there is something within us that we call 'humanity' and humanity, if the crimson glow of the rising sun eclipsed by our own evil will, will finally win over the slavery of animalism for the sake of humanity. *"We shall not feel proud to be confined within their directions. Our minds will lust after small privileges, and we shall rebel against the rigors of education* (The National School, 126)." But, he was completely against imposing

thoughts, morals or ideas, which is why he never tried to influence children directly through his writings in this primer. Because morality is a social function and it varies from man to man. Tagore was not a Freudian, but his perseverance in personality development is quite similar to his. In this regard, Tagore sketched a world of a fairy with no king or boundary that can limit the sky of childhood. However, humans and society exist with a panoramic beauty that takes them to the world of imagination. Tagore believed in the mystic trinity of Satyam (Truth), Shivam (Divine) and Sundaram (Beauty), which finally would lead them to the world of humanity as a whole.

Sigmund Freud directly influenced Erik Erikson in his earlier life. Still, latterly in his theory, Erikson added the value of society in human development by denying the Freudian concept of Id, Ego and Super-ego. *"In his famous chapter, "Eight Stages of Man," Erikson (1950) modifies and expands the Freudian stages of psychosexual development by placing much greater emphasis on the social context of development. Erikson also is the first person who proposes a life-span theory of development that encompasses the entire life cycle. His modifications were inspired by anthropological findings and a concern with the social origins of these stages, which contributed to a shift from the sexual nature of man to a theory of psychosocial development* (Theory of identity Erikson, page- 2)."

On the other hand, Tagore was also concerned with the fact that development is not a periodical process. Rather, it is a life-long process, and society plays an important role in every realm of the human mind because it is not only the development of the human mind that determines their social being but, on the contrary, their social being that determines their process of development. So, as an educationist and writer of the "Sahaj Path", Tagore incorporated humans and their peripheral society in his primer with great importance. He in his book, he first introduced some subjects to stir up their imagination, then he placed them in some social condition to achieve their learning abilities, as mentioned by Erikson's Social learning theory.

In his Social cognitive theory, Albert Bandura mainly stressed five major development sectors - Reflexes, Symbolizing capacity, Forethought, vicarious learning and Self-analysing capacity. These all are necessary for a learner in his self-learning procedure. Tagore, being a believer in self-learning, has constructed a condition where one can have everything to obtain his learning outcomes, as mentioned by Bandura. We have already discussed it by analysing examples from Tagore's "Sahaj Path"; most often, all these examples are complemented by Bandura's theory of learning. In his Triadic reciprocity theory, Bandura claimed that if behavior, cognitive elements and environment are tied up in a stimulating relationship, it can lead a person to his proper learning. Most often, this relationship is also required for observational learning. *"Bandura, like Skinner, recognizes that much learning takes place as a result of reinforcement. He also stresses that virtually all forms of behavior can be learned without directly experiencing any reinforcement. Bandura's approach is also called observational learning, indicating the importance in the learning process of observing other*

people's behavior. Rather than experiencing reinforcement for each of our actions, we learn through vicarious reinforcement by observing other people's behavior and the consequences of that behavior. This focus on learning by observation or example, rather than always by direct reinforcement, is a distinctive feature of Bandura's theory (theories of personality, 406)." Tagore also believed that observation could make oneself conscious about his surroundings, people and nature. Even in his childhood, living a life of discipline, he had nothing in his closed room except a secret window where he observed and imagined everything and everyone. But his characters in this primer are not chained like him in a closed room. They all are free like a bird, curious like a discoverer and open as nature. There Tagore mainly explained and elaborated on the curiousness of his characters to discover the mystic nature of childhood, where reinforcement comes from within and experience enhances by experiencing it directly. Tagore criticized the process of imposition. If the learner is not intended to learn, he is forced to do it. *"Where our cordiality, our intimacy, our easy pleasantries disappeared… The grind starts from very early childhood. There is very little connection between the mind, and this way of acquisition of knowledge; nor is it for pleasure, it is only for a living and some status (A Veil, 140).*" But, we can impart an alternative way to skip this monotony of learning. If the learner creates his way, it should be a better option for him. Tagore's "Sahaj Path" is that kind of book where the learner becomes the most paramount person who starts his journey as a discoverer by observing his surroundings and people.

Jean Piaget believed that knowledge is not inherent; it is invented through a step-by-step procedure through assimilation and accommodation with maintaining its equilibrium. Our self-preservation capacities are called Assimilation. Accommodation is a process by which a learner learns new experiences or changes his behavioral pattern to the influence of his society. Children engage themselves in a continuous interaction process with a society where they get attached to newer concepts and thoughts; thus, the process of adaptation gets complicated. In this process of interaction, the Schema develops to deal with his environment. *"When a reflex responds to a suitable external stimulus, the total sensory perception and motor activity are incorporated into the schema of that reflex and changed; so that when the reflex is again stimulated, the schema has been modified. The stimulus is never again experienced in quite the same way, nor is the response quite the same. Thus the schema is invoked to account for the modification of response and the alteration of perception in the course of learning (Tuddenham, 12.7).*" Tagore, in his primer, has incorporated such things which can elaborate and distinguish the different patterns of schema. "Sahaj Path" 1st part is compelled with some simple concepts, mostly related to sensory motors and physical activities, which are merely external reflexes, and through it, he tried to develop the basic patterns of the schema; then, in his 2nd part, he incorporated some more concepts which are more complex, intuitive and more internal in nature. So, his point of view was pretty clear about Piaget.

Kohlberg's theory is associated with the development of morals. Kohlberg's theory of moral development is a theoretical developmental process of cognitive capacities. So, moral

development is not an emotional process but a cognitive process. He said that when cognitive conflict arises in the human mind, it baffles the state of equilibrium. So, to acquire the previous state of equilibrium, we certainly need some role-taking abilities through which the process of moral development continues and human minds regain their equilibrium. Tagore also believed that education must persuade morally but not in a mechanical way. To him, our current education *"is again a result of the mechanistic approach. Like a daily dose of tonics, the child has to be given a dollop of moral instructions (Problems in Education, 108). "* But, we can give them a wide open space where they experience their moral duties and enhance their role-taking abilities. Role-taking abilities are also a person's quality by which we can foresee our future leaders. In his primer, Tagore has created so many situations where his characters, to bring back their equilibrium of mind, concluded the conflict by making proper decisions. But, there are also some exceptions— in most cases where Tagore's intentions were subjected to describe heroism, he most often stressed the concept of role-taking abilities without taking them into a conflicting situation. But, more or less, Tagore's "Sahaj Path" has widened and explained this theory by presenting some conflicting situations where his characters react and are exempted.

Lev Vygotsky presumed scaffolding is such a process by which the area of knowledge expanded, and in his learning theory, he also talked about an external element that can help a learner to acquire his learning abilities - he called it MKO or more knowledgeable object; it can be a person, a co-learner or a book by which he will develop in a proper manner. Though Vygotsky's saying is mainly directed to a co-learner rather than books, classes, or science shows, his theory did not deny the necessity of books as a MKO. Tagore also believed that interaction with people or nature could make a person more able than those of books or classes, but he felt books are necessarily important to take those learners in a proper direction. He believed a book could lead a person to develop a learner's social learning abilities, but the development quality depends on what kind of book is served to him. If the book cannot stir up the notion of ocean, if it fails to develop the minds, then it would be useless. Thus, he wrote "Sahaj Path" to make them a wanderer and discoverers of their own way. Vygotsky's theory is also related to the development of language. Children use speech not only for communication but also to solve tasks through language. So, if the language becomes unknown to them, then the entire developmental process would be affected. For that reason, Tagore proposed Bengali in place of English. He wrote: *"English is very much a foreign language for us. It has no resemblance to our language in syntax or grammar. On top of it, the ideas and topics are alien. Hence everything from top to bottom has to be memorized before any comprehension draws. The result is akin to swallowing one's food without properly chewing. Suppose a contains a story about 'haymaking,' then it is an activity familiar to the English child, so he enjoys it specially, or it is the history of the fight between Charlie and Katie over a game of snowball, then it is highly amusing to the English child. But when our children read these in a foreign tongue, it evokes no memory; there is no picture before his mind's eye, and he has to grope all the way* (Education upset, 15-16)." As a result, the inter-psychological and intra-psychological

stages of the learner are interrupted because before focusing inwardly, one cannot express his feelings or thoughts through language—so, as a matter of fact, the relationship between thought and the word itself creates a puzzle rather solving it. That is why; Tagore's perception of delivering language simply and understandably through the mother language is not contradicted but complemented by Vygotsky's point of view.

Like Piaget, Bruner believed that development is a step-by-step procedure by which a learner learns his conscience as a human. Bruner's theory is based on 'representations'; representation is a set of rules by which events and incidents are encountered and remembered. He divided the representations into three specific systems based on a learner's age— Enactive Representation, Iconic Representation and Symbolic Representation. Through these representations, a learner learns and relates with society, people and objects. Tagore's "Sahaj Path" clearly discloses the necessity of those representations. Though enactive representations are not often used, the other two are frequently used and described to establish the relationship between the physical world and the world of signs and symbols. On the other hand, Bruner's theory of Discovery learning has greatly impacted the field of education. Discovery learning is an inquiry-based learning situation, consolidated with Curiosity and uncertainty, Structure of knowledge, Sequencing & Motivation where the content is not served but has to be discovered, has changed the scenario of the learning pattern, and is also imparted in Tagore's primer. Tagore has created some situations where his representative characters are not told what to do, they do what they feel about from their conscience, and finally, they discover what they want to achieve.

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The Meeting Pool Where Education Makes an Interface with Philosophy

CHAPTER

2

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Abstract:

Education and philosophy are intertwined on a common platform called purpose. The purpose defines a human being and their life afterward. Our lives have been chiseled and hammered and thus given shape. This chiseling and hammering are called education. This gives shape to our lives. This shape is called philosophy. Philosophy is the destination, and education is the process of reaching it. People are differently educated and therefore have different destinations. Why do people have different destinations? This is because people have different purposes in life. Hence purpose is the common platform where both education and philosophy meet. This writing is a humble endeavor to show how different purposes are met through education to reach our destination, which is the ultimate philosophy of life. Some of these purposes are ethical purpose, economic purpose, social purpose, and spiritual purpose, and they purpose to deal with the uncertain future.

Prologue:

For ages, education has needed philosophy for its growth and survival. The very essence of education lies in philosophy. When a mother teaches her child language and etiquette, she uses the philosophy she adheres to. When a father educates his child about the social and behavioral milieu, he uses the philosophy he believes. When a teacher trains a learner and prepares them for a larger role, s/he uses philosophy as her base. When a neighborhood uncle lectures while passing on a street, he uses the philosophy he practices. When a priest in a temple or church gives sermons, he disseminates the religious philosophy he is brought up with. When a political leader mesmerizes people with his speech, he also dwells in political philosophy. Every learning and interactional platform one comes across is loaded with some kind of philosophy. And the learners have to face them day and night. Come learn and make their own, and many forget or neglect. But they have to be influenced by some kind of philosophy. It is up to them whether they are choosing the right one or the wrong one. The role of education, more specifically formal education, is to help the learner guide towards the correct path one needs to follow. Therefore, every education setup sticks to some kind of social, national, or economic philosophy it thinks is useful for survival.

Now the question Is, why does education need philosophy every time it wants to propagate something? The answer is education is not a random activity. It is not even an activity of

compulsion. It is an activity of volition. And every volitional activity is purpose-driven. Philosophy gives that purpose to education. It is the purpose that drives education from head to toe. From the beginning of education, parents set a purpose for their children. In school, some change their purpose by being influenced by teachers. When they come to work field, some also change their purpose with the environment. So every human activity is purpose-driven. It is the purpose that makes the meeting between education and philosophy happen.

The Meeting Place Called Purpose:

Philosophy gives purpose to education. Education chooses a purpose according to its convenience. Let us discuss some of these purposes in detail.

The Ethical Purpose: Philosophy provides the moral base for every human activity. People have always asked the question of 'why we do what we do before any meaningful activity. One of the many reasons people provide education is to use it as a platform for teaching moral values. Human society differs from every other society because of its rule and order. These rules, orders and principles are the core of morality. Maintaining individual morality will help to maintain universal morality. The Vedas call it 'Ritah,' and the Puranas call it 'Dharma.' Any society at the collective level detaches itself, and an individual at a personal level, if detached from that moral principle, is bound to fall. Many civilizations have fallen because of this. They had everything, but somehow, people became devoid of that moral code and suffered. Therefore the Bhagavat Gita says, "Yato Dharma Tato Jaya." It means where there is dharma (universal order), there is victory. *Manusmruti*, another ancient Hindu scripture, speaks, "Dharma Rakshyati Rakshitah". It means dharma protects its protector. The *Atharva Veda* says, "Pruthivim Dharmana Dhrutam," meaning Dharma upholds the world.

So, every learner needs to know what dharma or the moral principle is. At the individual level, every learner should be taught four dharma–swadharma, samaja dharma, rastra dharma and viswa dharma. Doing one's own duty perfectly and regularly is swadharma. An action for the neighborhood is samaja dharma. Contribution towards the nation is called rastra dharma. And duty for the betterment of the whole world is called viswa dharma. To fulfill this ethical purpose, education needs the guidance of philosophy. And we know philosophy is the sourcebook of ethics. So, all the scriptures, in a way, are philosophical by nature. So, we should learn those scriptures to understand the ethical purpose of education.

The Economic Purpose: it may seem unlikely that education needs philosophy for economic purposes. But this is true. For every economic activity, there should be an ethical base. Economic activity devoid of dharma is bound to fall. Therefore, in the order of four *purusarthas* Dharma comes first. It means the other three *purusarthas* have to be according to the principle of dharma. So the order is *Dharma, Artha, Kama, Mokshya*. To earn or to generate wealth, ethics can never be abandoned. To enjoy life, ethics cannot also be abandoned. Therefore we have 'vivah samskara' (marriage ceremony). And to achieve liberation or *mokshya* the path of dharma is a must. As our concern here is about *'artha'* or the economic

purpose of education, we can say with certainty that it must have dharma in its base. Otherwise, it would bring a sudden downfall. Indian *puranas* and *dharmasastras* are filled with stories where immoral economic activity brings downfall and disaster to the character. Modern management theories now understand this concept. One of the great writers of our times Arthur Miller in his play 'All My Sons' has beautifully depicted this concept. In that play, a character called Joe Keller, in his greed to amass wealth through unfair means has committed the crime and later on found his own son dead. Therefore learners from the very beginning should be taught how to generate wealth but through fair means. And education here meets philosophy to guide it so that the process of generating wealth should be fair and just.

The Social Purpose:

Humans are social beings. Socialization, therefore, is an aspect of education. A term in sociology called 'enculturation' means socialization through education. Previously parents used to socialize with their children. Nowadays, with the changing social fabric, where both parents are busy in their daily work schedule, schools are increasingly taking this responsibility. But socialization is not an easy process. It requires a thorough knowledge of cultural understanding and national philosophy. Therefore we find different kinds of socialization in different countries. As per the cultural and national requirements, children are socialized. Maharishi Kashyapa had two wives–*Aditi* and *Diti*. *Aditi* was the mother of the demi-gods, who were known as *adityas*. They were brought up with the *samskara* of *devas*. So they became devas. *Aditi* installed the qualities in her sons to become godlike. And they became like that. On the contrary, Diti's training of her children was completely opposite. She trained them with all the devilish qualities that the universe had ever known. And her sons became like that. They became *Daityas*. The puranas beautifully showed the conflicts of these half-brothers. Having been born from the same father, the *devas* and the *daityas* were found to be characters of opposites. This is because of their different socialization. Therefore, the best socialization can make the worst learner better. The ancient kingdom of Sparta socialized its children to be great warriors. And it had produced some of the greatest warriors. But, ancient Greece socialized its children to be great thinkers. And lo, it produced some of the greatest thinkers like Socrates, Plato and Aristotle.

The Spiritual Purpose:

Every human is a divine creation. Once their basic and social needs are fulfilled, they strive for more. That something more is nothing but a spiritual quest. Abraham Maslow's theory of 'need hierarchy' has depicted it beautifully. We evolve with the fulfillment of our needs. Our journey starts with fulfilling physiological needs, and the need for self-actualization comes last. In between, we have safety needs, psychological needs and esteem needs. Each need is to be satisfied via certain elements. For example, to meet basic or physiological need we need food, water, clothes etc.; to satisfy safety need we require health and wellness, financial security, safety against accident and injury; to fulfill psychological need we need friendship, romantic

attachments, family relationship, community etc.; and to cater to our esteem need we require appreciation and respect. But after one experiences all these, s/he desires something intangible and immaterial. That is the quest for knowing the self, the creation and all the transcendental concepts. Then you do not require all the said needs. You require *shunyata* (loneliness) and *antardrusti* (introspection). Now you want philosophy to guide you and show you the right path. Upanishads are one of the best philosophical treatises for this. It is said, "tyejet ekam kulasyarthe, gramasyarthe kulam tyejet; gramam janapadasyarthe, atmarthe pruthivim tyejet". It means for the cause of family. It is better to relinquish one member if the situation demands, for the cause of the village, you may leave your family; for the cause of the state, you may have to leave your village, and when the question of knowing the self comes, you can leave the whole world. Therefore, the Indian culture has seen *Yogis* and *Rishies* leaving everything and going to the deep forest for self-actualization. Philosophy is all happy to guide potential seekers to reach their destination. Ancient Indian education also has these categories. But unlike Maslow, it has only two–the *Apara Vidya* (that education which helps the learner to achieve material happiness) and the *Para Vidya* (that education which helps the learner in knowing the self). At first, *Apara Vidya* was taught to the learners. But in their later stages, *Para Vidya* was taught. So the learners, when they return to their household life, use their knowledge of *Apara Vidya* to sustain themselves in the world. Then, with time, when their mind gets fed up with the mundane life, they automatically use the knowledge of *Para Vidya* to experience that transcendental.

The Purpose of Dealing with the Uncertain:

Human life is uncertain and unpredictable at times. Things may go on smoothly, but there may be a sudden halt, a mishap, or something unfathomable. This may completely turn them upside down. Natural calamities like tsunami, earthquakes and cyclones bring devastation. The onset of corona brought the whole world to a standstill. Many people lost their lives, many people suffered a loss of livelihood, and some millions went into a psychological depression. How to deal with this uncertainty caused by nature? Education, with the help of philosophy, would bring the solution. If we analyze the modern lifestyle, we will find the answer. Busy and selfish lifestyles, massive exploitation of nature, and non-concern over sensitive issues have brought this corona-like pandemic to us. Howsoever material the cause might look, the real cause lies in the collective human consciousness. We have to introspect now. Education needs to train the young mind to think critically and deal with the coming uncertainties of life.

Uncertainty is not only caused by natural and physical forces but also by innovation and technology. For example, in 1998, Kodak, which had 85% market control in the photo business, was virtually stopped now. All its 1 lakh 70 thousand employees are now jobless. Digital photography has wiped out this company from the market. The same fate happened to brands like HMT, Bajaj scooter, Konark TV, Phillips Radio, Nokia mobile phone, Rajdoot motorcycle

and Ambassador Car. These brands failed to match the time's need and vanished, as do the employees and logistics. New software and machines are taking human jobs massively.

In America, IBM-Watson software has drastically decreased the work of lawyers. Watson software's diagnosis of the disease is four times better than an average doctor's. MOOCs and other online platforms will kill teachers' jobs massively. Virtual platforms will be the reality of tomorrow. So the biggest problem of tomorrow's generation is harnessing technology and finding newer work options for survival. Moreover as we will get a lot of free time, mind management will also be a great challenge for tomorrow's generation. A sorry state of affairs is that the human mind is not evolving parallel with the change and evolution of technology. This would create a wide gap between technological evolution vis-à-vis human evolution. This might create a lot of chaos and anarchy in society. The role of philosophy is very important here. It must find out the solution for these coming problems of the future.

Epilogue:

Both education and philosophy are two sides of the same coin. The former is the practical side, while the latter is theory-laden. A perfect meeting of both can give birth to a system of education that is complete and everlasting. Education without philosophy will be rudderless, and philosophy without education will be barren. Both need each other to make themselves complete. Without philosophy, more specifically dharma, education would lose its vitality. Therefore, the however effort may require must teach the principle of dharma among the learners. The Bhagavat Gita aptly says, "Swalpamapasya dharmasya trayate mahato bhayat". It means even a little dharma practice would redeem you from great fear. Every education system must endeavor to install that seed of dharma among young minds. Then only it can become robust and long-lasting.

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CHAPTER

3

Reflection of English Language Teaching in Formal Education

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Abstract:

In a country like India, where a huge number of learners are teenagers, part of pedagogy and andragogy, where sufficiently trained teachers are not available, and where the internet is the source of global education, English happens to be the most important language to learn. Mass technical, practical, non-formal and most vitally formal education in India relies upon English language teaching. Misconceptions regarding English subject learning-teaching in schools, misconceptions regarding the reason for giving importance to English in India, and many more points are acting as obstacles to the overall development of both pedagogy and andragogy. Hence in this study, the misconception regarding English language teaching in the pedagogical teaching community in India has been discussed. The 'Indian education system's history was pathetic and horrible from the eleventh century onwards. An indigenous form of education was continuously exploited and spoiled by several invaders. India was broken into pieces by its culture and concurrently by its language. During the colonised era of the eighteenth and nineteenth centuries, both the coloniser and the colonised understood in their own way, English is the only contemporary language to learn to fetch the solution to the problems of employment to rule India and, on the contrary connecting east to the west and south to the north of India to organize the rebellions more harmoniously to get freedom for the country. After Independence, even today, India could not find another suitable solution to replace the English language in the field of education. Today, in the third decade of the twenty-first century, English is playing the most aggressive role in capturing parents' faith regarding the future success of new-generation students and aspirants.

Introduction:

It's frustrating that a major percentage of English teachers at the schools of West Bengal cannot figure out what they are actually for appointed. Most of them nurture the feeling that they are teaching their students English Literature. The funny part is they never noticed even the mark sheets of their secondary or higher secondary students, where it is clearly mentioned: First Language (Vernacular Language) and Second Language (English). The case is not only for most of the ESL (English as Second Language) teachers, an alarming number of other language teachers are also facing the same frustrating Situations.

It is very important for pedagogical teaching-learning that teachers realize at the outset what they are to teach and what the desired learning outcome of the nation wants. ESL teachers must understand they are to teach 'language', not 'literature', not the content of a textbook or a subject, but for 'content-based language teaching'. Language learning is essential in schools.

Not any other subjects or disciplines but language. Those teachers who are confused about whether they are teaching literature should ask themselves, why an engineering or a medical aspirant of higher secondary level should read a poem, play, or funny short story compulsorily? Does our nation want to create so many poets or authors, or storytellers? These initiatives are just to train students in the language skills of listening, speaking, reading and writing. Every nation has its own formula and philosophy to generate its own necessary human resource. India focuses on communication skills. One fundamental focus on making the new nation after '47 was providing education for the huge number of poor illiterate people of prolonged colonized India. Education means formal education and functional education for the livelihood and overall growth of the nation. Educating and empowering such a huge number of people with diverse cultures, languages and needs was never easy. So strong networks of knowledge and understanding and the ability to apply the learning and to develop skills were essential. Education for making a new nation got its' path in the light of English.

The misconception in the Pedagogical Teaching Community.

School teachers must first realize that they are teaching language, not literature. Learning a language is mastering any skills, which is why teachers at the school level must focus. Also, at the university level, increasingly required English courses are designed to train students in the fundamental language skills of listening, speaking, reading and writing. It is assumed that students have acquired some basic understanding of language structure at the secondary and tertiary levels, so this foundation can be built upon to focus attention on language as communication. It is widely recognized that there are gaps in this basic knowledge. Therefore, beneficial courses are planned. Of course, university professors can also teach English literature if they are teaching students who have chosen English as a special subject of study.

An appreciation of the current situation of English in India is essential before one can decide what to teach and how to teach it. Even more than before, it has become a mark of excellence, and therefore, more and more segments of the population are looking to know and try to use the English language. It largely remains the language of administration, business, education, and communication, both inside and abroad. Can we then call it a foreign language rather than a second language?

Even when the language does not function as a mother tongue for any section of the country's population, it plays such an important role within the country that it can be called a second language. When language does not have such a role to play but is studied from a cultural or purely humanistic point of view by those interested in its literature or culture or from a utilitarian point of view by those who need it for purposes such as relationships, work or study abroad, it may be called a foreign language. In the case of a second language, there will certainly be more exposure to the language in the environment, a greater motivation to learn, and a greater justification for making it a desired subject of study.

The Misconception about English Language Teaching in India:

What is the role of English learning in India? Aside from the fact that small sections of the population speak it with local proficiency, much better than any Indian language, and thus claim to be their mother tongue, English plays a very important role in education, business and management. It is the medium of teaching for higher education, both academic and technological. Those looking for work in private companies or professions must be proficient in English. It is recognized as an official language for administration purposes at the national level. It follows that it should be considered a second language rather than a foreign one. Looking at it from a student's point of view, one notices that exposure to English in major cities is significant. In a city like Chennai, Mumbai, or Kolkata, English newspapers are widely read, English television programs are watched eagerly, and advertisements, shop signs, street names, and advertisements in stations and other public places use English. Certainly, no foreign language can occupy this position.

However, there are aspects in which the English position of many Indian students is closer to the position of a foreign language than a second language. At stations, buses, shops, restaurants and banks, the use of English is not mandatory. Many students only read newspapers in their mother tongue, watch Bollywood or Tollywood films only, and limit themselves to radio and television programs in their mother tongue or Hindi. Therefore, exposure to the English language is limited. Added to this is the fact that the structure of the language and the expression of concepts make it more difficult for an Indian to learn English than another Indian language. English becomes a foreign language for the student, like any other foreign language. How much would this be the case in small towns and rural areas? Students have little exposure to English outside of the classroom. Most will not hold jobs in the future or move to an environment where they use English. They will not travel abroad and most of them will not go to higher education.

Thus, the position of English in India is in some ways similar to that of a second language, in some respects, that of a foreign language. Another serious complication arises from the number of languages to be learned and the order in which they are learned. English may be the third language offered in schools, after the mother tongue and Hindi. It can even be the fourth language when the student's native language is different from the state's regional language. These considerations will affect not only the goals we set for ourselves, and the level of proficiency we aim for but also our assumptions about how we learn a language.

The Pathetic History of the 'Indian Education System':

The senseless violence that broke out in the great universities of late medieval India: Nalanda, Vikramshila and Odantaburi, by Muhammad Bakhtiar Khilji and his men shocked the Indian lands in the thirteenth century. The sacredness associated with institutions and individuals of learning has been violated unprecedentedly in India. There were many books, and when all these books came under the watch of Muslims, they summoned several Hindus to

give them information about the importance of those books, but all the Hindus were killed. Ironically, Bakhtiar Khilji hails from a tribe in what is now Afghanistan, which practiced Buddhism for centuries before the Ghaznavids invaded it and converted it to Islam. In the following years, with the spread and consolidation of Islamic rule in different parts of India, many universities, such as Somapura, Jagaddala, Kashmir, and Valabhi, were demolished. As the news spread, academics deserted their universities even before the emergence of Muslim invaders. In Benaras, one of India's ancient centers of learning, when Qutb al-Din Aibak destroyed several hundred temples in the 12th century, much was learned that the Brahmins who studied there fled to South India with their families. Some scholars, such as Sakya Sribhadra and Vibhutichandra, went to Tibet, another center of higher learning. Records kept by Buddhist monks in Tibet for the destruction of Indian universities. Translations of Sanskrit texts preserved in Tibet help give an idea of the books Housed in the Libraries of the Great Indian Universities. Did the Rulers of India Learn Lessons from the Previous Destruction of the Libraries in Alexandria, Cordoba, Persia, and Ghazni (many of which contain texts that originated in India itself), their differences, perhaps India boasts of being the oldest universities in the world today. Ancient Sanskrit, especially those related to science and medicine. The destruction of major higher education centers in India, including temples, and the persecution of Hindus, Buddhists and other adherents of the Dharma religions during centuries of Muslim rule greatly affected the progress of Sanskrit scholarship.

The formulation and revision of the new smritis suffered an obstruction:

The Sanskrit works of scholars and mathematicians of earlier periods began to be forgotten in their homeland, even when their translations into Arabic and Latin and stolen copies became the basis of science, mathematics and mathematics technology in Europe. With the various Islamic dynasties gaining a foothold in India, education to impart Islamic teachings became the norm. Offices and schools attached to mosques began to provide training in Islamic traditions.

The Muslim rulers of India built only Islamic madrassas, the religious books and madrasas, which are often linked to mosques, only to train Muslim students in their religion and other trades to carry out administrative and military functions useful to the Islamic state. Learning Arabic and Persian and memorizing the Qur'an, Sunnah, and Islamic law were the main subjects of study. Limited training was also provided in agriculture, accounting, astrology, astronomy, history, geography, and mathematics necessary for the administration of the state. Delhi has become one of the most important centers of Islamic education. Islamic schools using Persian as a medium of instruction were out of reach of Hindu students. The lack of state support for Hindu education led to a sharp decline in their higher education even though village primary schools continued to operate where unfair taxes had not completely paralyzed finances. Many Hindus converted to Islam and learned the Persian language to gain respectable positions and avoid the *jizya* tax imposed on non-Muslims. This was also when caste became more stringent among Hindus to retain identities and preserve traditions. Wealthy businessmen, Hindu Raja, and local communities kept the burning torch of learning for Hindus. During the

reign of Mughal Emperor Akbar (16th century), Sanskrit received a certain amount of royal patronage. The first Sanskrit-Persian dictionary was compiled during Akbar's reign. Many works have been produced in Sanskrit, Hindi, Urdu, and regional languages such as Bengali and Marathi. Tulsidas and Rahim were celebrated at that time. Akbar wanted students not to be confined to classical theology and literature only. Akbar also encouraged the opening religious schools for Hindu children so that Hindus and Muslims could study together. He introduced the study of Sanskrit in many schools. His imperial library in Agra contained as many as 24,000 manuscripts. King loved listening to book readings on a variety of topics. The Jains created some Sanskrit literature during Akbar's reign.

To some extent, literature in Sanskrit and regional languages continued to be promoted during the reigns of Jahangir and Shah Jahan. Shah Jahan patronized Sanskrit poets such as Panditaraja Jagannatha and Kavindra Acharya Saraswati. A new language emerged from the fusion of Persian, Arabic and Hindustani, which was similar to Urdu and Hindi today. However, Aurangzeb reflected the dictatorship that Akbar had introduced during his reign. An Islamic fanatic, he persecuted Hindus and built new offices and schools on the ruins of demolished temples. When he heard that the Brahmins of Thatta, Multan, Sindh and especially Varanasi were attracting Muslims to their discourses, he ordered the demolition of all their temples and schools. A scholar of Sanskrit, with the help of critics, Dhara translated the Ramayana, the Gita, the Upanishads, and Yogavasistas into Persian, all of which constituted blasphemous verbs in the eyes of his brother. Dhara's Persian translation of the Upanishads was translated into Latin, creating renewed interest among European scholars.

The Mughals did not build on the advanced concepts put forward by Hindu scholars of an earlier era to become world leaders in science and mathematics. As religious schools proliferated and students became experts in the minute details of the Qur'an and Hadith in Muslim India, the Western world advanced in science and technology. Of course, these developments were greatly supported by translations of Arabic works derived from India. The Mughal kings missed the opportunity to ride the wave of technological discoveries in the West despite their rule over the richest land in the world. When Portuguese missionaries introduced the largest printed documents, they were not concerned with the ability of the printing press to change education.

The History of English Language Learning in India:

Meanwhile, Europeans who had come to India by sea from the fifteenth century onwards were fighting among themselves for a monopoly on trade with India. The British East India Company was victorious after pushing the Portuguese, French and Dutch to the edges and began extending its tentacles into India. At first, the British were not interested in educating the "natives" and focused on doing politics with different rulers and getting rich. In time, they realized their rule in India could not last long unless Western education, spread among the inhabitants of the land of educational heritage.

English Language Learning before Independence:

The College of Muhammadiyah and Sanskrit was established at Kolkata and Benaras, respectively, in the late eighteenth century "to provide a regular supply of qualified Hindu and Muhammadan law officers for the judicial administration". The masses when established institutes of learning. They were the same people who imposed severe penalties on enslaved Negroes in America and passed laws that "A gathering of Negroes for the purpose of teaching reading or writing would be an unlawful assembly." Many of us are familiar with Macaulay's Memorandum or "The Minute" on Indian Education, which he distributed before the passage of the Education Act of 1835. This act triggered Governor-General William Bentinck's decision to reallocate funds to a Western country and to develop a curriculum with "English as the language of instruction."

But in contrast, by 1857, rebel soldiers had taken over the telegraph system but could not use it. They had no language to connect Kanpur with Kalpi, the two main centers of the revolt. Today, English associate Kashmir with Kanyakumari, although their languages and cultures are different, like day and night. The English language brings the rest of India together.

English was also part of the language of the freedom struggle in India. *Maharatta* by Tilak, *Young India* of Gandhi, Nehru's *Indian Herald* is published in English. Without English, our freedom fighters from across the country would not have been able to communicate with each other.

The English language was introduced to India, not because of the British but in spite of them, through the cooperation between the informal British and the liberal Indians. When William Bentinck, on Macaulay's advice, decided (in 1835) to spend most of the money that was introduced by the East India Company for the Education of Indians to support the English language and English language education in India, as the English language had already been here for nearly two hundred years.

The start of the English language in India was difficult. While the Portuguese remained, English was only used in shopping malls. For everyday business transactions, interpreters or "dobhashas" were in high demand. They worked for a certain salary and were probably the first users of English in India. In the first half of the eighteenth century, enough people knew English to maintain the English language in India, although it was still not enough to meet the demand. In part, sustenance was also provided by missionaries. The growth of English commerce also encouraged the use of the English language. Special lists of words, phrases and slang have been compiled. Several lists were published between the 18th and mid-19th centuries. These books are believed to have sold to aspiring interpreters, writers, copyists, and agents in droves. This was the era of self-study.

English men and women started private schools. Raja Dwarkanath Tagore, the grandfather of Rabindranath Tagore, went to such a school taught by a Eurasian man named Mr. Sherborne. Several British men and women offered English lessons for a fee (Sinha 1978:22-23). But the teaching and learning of English in India received additional support when, after nearly two

decades of hesitation, English was declared the official language of the Calcutta High Court. For a time, justice was administered in the language of the people and persisted in Arabic and Persian. But it soon became clear that British judges preferred the English language (King 1994). Thus, in 1774, the High Court of Calcutta decided to carry out its transactions only in English. This was the first major official measure that certainly added to the popular demand for the English language. People who could write petitions were in great demand and well-paid. The limited supply of these people and the unlimited demand for them led to the creation of more schools and motivated more people to teach and learn English.

Missionaries and other unofficial British and Europeans also contributed to the spread of English in India. The initial missionary effort began in 1614 and became more prominent after 1659. This was the time when missionaries were allowed to use the ships of the East India Company.

William Carey, a preacher, opened the first vernacular school for Indian boys at Serampore in June 1800. It quickly became popular, providing instruction in English, liberal arts, literature, science, and vernacular. Serampore College had nearly 300 boys on its rosters in less than ten years.

Missionaries were the pioneers of English language education in India. The standard they set for the English language was high enough up until then. However, English literature has found a place in the school curriculum. Works such as Paradise Lost and Bacon's Essays were also taught in the upper classes (Howells 1927:20). The English language was also encouraged in India by many British merchants, Radical Indians, and others. Also noteworthy is the notable contribution of Raja Rammohan and David Hare.

Officially, the East India Company was not very keen to educate the Indians. There was a fear that this would lead to the loss of India. But liberal MPs, such as Charles Grant, believed that giving Indians a free education in English would help replace the Persians in the administration. Thus, he encouraged the introduction of the printing press in India.

Even the Indians preferred to teach English over Sanskrit and Persian. English has become a compulsory subject for five semesters. The English department has been strengthened, and the salaries of English language teachers have been increased. The attitude of the Indians towards English has changed so much that it has become the preferred language for communicating, even with family members. But after 150 years, Indians were no longer learning this language just to buy, sell, or find work. It began to take on an integrative role. Soon, education meant knowing the English language.

English Language Learning after Independence:

Nowadays, it isn't easy to think of success in any profession in India without a good command of the English language. Kachru notes: "The end of British rule in the Indian subcontinent was supposed to begin with the slow but sure demise of the English language in South Asia. However, the reality of use is different. The real picture is the increasing spread of

the English language in society. The functional areas in which English is used rather than contracted have expanded"

Article 343(1) of the Indian Constitution in 1950 stipulated that English as the official language of the Federation would give way to Hindi in 1965. But in 1965, violent riots broke out, especially in the south and northeast. States and a constitutional amendment were passed to allow English to remain another official language as long as all states and union territories wanted it. In education, a "trilingual formula" has been adopted, according to which all states teach English and Hindi as well as a "regional" language. The main official language of India in Andaman, Arunachal Pradesh, Chandigarh, Goa, Meghalaya, Mizoram and Nagaland, English is the only official language.

In a 1983 Ford Foundation-funded survey of the South Kanara district in Karnataka, 75% of 625 participants said they used English for official correspondence (Chaudhari 1988:69). 81% of those surveyed said they wrote formal requests and requests in English. Among working respondents, 66% said they write formal notes in English, and in formal meetings, 61% said they speak English. 62% of surveyed said English was the most appropriate language for the job. The Government of India allowed the use of Indians. Languages in many selection and admission tests. The Union Public Service Commission, Secondary Service Personnel Selection Commission, Joint Defense Services Board, etc., also allow scheduled Indian languages. So do the Indian Institutes of Technology, Management, etc. National credential exams, such as the Graduate Engineering Aptitude Test, can now also be written in languages other than English. But these languages still did not find many recipients.

Although the First Education Committee, chaired by S. Radhakrishnan, discussed the role of English in obtaining citizenship, he was of the opinion that "English cannot continue to replace the state language as in the past. The use of English as such divides (the people) into two nations, the few ruling and the many being governed, one unable to speak the other's language and neither understanding the other. This is the denial of democracy. However, he recommended that "English be taught in high schools and colleges to keep us in touch with the ever-increasing living stream of knowledge."

English language learning for Education:

The history of English in India, as we have seen earlier, is the history of the increasing expansion of the functional areas of a foreign language. About three hundred years ago, English was limited to a few work areas. Then, during the nineteenth century, it occupied the field of education and moved into the social spheres. In free India, the English language has spread into all areas of public life and is now moving to permeate the leisure and the home. Conversations vary in the extent to which English is used. This is almost a necessity in families with parents from different language backgrounds. This may not be the case in other educated families, but English is used today in every spare education.

English Language Learning in the 21ˢᵗ Century:

Due to the education and entertainment in English, many children in today's Indian homes use mixed English slang with their siblings or peer groups. Older family members can use English mixed with their mother tongue. Conversations between age groups can vary in the degree of promiscuity, but the symbols of promiscuity are increasing. Unmixed or "pure" language seems strange to many. TV presenters use mixed code.

Except for reading, the field of religion has very little English so far. Occasionally, people attend religious sermons in English. However, people still use other Indian languages for daily prayer or worship. A small minority of Christians use the English Bible and English prayer books. They also attend an English service at the church.

In general, it may not be inappropriate to say that the English language is no longer just a window to the world, a language of association, or any other tool as restricted in use as it was in the past. On the contrary, it has now become the language of our daily lives, and there is hardly any area where English is not used.

But this is only one side of the picture. The flip side is that in educationally backward families, success in learning English was out of reach. Every year, thousands of students fail their English exams. Despite his years of learning English, fluency and accuracy elude the student. This negatively affected the morale of many students, and their discontent with the formal sector of English language teaching led to the emergence of a huge private industry. The failure of the private sector is another story. In a society where success in life depends on success in learning English, there is a challenge for ELT (English Language Teaching). In the early years of English in India, a limited amount of the language was available to the learner. There were only a few native speakers and they seldom used English with their Indian interlocutors. There were few books, and most were not adapted to the needs of the students. So learners of that early period used special word lists. Their needs were limited, and these menus served them well. In the late 18th century, more detailed books on grammar, pronunciation, and other areas of the English language appeared. With the transfer of judicial and financial powers to the British, new occasions arose for more frequent use of the English language.

Even when the British were here in India, and Indians were expected to be exposed to the standard British variety, few people could use the standard dialects and varieties of English. However, in some schools and colleges, emphasis was placed on recitation or oratory, but it was not enough. So the Indians had to rely on books and magazines. English literature became part of the school curriculum. Reading habits are encouraged. Libraries and book societies were established, and the book trade flourished in India. But this made Hindi English books. Even in their private conversations and correspondence, the Indians could not maintain formalities and calm. Distance pattern:

Among the Indians, the impulse to learn English was of a basic type: to learn it to earn a living and a certain social position, to expand the horizon of one's consciousness. Until around the 1960s, you could only pass the final school exam in India if you passed it in English.

English in India is fighting with hundreds of other Indian languages. Each time a student decides to learn and use English, he undergoes a decision-making process. The student decides between several languages if, in his opinion, this is the best language to use. The student also decides, among other things, the style and scoring of the particular language to be used. Is multilingualism, and thus a plurality of overtones, an obstacle or aid in language learning?

Conclusion:

Satisfying answers to these inquiries are not yet presented. In a survey of Scheduled Tribes in Ranchi students, almost all respondents would like their children to learn English if they only had to learn one language. Recently, such questions have been asked by educational psychologists such as Bernstein (1970). The "English-only" movement in the United States appears to be fighting multilingualism. Studies have been done to find out what people prefer. The teaching and learning of any language should be studied, bearing in mind that language is a social phenomenon. Language is not only an abstract system of formal, lexical, and grammatical features but also performs a social function and must be seen in the social context of its use. The language would be learned in an environment with no native speaker. When a language is learned in this way, there must be a primary purpose for which it is learned. A language must have some internal social function in society. In multilingual countries, people who do not share a common vernacular language may use another language to communicate. This orientation places the second language in a clearly defined social context or situation.

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CHAPTER

4

Impact of Modern Education in The Light of Sanskrit Language Through CLT For Reading And Writing Skill

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Abstract:

The usefulness and relevance of Sanskrit as the most excellent language in this scientific age are well known. If there is no language, it cannot be practical in the world. Language is the body of culture. Therefore, language is the most excellent tool in the daily practice of human society. In this world, language learning begins at birth through informal means. The tendency to acquire language is natural in humans; therefore, a child starts speaking a language quickly. Language learning in humans is natural, universal and eternal. Everywhere a child learns language from his mother from childhood. After that, language is acquired by household members and other social members. There is a social process by which a child acquires language with ease and play. Therefore, at the higher secondary level, students can read, write and speak in their mother tongue, but there is some difficulty in reading, writing and speaking in Sanskrit. Acquisition of Sanskrit requires the ability to read and understand certain words and all kinds of proficiency in the language. In the present era, there is a great need for practice in learning Sanskrit. Therefore, new trends are being seen in language learning worldwide to solve all the problems. There is some tendency among them towards computer-assisted instruction. How it can be used in Sanskrit language acquisition is considered here.

Introduction:

In recent times, the explosion of science has radically changed every field. The field of education is also constantly changing, giving birth to various branches of knowledge. Education based on purposefulness is respected globally, so people are egotically trying to get meaningful knowledge. In this changing world, new trends become interesting, and this is natural. In the fields of science, technology, psychology and education, groundbreaking research has led to unimaginable developments, various tools and devices. Then a new vision and a new instinct are constantly observed in each field. There are also new trends in language learning in the world. So what are the new trends in language learning? Among them, there is some trend of language learning done with computers. What is the nature of this? How it can be used in language teaching, especially in Sanskrit language teaching, is considered here.

New instincts:

The saying that new becomes new is born is often heard. Everyone likes something new, and everyone has an interest in something new. What is the new trend here? This inquiry refers to

new behavior or change. A new instinct is a change that is the communication of innovation in the elements of activities, substances, and ideas in previously existing methods. The changes and development that began in the Western world after the Renaissance with the Industrial Revolution impacted all sectors of the world. After that, the development of science began. Since the invention of computers and the Internet, information technology has spread new thinking, new visions and trends everywhere. Some recent trends have also come up in language teaching, some of which are presented below. These are some of the new trends currently taking place in language teaching.

- ❖ Language learning through television/language learning through satellite.
- ❖ Language learning by limited circuit television (CCTV).
- ❖ Language learning by accessing access.
- ❖ Language learning through instructional systems.
- ❖ Language learning through distance.
- ❖ Computer-assisted language learning.
- ❖ Among the many trends in language learning through microlearning, (to acquire language skills), this paper presents the idea of computer-assisted language learning.

Meaning of the language:

Language is the most excellent means in the daily behavior of the human community. The new ideology is as great music is promoted in a loud and pronounced manner on limited levels. The great sound is the universe in its unlimited letters, and the following (Musical Phenomenon) Bloom Field and others mean. Patanjali has said, "These are the characters of expressed speech, and these are the language of the power of communication, which is called dhiyaktavac".

Language Teaching:

The importance of language in developing equality is everywhere. In a country where language is developed and prosperous, people are also prosperous and developed. In this world, there are three teachings: formal, informal and random. Without language, a man becomes completely inactive and lame. Language richness is an index of the richness of people. And the language that is refined, refined, simple, sweet, capable, and understandable is respected worldwide. For a long time, the same language reigns, contributing to science development and society as people benefit.

A. Spelling: The first component of language is the destruction of letters. First of all, language is a phonetic code. Next, a scripted language code was required to communicate between people in remote areas. Over time, the alphabetical arrangement came to mean the clear writing of letters according to words.

B. Vocabulary: This is the second of the components of language. Every language has a huge vocabulary space. A word web is the words in a language. The order and form of words form a sentence.

C. Reading: Here is how to read when reading a sentence. There should be no errors in reading during the reading. Then the students have to be informed.

D. Syntax: Language is the fourth of the components. A sentence is a group of words. That is, there is an interrelationship between the terms. Blocked words do not signify the meaning of a sentence, even as a group. For example, linguists have expressed their views on the meaning of the sentences, which do not have any relationship between the words pot, cow, human, sky and world. According to the jurists, the main elements of sentence structure are the presence of aspiration, ability and presence.

Language skills in teaching Sanskrit:

Listening Skill: Good (1959) described it as follows: "The act of understanding the meaning of printed or spoken language as constructed, with the ability to perceive and pronounce words without reference to their meaning."

Measures to improve listening skills:
- ❖ Listen carefully to sounds when others are speaking.
- ❖ Listen to the sounds carefully and speak again.
- ❖ When different sounds are pronounced, know how those sounds are released.
- ❖ Sounds of needs should be heard even during noisy times during debates.
- ❖ Identify the short, long and consonants and understand the statement's meaning.

Tools for listening skills: Family members, radio, television, telephone, phonograph, computer, amplifier, concentrated prints, telephone, seminars, inclusions, conferences, films, etc., are the means.

Listening Skills Required:
- ❖ To pronounce words correctly and to hear and repeat them.
- ❖ To express the meaning of words and for pure knowledge.
- ❖ To acquire speech ability, etc.

The tasks that teachers undertake are tailored to the age and mental level of the students. Therefore, he thinks about improving his skills according to the level.

Resources for listening skills at the secondary level:
- ❖ Foot games that edit listening skills occur at this level.
- ❖ Students can acquire listening skills by light reading textbook passages.

Resources for listening skills at the upper secondary level:
- ❖ Listen to songs, stories and verses with new tastes.

❖ Students should be motivated to participate in poet conferences, discussions and workshops in Saraswati Sabhas.

❖ Use of films, sound recordings, concentrates recordings, computers, telephones, etc.

Speaking Skill: Speaking comes second to language skills. All human beings speak to express their intentions. But we do know that merely uttering words is not speech. Sometimes, even in words spoken, if the user's intention of the words is not discovered, it is not proper to say that he spoke. Therefore, the discovery of meaning is significant in speech. This skill is the second target acquisition of students; the form of speech is the expression of emotion. The power of speech is born and grows under the influence of the environment and on the basis. Because in the classroom, however, listening and speaking are the most important things. Therefore, language knowledge is immature and incomplete without speaking skills. Meaningful pronunciation is also a distinctive feature of language skills.

Tools for speaking skills: Conversation, storytelling, impromptu speech, debate, competition, initials, picture reading, drama, language games etc., are the main tools in developing students' speaking skills. If students enhance their speaking skills, their pronunciation will be pure.

Ways to improve speaking skills:

❖ **Conversation Camps:** Sanskrit speaking should be promoted by organizing conversation camps in your school.

❖ **Debate**: Decide on the topic and provide students with adequate time for practice Students should be encouraged to express their views on the pros and cons of the topic.

❖ **Competition:** The school should organize essays, debates and general knowledge competitions on issues of national and international importance.

❖ Picture reading: Students develop thinking power in reading practice by looking at pictures in class.

❖ Drama acting: Teaching based on drama style in the classroom. Then the students' language understanding is correct.

❖ Language play: Play also plays a major role in teaching nowadays. Sports can bring about a radical change in the lives of students. In the language field, speaking practice can also be done through games such as creating infinite stories and filling in incomplete stories.

Reading Skill: Reading the written part of language silently or aloud with the eyes is the priority of grasping the meaning. This is so grasping skill because it is considered to be the priority of reading as well as listening in language skills started only when the child has been given a thorough practice in listening and speaking skills." "Reading is a process of looking at written or printed symbols and translating them into appropriate sound components."

Ways to improve reading skills:

❖ Reading in such a way that there is a clear relationship between the scripts.

❖ Provide space for reading with meaning.

❖ Reading in a room-appropriate tone and without interruption.

❖ Reading following the pace of prose and verse.

❖ Acquire reading skills according to the consonants and vowels of signs in various languages.

❖ Reading, giving priority to the act of pleading over the act of gestures.

Reading Teaching Methods: There are three main methods in teaching reading.

Alphabet Method: In this method, the vowels and consonants of the alphabet are taught sequentially after the compound letters, words and sentences are understood. Sanskrit characters are scientific.

Word teaching method: Meaningful words are taught. The student pronounces the words first.

Sentence teaching method: In language, sentences are the connotations of meaning, and words and letters are components. Even grammarians consider the explosion of a single sentence to be meaningful. This method is addictive for students.

Writing skill: There are two forms of language, oral and written. The expression of emotions in descriptive words is the verbal form. The written form of language is writing these descriptions in linear words. The oral form is immediate. Written but permanent. Therefore, writing letters clearly and beautifully is an important part of language learning.

Writing Skills Requirements and Objectives:

❖ Increase students' writing and emotional expression.

❖ Practice clean, clear and beautiful writing in Sanskrit and provide opportunities to write poems appropriately.

❖ Write proverbs, riddles, proverbs and judgments according to context.

❖ Write concisely when summarizing and in detail when expanding.

❖ Increase the speed of students in sequence and movement, and develop the ability to read, concentrate and remember.

❖ Enhance sentence formation skills for deliberative composition.

❖ Practice writing signs in various moods and knowledge of punctuation marks.

Ways to improve writing skills: Students need to practice sitting still and comfortably and train their fingers to hold a pen. Then the writing will be beautiful and neat. Writing Practice in the Past, the method of repeating the large letters written by the teacher on the students' writing boards seems to be neglected now. In learning to write, one must believe in the shape of letters at the beginning. The writing of the letters shall be clear and nicely headlined. Teacher's writing is ideal for students. Students should then be encouraged to write beautifully in person and indirectly. Mottoes and proverbs written artistically on paper should be placed on the room's walls. Students who are attracted to it should practice beautiful writing. Skill in art is accomplished by practice. Well-planned competitions motivate children. In the classroom, children work carefully to achieve full skills competitively. Thus, we can enhance writing skills in many ways. These four skills are interdependent. Listening, speaking, reading and writing

skills are essential to achieve the primary purpose of communicative language. These skills are essential in the development of the Sanskrit language.

Learning: Acquisition is acquisition. This word is "derived from the verb 'gam' with the prefix adhi". From birth to death, all living beings are always learning something. Learning is a continuous process that goes on throughout life. Even there, human learning is unique.

Learning is the relative eternal result of experience, practice, training, or information in the behavior of living beings. The result of maturation, fatigue, alcohol and drugs etc. is not learning of learning in general, and the symptoms are all accepted. The computer is an audio-visual installation of technological devices for its simplicity and effectiveness in learning and acquiring modern languages. A school cell is required to acquire language by computer. The teacher makes effective language acquisition for the students through projectors, sound receivers, phonographs, video recorders, computers, etc.

Educational technology:

Educational Technology is the field of study that investigates the process of analyzing, designing, developing, implementing, and evaluating the instructional environment, learning materials, learners, and the learning process to improve teaching and learning.

The Association for Educational Communications and Technology (AECT) defined educational technology as "the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources". It denoted instructional technology as "the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning". As such, educational technology refers to all valid and reliable applied education sciences, such as equipment, as well as processes and procedures that are derived from scientific research. In a given context, it may refer to theoretical, algorithmic or heuristic approaches: it does not necessarily imply physical technology. Educational technology is the process of integrating technology into education in a positive manner that promotes a more diverse learning environment and a way for students to learn how to use technology as well as their common assignments.

Accordingly, there are several discrete aspects to describing educational technology's intellectual and technical development: Educational technology as the theory and practice of educational approaches to learning.

Educational technology as technological tools and media, for instance, massive online courses, that assist in the communication of knowledge and its development and exchange. People usually refer to this when they use the term "detach".

Educational technology for learning management systems (LMS), such as tools for student and curriculum management and education management information systems (EMIS).

Educational technology as back-office management, such as training management systems for logistics and budget management, and Learning Record Store (LRS) for learning data storage and analysis.

Educational technology itself is an educational subject; such courses may be called "computer studies" or "information and communications technology (ICT)".

Computer: A computer is a unique man-made device that accomplishes the desired task quickly, in large quantities, without evil, and tirelessly based on the information provided by an encrypted instruction system. A computer is an electronic device that is designed to work with information. The term computer is derived from the Latin term 'compute', which means to calculate or programmable machine. Here the name computer-assisted means a task performed with the help of a computer. If language learning is done with the help of a computer, it is called computer-assisted language learning. To our advantage, the teaching method involves computers and audio-visual aids.

The computer is an audio-visual installation of technological devices for its simplicity and effectiveness in learning and acquiring modern languages. A school cell is required to acquire language by computer. The teacher makes effective language acquisition for the students through projectors, sound receivers, phonographs, video recorders, computers, etc.

What is the need for computer-assisted language learning?

The computer accomplishes some of the teacher's work within the chapter. It provides great help to the approaches in the acquisition. New technologies and new software have made computers more useful. Many software components have come into play in language learning. Therefore, language learning through computers has become very interesting and effective. In the last thirty years, great changes have occurred in computer-assisted language teaching, whereas Mr. Barshar divides this into three categories, viz.

1. Practical Computer Assisted Language Learning Behaviouristic CALL,
2. Communicative CALL, Communicative Based Computer Assisted Language Learning
3. Inquiry-based computer-assisted language learning is Integrative CALL.

Now that we know how computer-assisted language learning (CALL) helps in language acquisition, computer-assisted language learning can be divided into three main categories: computer-only, using language learning software available on computers, and computer-based online tools. Computer-assisted language learning is a great help in language acquisition.

(1) A computer for frequency practice.
(2) Computer as Drill and Practice.
(3) Computer as Tutor.
(4) Computer as Simulation / Problem Solving.
(5) Computer as Game Computer as Game.
(6) Computer as a tool for language learning and language acquisition for teachers and students.
(7) Computers are online tools for teachers and students to access language learning.

(1) **Computer as Drill and Practice:**

There are three steps in frequency practice: Motivational provision, receiving feedback from the acquirer providing quick feedback. These three functions make a computer beautiful. There are various such frequency exercises in language learning. For example, well-structured frequency practice software such as proper matching, sentence completion, multiple choice questions, correct answers, short answers, etc., indicate the learner's learning development and time spent on it.

(2) **Computer as Tutor:**

As a teacher of computers, it can help in the following ways, e.g.

Teaching Grammar: In teaching Sanskrit grammar, the chapters of nouns, prepositions, prepositions, verbs, conjunctions, feminine suffixes, adjectives, compounds etc., can be taught effectively with software. Similar efforts in creating ghost systems have been made, and some are being made at Jawaharlal Nehru University, Delhi, Hyderabad Central University, Kanpur-IIT and elsewhere, and similar ghost research works have been done at Rashtriya Sanskrit Sansthan (a recognized university). Many software has also been developed for teaching English grammar. Who should be taught grammar? as-

- ❖ Longman Grammar Software;
- ❖ Grammar Expert Plus; Tense Buster (Clarity Software);
- ❖ Grammar Mastery (ALA);
- ❖ Roman Grammar (Addison Wesley Longman),
- ❖ 3D Grammar:
- ❖ Contextualized Practice for Learners of English (Heinle & Heinle).

Reading: Computers are a great help in acquiring reading skills, and various types of reading, such as model reading, aloud reading, intense reading, critical reading, or acquiring analytical reading.

- ❖ Rocket-Reader (1998) (a speed reading program);
- ❖ Read-Flex (Speed Reading), Reading for English

Thus we can compose such passages in Sanskrit as well.

Writing: There is software in English for spelling, spelling, sentence writing, paragraph writing, report writing, editing, review writing and various writing skills.

Paragraph Punch (a writing tutor for effective paragraphs); Write Express Easy Letters (effective business letters); Power Editing (an interactive tutorial on how to edit and revise sentences); Report Writer for Science and Engineering Reports (Clarity Language Consultants) (EFL/ESL report science and engineer writing) This can be done in other languages by following these examples. Pronunciation Speech Reading Listening Skills-

They have developed many software in English to acquire these skills, including Learn to Speak, English Pronunciation (1997-98), Naturally Speaking (A voice recognition program), See It, Hear It, Say It! Accent Improvement (Speak Ware); Real English (Wiser Software)

Computer-Assisted Instruction: Computer-assisted instruction is one such technique that includes information-related content and literal audio-visual and various acquisition processes. Here, the use of computers in teaching is called computer-assisted instruction. The information in this instruction is arranged in an orderly manner. Computer-assisted instruction is where computers are used to enhance teaching and learning skills. The information in this instruction is arranged in an orderly manner. The user can get information on different topics. Chamber son & Speecher (1983) stated that drill & practice, tutorials and simulations are available in the classroom through uninterrupted computers. According to White & Forcier (1985), computer-assisted learning is where information is delivered to students through computers and software programs.

"CAI refers to the use of the computer and software programs to assist the delivery of information to the student". According to Ms. Bark (1982), computer-assisted instruction is the validation of learning skills through computers. According to Bark (1982) "CAI refers to the use of computers for the facilitation and certification of learning",

Database System Topics generally consist of two programs. The first part is logical analysis and design, consisting of Requirements Specification and Requirements Analysis, Data Modeling, Relational Mapping, and Normalization. The second part is the physical design and implementation of the Data Base Management System, consisting of SQL: Data Definition Language, SQL: Data Manipulation Language. The concept of needs analysis and requirement specifications is a program oriented to user needs so that the scope of the study is unstructured problems. The design and implementation must follow the needs analysis and requirements specifications. The characteristics of the database system course require the use of learning methods not only to emphasize conceptual understanding but also to practice in-depth exploration of unstructured cases. Tutorial models in CAI-based Tutorial (Lestari, 2015; Seow, Pan, 2017) are learning strategies developed for material that has characteristics: new information conceptual nature and emphasizes the optimization of achievement of cognitive aspects. The Drill model, as in (Pacol, Patacsil, 2018; Pujawan, 2018), provides learning experiences through the creation of imitations of forms of expertise that approach the real atmosphere through the provision of exercises to develop creativity and test students' abilities (Darmawan, 2011). The characteristics possessed by the Tutorial and Drill model align with the learning characteristics of database systems that require learning concepts that emphasize conceptual understanding and require deep practice to expose unstructured cases. Our paper proposes a CAI model based on a combination of Tutorial and Drill and Practice models for learning database systems, as shown in **Figure 1**.
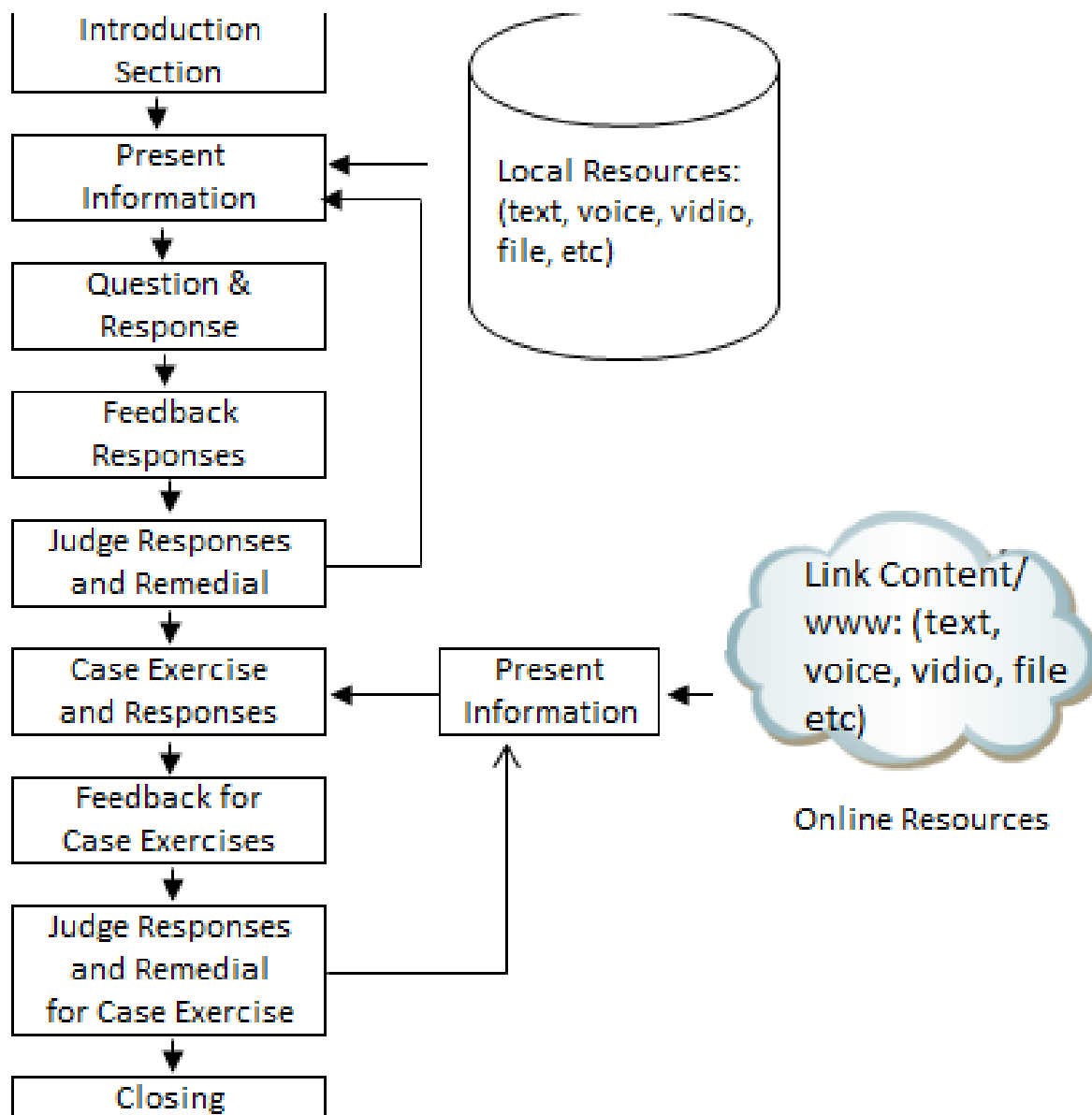
Fig. 1. CAI-Based Procedural Model of Combination Tutorial and Drill & Practice

The CAI model in Figure 1 runs on a Web-based platform or a CMS (Content Management System) application such as e-Learning. The system is used to help students learn independently anytime and anywhere and in classroom teaching with the teacher's assistance. The CAI procedure based on the combination of the proposed Tutorial and Drill & Practice consists of 9 steps as

Follows:

1. **Introduction Section.** The CAI system displays instructions or learning steps.

2. **Present Information.** The CAI system presents material sourced from the CAI system's local resource applications in the form of tutorial scripts. Presentation of information in visual information other than text, such as images, graphics, photos, and images /videos.

3**. Question and Response.** The CAI system presents issues and assesses how students can remember and understand the lessons offered. This stage is an integrated evaluation stage in the material presentation stage.

4. **Feedback Response**. The CAI system provides feedback as a reaction to the responses given by students. The feedback function is to inform whether the answer given by the student is right or not. Input in the form of messages in the form of text and graphic illustration forms. If the response given by students is correct, the program reinforces students. But if the student's answer is wrong, the program provides a sentence with a statement that the response given is incorrect.

5.**Judge Response and Remedial.** The CAI system evaluates students' answers/responses so they can provide feedback for students. Assessment functions to assess students' learning outcomes and decide whether the learning process can be continued to the next stage or repeated. Repetition takes the form of restatement of material that students have seen, sourced from local resources.

6**. Case Exercise and Response.** The CAI system presents questions in the form of new case studies but is still relevant to the materials that have been studied/seen by students and assess the extent to which students can develop certain material they have acquired. Students can reach this session if they have mastered all the main material of learning.

7. **Feedback for Case Exercise**. The CAI system provides feedback as a reaction to students' responses (as in step number 4)

8. **Judge Response and Remedial for Case Exercise**. The CAI system evaluates students' answers/responses so they can offer feedback to students. Assessment functions to evaluate the results of case training and decide whether the learning process can continue to the next stage or return to its first stage. Repetition in the form of presentation of enrichment material sourced from online resources/internet (www, download files, YouTube, etc.) to enrich students' insight before doing the case rehearsal. This concept can train students to think critically and develop ideas into available material.

9. **Closing.** The CAI system presents a summary of information about lessons in the form of the main points of a paragraph about learning objectives and provides recommendations for further learning. The first step to the fifth step is the underlying logical structure of the Tutorial-based CAI model, while the sixth step to the eighth step is the core of the Drill and Practice-based CAI model. Both of these models are integrated, resulting in learning logic procedures in the form of applying the Tutorial system at the beginning of teaching to provide conceptual understanding for students and at the end of the teaching offering exercises to develop creativity and test students' abilities.

Computer Assisted Teaching: This is one of the methods used at present. The process of computer-assisted instruction is as follows. Computer learning system is provided to every student in the schools. The teacher teaches using a computer during the lesson. That is, just as he teaches using audio-visual aids in general teaching, he teaches using computers in computer-assisted instruction. Of course, there are limitations to the use of audiovisual equipment. Computer-assisted instruction, however, is very extensive. For example, during the recitation of Kalidasa's verse "Grivabhangabhiramam", the description by Kalidasa can be read with audio-visual aids, but the students do not get that much feeling there. If we display the description by Kalidasa with sound with the help of computers, the students will remember the learning for a lifetime. Moreover, students should demonstrate an attachment to Sanskrit, which is presented as a complicated language.

In the computer-assisted instruction method, the teacher already programs the computer using Animation, Graphics, Sound, Photos etc., according to the teaching subject. The teacher can come to the classroom and show something a little bit according to the context, or it can be shown all at once like a movie. Even after teaching, students can sit in front of the computer and receive feedback according to their abilities. If we install a Monitor wire L.C.D/ L.E.D or Science Projector, it can be displayed on the screen in large format like a movie.

Significance of Computers in Education :

❖ Students remain active in computer-based learning, and educational material is collected using a computer technique.

❖ In the second method, a teacher depends on hardware and study material. In this, students are not directly related to computers.

❖ In the third method, the teacher develops some educational software program, called Computer Assisted Teaching, according to the subject and teachers.

Impact of computer-assisted instruction: As a tool for language learning and language acquisition for teachers and students, e.g.,

❖ **Word Processors:** This resource is very helpful in reading, writing, and editing. Where and what kind? Where is the justification of whose term is used? Similar resources in English indicate that this term is used in the composition. Spelling Checkers: This resource is very helpful in checking for spelling errors. There are such resources in English.

❖ **Grammar Checkers:** There are grammar checkers tools in English to fix grammar-related errors in the language, but they are not very useful. Such tools can also be created in Sanskrit. Great efforts should be made by Sanskrit grammarians and computer scientists for this purpose.

❖ **Concordances:** Concordances are a great help in finding places of use for proper word use. There are such pieces of software in English.

Conclusion:

Under the present circumstances, teachers can teach language effectively through computers. For example, Online Language Learning, Facebook, Language Learning, PowerPoint, E-Learning, and Sanskrit Blogs are tools that can enable innovation in reading, writing and Sanskrit language learning. So at the higher secondary level, computer-assisted instruction now helps greatly in Sanskrit language acquisition. In the technological era, students have gotten bored and feel monotony with routine classroom teaching like traditional teaching methods. Using traditional methods makes it very difficult to make them to understand the poems written by earlier writers like Balmiki, Kalidasa, Bhavabhuti etc. So, the situation raises demand for using modern techniques like Computer Assisted Instruction, Computer Assisted Teaching, and ICT to sustain the interest of the pupils in Sanskrit learning. It makes the student become active and participate in the learning with involvement. So, Computer Assisted Teaching breaks the monotony of traditional classroom teaching as it also helps in academic achievement in Sanskrit.

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CHAPTER

5

Impact of Education in the Light of History Subject

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Abstract:

According to the Kothari Commission (1964-66), commonly referred to as history isn't only an object of human interest yet a wellspring of passionate security that gives development, soundness and self-confidence. Modern social scientists and progressive thinkers think that history is a recorded script in which human life and society are related and includes all the changes human society has gone through, all the ideals that have controlled and affected human activities, and the real facts that affected human advancement. Students can gather knowledge about society and country from the study of history. It irradiated the narrowness of the mind and expanded our views. Therefore, the inclusion of history in the school-level curriculum is very apt. According to the National Curriculum Framework 2005, education will be learners oriented, and the teaching process will be constructive. The learners will develop their knowledge by active participation in classroom teaching, where they can amalgamate their previous knowledge and experience with the new learning situation. By this way, they can create new knowledge. History is the memory of the human experience. History is not a separate individual subject. Every subject of the contemporary educational curriculum- literature, different sciences, religion, philosophy, Political Science, Sociology, Education, Economics, Geography, Mathematics, Medical Science, Technology, Agriculture, Industry etc. is included in History. No subject can develop continuously if it excludes history. All didactic subjects are connected with history from the beginning, and history is the mother of all subjects.

Introduction:

From time immemorial, studying history has been a summary of mythmaking episodes and heroic deeds of warriors and rulers. Thus, history as a royal subject has guaranteed its proper place in different curricula from juvenile to higher studies. History creates an urge to know the unknown, to compare the past with the present and then to understand the future will. History is not merely a totality of ups and downs of kings and queens and kingdoms or annals of warfare or aggrandizement of territorial expansion. It is the leading mouthpiece of human progress, culture and civilization too (Andrews et al., 2010). Reading or studying history will be set at naught if it fails to us her inquisitiveness in the mind of the History learners how the historical development in various aspects has occurred in different countries, how the great historical personalities are still memorable, how they have fought for social, cultural, economic justice for their countries and people of their own (Haydn, 2012).

Now-a-days people are giving much more importance to many other subjects for building our career than studying history as a core subject for the betterment of our life and livelihood. Perhaps the necessity for creaming history to pass the examination stands in the way of honoring history as a subject. Another aspect to the contrary is the sentiment mentioned that the process of teaching history at present fails to copy with prevalent progress and need of society in so far as its democratic aspect is conserved. History students need behavioral and scholastic change, but history education is currently below the rank and fails to build their career as good citizens or help a country's smooth functioning with overall democracy (Nyamwebe et al., 2013).

In fact, the history curriculum and the method of teaching history in all stages of education are poles asunder and be changed root and brunch under the rapid growth of dialectical democracy. It should be borne in mind that every other subject, technical or non-technical, must have a history of its own and that part of history is also the academic course of history enlarge our historical knowledge not as bare facts but as a part of our life and livelihood (Olutayo, 2015). Moreover, the subjectivity of literature and objectivity of science and technology jointly will have to reshape the content of history as a cosmopolitan subject.

Concept of History

Latin 'Historia', French 'Historic', and English 'History' means 'investigation.' Later, the Greeks think that history is a record or narration of the result of the inquiry. So, history is both the process of investigation and recording the information and knowledge received through investigation. Herodotus, the father of history, first used the term History (Human story), which means tradition or past incidents. Herodotus glorifies history as an independent field of study (Williams, 2016).

History is being recorded from ancient times. But up to the early 19th, only political up downs were considered the material of history. Even royal myths and stories of wars were considered history. In the early 19th German historian Ranke protested against it and started modern history. Gradually history became data-based and scientific. The span of history expanded along with political events, and social, economic, and cultural history was also written. Psychology, environmental study, women's study etc., have been acknowledged as the theme of history. The subaltern study is now the main theme of history. History's function is the analysis of public life. Dr. Henry Jonson thinks that history means the history of human life. The subject of history is the evolution of human society and civilization. Therefore English Historian Metland said history is what man has done, told and thought about in the past. In the process of evolution, through centuries, the development of human society is the content of history. Man is the focus of history. Rabindranath Tagore says, 'There is only one history – the history of man'. Historian Mark Blok thinks history is the story of the man in the boundary of place and time.

Some historians think a man is the center of history or creates history. Historian Ramesh Chandra Majumder thinks man and the correlation between human beings, the interaction

between different communities, their strife and assimilation leads to the gradual development of greater human society and its chronological description is History. But this 'man' means not only the royal or aristocratic persons but the mundane people also. Eminent English philosopher and historian Thomas Carlyle once said that history is the biography of great people. But he otherwise acknowledged the role of common people in history. It should be admitted that the great persons of history have influenced national life and contemporary history with their achievements and ideals. But mundane, common people have been leading in constructing society or changing the flow of history. Eminent modern historian E. H. Carr thinks the history culture centered around the royal persons is now invalid. In fact, though it is quite necessary to know the royal, aristocratic persons or generals, the explanation of the change and evolution of the larger community of common rustic people that live outside the royal court is history.

Historian Ramesh Chandra Majumder thinks the content of history is the reality of the past. Historian Trevor Ropar supports him and thinks that historian should love the past. Dr. Ramesh Chandra Majumder says history is the chronology of the previous activities of human society. English philosopher and historian Thomas Carlyle thinks history is hero worship and the activities of great people of a country behind its social advancement are very important. So, R. W. Emerson says, "There is properly no history but only biography." But some historians like Voltaire, Gibbon, and Joyce think otherwise. Voltaire says history contains only serial crime and misfortune. James Joyce thinks history is a nightmare from which I am trying to awaken. E. H. Carr says that historians and historical information are two important matters in writing history. History is a continuous interaction process between a historian and his information and an endless dialogue between the present and the past.

Nature of History (Science of Arts)

Since the age of Herodotus, history was a sophisticated literature full of records. But in the nineteenth century, this view changed and history started to be established as a scientific subject (Ishak and Awany, 2017). As well as in other branches of knowledge, in the field of history, scientific analysis, exercise and initiative started. Voltaire was the pioneer in treating history as a science. English historian Gardiner mate land, Stubbs etc., tried to write history scientifically and establish history as a field of science. After analyzing historical information, Komte and Barkle found some common rules and proved that history and science are identical. German historian Ranche incorporated a scientific style in writing history in the nineteenth century. Science is based on some rules, and these rules can explain different scientific matters that explain historical events and lead society and the state to the right path.

Aims and objectives of history at the secondary level

History is one of the most important subjects in the Madhyamik school curriculum. Like others, one can learn many experiences and knowledge through reading history. Educationists

express many opinions about the aims and objectives of history. After displaying a subject to a student, the desired change in behavior is pre-defined.

Inspiration of discovery of truth: By reading history, students can get inspiration for the discovery of exact truth. Prone to the truth and dedication are created, false presentation and exaggeration and controversy are created, which are the aim of history reading.

Love for the country: History plays an important role in love for the country. Through the reading of History, the student becomes respectful of his country.

Preparation of Lifestyle: History students know the definition, duty, civil life citizenship, and their basic rights.

Progress of Man and Society: History may be regarded as society's mirror.

Within history, a complete picture of society is displayed, and within the scope of society, the proper development of men is done.

Humanism development: Human civilization and culture are an international wealth. To get this wealth, the creation of humanism is earnestly needed. Throughout history, one can be respectful and tolerant of humans.

Know the Present: History reading aims to know the present and analyze the present with the help of past experience. Present social, cultural and economic perspectives are conceptualized.

Mental strength and development: Through reading history, students can analyze and make decisions, and the field of memory judgment and power of debate is developed. Consciousness to time: History is related to the past in dents and places, so there is work reason relation. The students can teach those time and geographical positions.

Respect for Constitution: History helps to respect the national song and the country, including the democratic structure and national institution. On the other history teaches us to respect our constitution and its important value.

Universal Conception: Not nationalism, but universalized history is the utter truth.

Students can conceptualize the bigger world that is present behind their country. History should not be marginalized. The students become aware of the progress of human development. Through the study of history, universal cooperation and resilience should be maintained. For this, a peaceful and cooperative world can be opened to the students, creating a beautiful world.

Aims of teaching history at the higher secondary level

The aims of teaching history at a higher secondary level are highlighted in the following points:

1) Aims study of any subject is to create interest in that subject. The interest created at primary and secondary levels is more deep and strong at higher secondary levels.

2) History analyzes past social life activities from the perspective of place and time. History at the higher secondary level strengthens the conception of place and time more deeply.

3) History reading aims to make learners more attentive to analyses and judgment through progressive debates.

4) History makes a performance of criticism and scientific attitude and quality. History helps the learners observe and analyze the present regarding high past incidents or history.

5) Despite all, present-to-present and present-to-future relations are the chief aims of history. World culture is the gift of its residents. Each country is, directly and indirectly, dependent on its culture, and the world culture is reacted by the mutual exchange of thoughts, habits, traditions and deeds in a social scenario. History reading aims to inform learners about present social, political, and religious problems and make them efficient in solving these problems through their past experiences. History is the flow of the evolution of socialized men.

So, the aim and objectives of the history study are to co-relate its learners with civilization and cultural perception.

Values of history subject

The concept of history is that history has a dark and light side. If there are negative concepts about history, there are also about science people do not know that history has changed its colour of the political dress with time. History is an encyclopedia of human society. So, without history, knowledge about life is incomplete. Historian K. D. Ghosh says – It is no exaggeration to say that from long being the Cinderella of the curriculum, she bids fair to be its queen.

Development of morality and values: A large part of history discusses great man's life and their ideology, bravery, dedication and extraordinary qualities.

Curious and imaginative: History is the story of human civilization's continuous progress. This story makes the learners curious and imaginative.

Makes Scientific Out Look: There are many controversial matters in history. After analyzing the matter, the learners come to the discussion which makes the learners thoughtful, national, scientific and neutral outlook.

Make Aware of Folk Culture : History deals with folk, folklore, local handicraft and folk song dating with ethnicity. With the help of it, we can idealized basic social life and moral conduct. History is solely related to temples, cities, peoples, Rajas Zamindars and their ancestors.

Training of Leadership: History is past politics. So through the reading of history one can train leadership. It creates philanthropist and universal conception.

Importance of history as a discipline

Development of knowledge: History is a storehouse of knowledge. It deals with the evolution of human beings, the rise and fall of monarchy's politics, economics, society, culture, revolt, revolution, movement and thoughts of the great statesman.

Pillar of Present: History is the witness of the past, and after crossing such a long past people have reached to present. So, truly we can say that the present is on the stand of the past, i.e., History.

Political and Administrative Development: From History we can learn about the states and administrative and political structures governed and maintained by kings. The real and good side of the amendment and political and administrative implementation rectification are known.

Cultural Development: One of the parts of History deals with the cultural life of human beings. Through History the evolution of socio-cultural aspects has been upheld.

Helps to Develop Nationalism: Nationalism means love for countrymen and sympathy for all inhuman creatures and organizations, including respect for all national values. Nationalism helps to make love to culture and tradition. It inspires the people to protect themselves from external attack, aggression, suppression, and brutality or torchers.

Religious Tolerance: Religion is a big part of human life because it is related to baling and practices. From many history incidents, we can learn about the result of conservative and orthodox tendencies toward religion. So, history makes us more liberal in religious tolerance.

Universalization – External affairs of state is one the major part of history. We can learn about the progressive and degrading condition of the state by studying history. It helps us establish universal harmony, peace, and love and discard all faults and enmity.

Place of history in the curriculum at the school level

Though comparatively, history is less important than the study of science and technology, history is included in the curriculum of almost every school in every country. Prot K. D. Ghosh has aptly said, "History has not only a fundamental place in the curriculum today but has her needs ministered to by such subjects as geography, literature, handwork, ants and music." For such acknowledgment of history many philosophers, historians, scholars and teachers like Cald Well Cook, Helen Parkhurst, Haphold, Cousinet, Thomas Arnold, Vives, Ranke, Karl August Muller etc., have contributed a lot.

Objectives of Inclusion of History in School level Curriculum

Main objective of our education is to relate a child with their country, race and mankind of the world and in this respect, the value of reading history is undeniable. Through the study of history, a human being is altered into civilized person and also related to civilized life, institutions and responsibilities as a social being. History makes a man skilled in society in various respects. Through history study, one can understand and recognize society. Through history study, human beings can build their ethics and characters. We can understand the biography, motto and self. Sacrifices of many noble persons by reading history. History creates love for the motherland and is also the main propaganda for healthy patriotism. History study gives importance to social compactness and internationalism.

The present age is the time of specification. Special study erects its base upon general study. In this respect, history should be regarded as a compulsory subject. It is undeniable that we want an extensive study of history in college and university, so its base should be hand. A big objective of education is to build a scientific and bountiful aspect inside a student. The study of

history is one type of mental training and it creates analytic power, creative training, argumentative power etc.

Place of History in Curriculum at School Level :

In the past the subject 'History' could not settle its place in school, and then it was a medium of amusement outside the school for the students. But, gradually, history had included in the education system of schools.

History as a Textual Subject

During the middle Ages Christian saints thrived or attributed importance to the history for their ethical and religious education. In the 16th century, a German Scholar, Jacob Wimpheling, gave importance to the study of history to prove the greatness of German compared with Romans. In 1524, German religious reformer Martin Luther argued for history education at the secondary level of schools. In 1531 Spanish Scholar Juan Luis Vives said through the study of history, children acquire the experience of grey hair, and in its absence, old people become un-experienced children. Eventually, during the last episode of the 16th century (1580) in England, there raised a voice to include history as a compulsory subject in school.

But the development of history education came to light during the 17th century. In this period, a religious institution, 'oratorian' and Christian Wigie (1642 – 1708) recommended including history in school education. In the 18th century, with the help of Voltair, Gibbon composed a renowned historical book. Charles Rollin announced the importance of history in the realm of ethical studies. Then a democratic autocratic administrator Frederick the great, announced the history to be included in school education. In 1775, National Convention instituted a degree for studying history in three phases. During 19th century history studies developed in almost all the schools of Europe and they taught history and geography at the same time and in the same class. After Thomas Arnold's efforts in 1830, the Oxford and Cambridge Universities recommended the history as a subject of Examination in 1870. From 1900 onwards, the History became a compulsory subject. After independence (1776), America's actual study and culture of History started in 1815. History study started in primary Schools in 1820. During the ancient Indian period, History study was neglected. In the middle age, the study of history got admiration for Muslim patronage.

National Curriculum Framework, 2005 and History

After Independence felt the necessity of change in education, various committees, commissions, and institutions have constructed. Such a nationalized system is NCERT which is related to the school education system. NCERT took many reformation steps for education in 1975, 1988, 2000 and 2005. As a result, the national Curriculum Framework has been created with the leadership of Prof. Yashpal. In this National Curriculum Framework importance of History as a part of social science has been described.

National Curriculum Framework, 2005 and Objectives of Studying Social Science

To establish an ethical and peaceful society, social science knowledge is inevitable. Social science can expand men's social, cultural and analytical skills to cope with worldly factors serially. Analytical and creative skill is developed in various works with the help of social science. Social science builds a value of freedom, faith, diversity and homage in the students. They will become more practical and constructive. Social science comprises history, geography, political science, sociology, anthropology, economics, etc. Although we give less importance to social science than Natural science, its impact is very profound in building a peaceful society.

Outline of National Curriculum Framework, 2005 and Significance of History

History is one of the main subjects included in social science. In NCF, 2005, it was said, "History will take into account developments in different parts of other parts of the world". In the outline of the NCF, 2005, it has been said in relation to process – "The teaching of the social science must adopt methods that promote creativity, aesthetics and critical perspectives, and enable children to draw the relationship between past and present". For the context of Teaching Learning Material (TLM) and its importance, "Teaching should utilize greater resources of audio-visual materials, including photographs, charts, maps and replicas of archaeological and material cultures".

According to NCF, 2005 for the endowment of children's world and make it full of diversity, we should teach History. We should inspire students to read history to understand the profundity of social and economic challenges. We have to be aware of students to understand human rights and social values.

As per the recommendation of NCF, 2005, History will be included in the syllabus of upper primary and secondary sections. The subject matter would be the freedom movement and modern history. The main aspects of history should be contemporary Indian facts. According to NCF, 2005 we should be dealt with the change process, various discoveries self–control, comparative discussion and consistency of a child. We want to discuss contemporary historical facts. Then from women's point of view, we should discuss the female sex with the male sex to understand subjects. So the importance of learning history lies in making good civilization for the students, so NCF, 2005 recommended teaching political science with history simultaneously.

After Independence, history was set to be compulsory at the school level. To furnish the syllabus, the school Mudaliar Commission (1952–53) and Kothari Commission (1964–66) played an important role. According to Mudaliar Commission.

Secondary education should be divided into two stages – Upper Primary (VI–VII) and high and high and higher secondary education level (IX–XI) Mudaliar Commission commented not to teach history separately but to teach integrated with geography, economics and civics as a subject of social science. The syllabus of the higher secondary level is divided into two stages –

core subject and optional subject. In the optional stream, humanities are one of the seven streams, and among eight subjects, history is important.

Kothari Commission divided the school education system into four phases: Primary (I-IV), Upper Primary (V-VII), Secondary (VIII-X) and Higher Secondary (XI-XII). Commission recommended that sociology can be taught in the Upper Primary stage if there is an opportunity. Otherwise, history, geography and civics shall be taught. At the secondary level history, geography and civics should be read as a compulsory subjects, and the commission recommended history as an optional subject at the higher secondary level.

In independent India, Mudaliar Commission proved unfruitful and secondary and higher secondary education was furnished as the recommendation of the Kothari Commission (10+2 level). In 1966 the secondary and 1976 higher secondary education system was started in West Bengal as per the recommendation of the Kothari Commission. History is studied in (VI-X) as a compulsory subject and optional in (XI-XII) in West Bengal.

Principles of Framing Curriculum of History

National Educational Research, Study Council and Framing of Curriculum – the curriculum is the life of education. The quality of education majorly depends on the quality of the curriculum. Generally, the curriculum is framed based on some principles. As subject history has some specialties. So, to frame the history curriculum, some basic principles must be followed. The national council of education, research and training has mentioned some principles in framing the history curriculum. The principles are following -

- There will be central units and central themes in the whole curriculum.
- The curriculum must be well organized and whole.
- The curriculum's theme must vividly contain the combination of past and present.
- The curriculum will be free from aggressive nationalism, provincialism and communal thoughts.
- Through the curriculum, the idea about the life and occupation of man will be presented in a broader sense.
- The curriculum should have the necessary information about present life, country and the world to get the idea.
- The information of the curriculum must maintain age and class.
- The results of recent research must be reflected in the curriculum.

Principles of Framing Curriculum in the light of National Curriculum Framework, 2005

In the sketch of the national curriculum, importance has been given to the study of History as part of social science and it has been said - "History will take into account developments in different parts of India with sections on events or developments in other parts of the world" (NCF, 2005). Some subjective ideas should be introduced in the curriculum so that interrelations can be set up among subjects of social science- History, Geography, Political Science, and Economics and a basic concept can be formed. National Curriculum Framework,

2005 suggests studying political science with history. It also suggests teaching the country's history in the perception of world history and through the important incidents of world history the learners can be altered of human rights and values, and it is necessary to stress on framing curriculum of history. There is an important paternal attitude in the information of social study at present. In such cases, in any historical incident and to discuss contemporary matters women's attitudes must be mentioned in respect of gender equality.

Principles of Framing Curriculum of History

Principles of Co-relation History: History is one of the main parts of social science.

It is said in the National Curriculum Framework, 2005, that some proper subjective ideas should be introduced in the curriculum that makes co-relation among the subjects of social science history, geography, political science and economics.

Principal of Holistic Approach: History is the narrative of above all progress of the life of social human beings in respect of time and place. History is comprehensive, so the curriculum of history will be wide and comprehensive. The history curriculum will reflect the complete form of human life and civilization.

Principles of Dynamic: The genre of History is always changeable. Dynamics is the force of History. Through the way of dynamics, civilization has reached the era of modern information and technology from the barbaric age.

Principles of Objectivity: Objectivity is the other side of cultivation History. The learning and teaching of history is a sensitive matter. That's why the presentation of history is much important. History must be biased less. The biased history causes fear. So special care must be taken to compose the curriculum of history.

Principles of Continuity: Inseparable continuity is a necessary part of history. The flow of history is like the current of the river. It is to be alerted in the time of framing curriculum that the continuity is not hampered in any way. The history theme will be framed into part of ancient, middle and current history.

Based on Aims and Objectives of Teaching History: There are some basic and proper and aims to teach history. A curriculum is a way to reach the aim. To compose the curriculum, the subjects will be framed to full fill the aim. There is a difference between the level and aim of education.

Principle of National Unity, International Understanding and Peace – Besides national needs, international needs will be considered when composing the history curriculum. The curriculums will emphasize revealing nationalism, forming national integrity, expressing internationalism and bringing the world peace.

Principle Social Relevance: The curriculum must consider individual and social needs. History is the incident of the up gradation of social man. The curriculum will have such experience that can satisfy the needs of social and national life.

Principles of Functional Relationship: The curriculum will be inseparable and undivided. It is an organic whole. There will be uniformity in the History syllabus of different levels (VI–XII). The subject matters must have a functional relationship.

Curriculum Should Not Be Free from Overloading: The curriculum will never contain unnecessary and excessive information. Only the legible, historically significant incidents will be in the curriculum. In conclusion, we should take past incidents in the curriculum. Beside information's will be taken from the present and the need of life, as well as the needs of future.

Criteria of Content for Selecting the History Syllabus at Secondary and Higher Secondary Level

The curriculum and syllabus are not similar. Basically, the syllabus is part of the curriculum. The topic of the curriculum is vast rather than the syllabus. The curriculum is a combination of more subjects. Like forming a curriculum, some principles are followed to select the topics. The principles are discussed following.

Learning history has some basic aims. The syllabus is framed on this basis. The subject of the syllabus must be in favour of earning the aim of learning history.

History is the changing course of general development.

The syllabus will become aware of the continuous development.

The syllabus will be composed regarding the level and ability of learners.

History is a major part of social science. So there will be social awareness and social development.

The syllabus will create awareness of history. There will be a central idea to select the topic.

The syllabus must be applicable in the classroom. The syllabus should be formed in a way so that both teacher and student can follow it easily.

History is universal. The syllabus will reflect the whole community of the world, a compact form of human culture.

The country's history will be presented based on world history that will vividly portray interrelation and effect. So national history and world history will not be in a separate way.

In some cases, the same topics are in the syllabus of different classes. So the syllabus's topic will be selected because it is not boring to the learners.

Evaluation of Existing History Syllabus at Secondary and Higher Secondary level in West Bengal.

Report of the Yashpal Committee (1989), the National curriculum framework, 2005, the Right to Education Act (2009) and the constructivism theory are the most important pillars of the modern education system. The reports of the Yashpal Committee emphasize learning without the burden and joyful learning. According to the national curriculum framework 2005, education will be learners oriented, and the teaching process will be constructive. The learners will develop their knowledge by active participation in classroom teaching, where they can amalgamate their previous knowledge and experience with the new learning situation. In this way, they can create new knowledge. The learners achieve the four learning abilities through

learning: knowledge, aptitude, application and skills. The learners can adjust to the environment and be the one of our society through the four parts of learning – i) Learning to know, ii) Learning to do, iii) Learning to live together, and iv) Learning to be. With the above-noted perspective, the West Bengal of secondary education starts a new curriculum and history syllabus in classes VI to XII. In 2007, a new syllabus was introduced step by step in ascending Order. In 2007 the new and concise curriculum was established at the Madhyamik level. In 2011, the History syllabus of class VII was renewed. In 2013-2014, class XI and XII's new and concise syllabus and curriculum started. At very present, the syllabus of classes IX and X is separated, and it has been decided to take the Madhyamik Examination based on class X.

Aim and Objectives of History at the Secondary Level :

From 2007, West Bengal of secondary education starts the new curriculum and syllabus of history for the Madhyamik level. According to the new syllabus of W.B.B.S.E, the aims of studying history at the secondary level are –

- To get an allover idea about the past development of human civilization.
- To realize the causal relationship of past and present activities in sight of the causal relationship of the various activities of the past.
- To get knowledge about the variety and characteristics of mankind of the oldest civilization.
- To get a clear idea about the process of transformation of civilization and the struggles and encounters between man and nature.
- To get an idea about the rise: Fall, and transformation of different countries of the world.
- To acquire general knowledge about the nature of the production system for creating wealth in human society and the position of the laboring community.
- To know the role of the great thinkers and the effect of religion, education and culture in the change of our society.

    "History can't limit in the boundary of country" – This cosmopolitan's feelings have to arise.

    Aim and Objectives of History at Higher Secondary Level in West Bengal

    From the 2013-2014 academic years, the West Bengal council of higher secondary education introduces the new syllabus at the higher secondary level. This syllabus is divided into XI (History of India and World) and XII (Civilization and Country). It is decided that the evaluation process in higher secondary examinations emphasizes the syllabus of XII.

In West Bengal, school education is divided into three stages. These three steps are-

i) Primary stage (I-VIII), ii) Secondary (IX–X), iii) Higher Secondary stage (XI-XII). The higher secondary level is called as 10+2 level. In West Bengal, History is mandatory in the syllabus of X. higher secondary level is specialization. At this level, history is additional. It is considered that most the students who read the history, most of them complete their higher studies in college and university. The average any of learners of this stage is 16–17. This is the pick level of cognitive development. In this stage, the learners can do inductive, deductive, and abstract thinking. So, the learners become mature.

ii) It is essential to set the goals and aims of history reading at a higher secondary level by justifying these matters.

iii) One of the most important aims of learning any subject is to create interest (in their own mind). So the aim of teaching history at prime and secondary levels is to go to its depth and make firm the interest created in their minds.

iv) History interprets primitive peoples' activities according to time and place.

Two main eyes of history are time and place. Teaching history at the higher secondary level aims to strengthen and consolidate the conscience built in the primary and secondary levels.

v) One of the principal aims of teaching history is to help pupils make decisions through argument, debate and analysis. Teaching history means building critical and scientific attitudes in pupils. Pupils should be made interested and forward-looking through old-age experiences and interpretation. Besides the relation between past and present, present and future should be set up.

vi) Universal culture is the donation of human beings in our world. Every country in the world direct or indirectly depends upon the culture, and through the transaction of each other, the cultural society is built in this universe. So creating this concept in students' minds is one of the principal aims of teaching history.

vii) Nothing comes out of nothing/there is no smoke without fire. There are many reasons behind every historical incident. Teaching/learning history aims to introduce students to the law of cause and effect.

viii) Knowledge of social, political and religious problems in the present state should be provided to the pupils. Students must be taught how to obtain the skill of balancing the age-old experience and the possible solution to the present day's problems and to raise the conscience to progress our country.

History is indeed a gradual evolution of primitive people. That's why one of the main goals of learning history is to feed the knowledge of the gradual development of human civilization and culture.

Interrelationship between histoty and various subjects

Now-a-days no branch of knowledge is self-supporting. Rather, various branches are interdependent. This correlation nourishes each branch. As an approved knowledge branch, history is also intrinsically co-related with other branches. In this present age, it is obvious that if one wants to have a realistic concept about this society, he will not have it through individual discussion of various aspects of this complicated societal system. National Curriculum Framework 2005 says that to frame a holistic concept of society, the establishment of co-relation among social sciences such as history, geography, and political science and economics is essential. In fact, history is a special part of social science that deals with the total development of primitive social people. Naturally, history is closely related to other branches of social science (political science, geography, economics, education, anthropology, sociology

etc.) Raymont says, "no subject is ever well understood and no art is intelligently practiced is the light which the others studies can throw upon it is deliberately shut out."

It can be concluded that history is not a separate individual subject. Every subject of the contemporary educational curriculum- literature, different sciences, religion, philosophy, Political Science, Sociology, Education, Economics, Geography, Mathematics, Medical Science, Technology, Agriculture, Industry etc. is included in History. No subject can develop continuously if it excludes history. All didactic subjects are connected with history from the beginning and are the mother to all subjects.

History and Geography

There is a close relationship between History and Geography- two important branches of Social Science. Essayist Pramatha Chowdhury says one must draw a history painting on the canvas of geography. A period cannot be described if it is limited within a span of the boundary of a country. The infinite sky is not limited to geography and continuous time is not limited to history. In fact, history is well established on the ground of geography. To write history script, especially military and diplomatic history, time awareness is as important as place awareness. Herodotus, a father of history, first emphasized the close relationship between history and geography. Eminent French historian Michella thinks history analysis is based on geographical data. He thinks human activities in History will be meaninglessly described if not based on geography. Hence, History, irrespective of time, is impossible as well as irrespective of place.

History and Political Science

There is a close relationship between History and Political Science. These two subjects are too much important and impressive branches of social science. Both deal with human life and various aspects of man's social life. The concept of state has evolved with the evolution of ages. And this evolution has affected the flow of history. In this regard, John Seeley comments- history without political science has no fruit, political science history has no root. Political science affects history because political science affects and controls the path of history. History of any country cannot be complete without the statement of its people's political science because the community's political activities are much more important than many activities.

Relation between Economics and History

History and economics are two important branches of social science. There is a close relationship between them. History deals with the gradual evolution of our forefathers' social, political, economic and cultural life. Economics deals with the nature and patterns of economic activity at various stages of economic development. Economic history is the common domain of history and economics. Professor robbins think economics is concerned with the form and economic history with the substance. German Historical School and Karl Marx established the relationship between history and economics on a strong base. Economist Schumpter emphasized especially the relation of economic history. Comfort thinks, "no theory, no history" i.e., history by economic theory; and economic theory by history. While discussing economic

data, theory and formula of a country, it is necessary to know the country's historical background. Similarly, one should have enough knowledge of economics to know economic activities, economic information and economic condition in different strata's of human development. It is individual's interpretation of those events. Primarily Cognitive theories are that anxiety is maintained by the mistaking of dysfunctional appraisal of some situation leading to the perception of danger.

Ellis (1976) believed that the primary reasons for human distress are some 'core irrational' beliefs. Ellis observed that an individual is happy when he can establish his aim in life and purpose, and then he actively pursues them.

This theory suggests that a faulty History curriculum lacks clear objectives, i.e., which fails to set a clear goal of learning History before the child and a faulty evaluation procedure which fails to make the child know how far he has proceeded towards and how far he is behind the goal, may make the child directionless and help to develop anxiety in History. This theory also suggests that encouragement from the part of teachers and parents to the children in relation to the activities of History may be effective for the betterment of performance and works as a preventive agent of anxiety in History.

Conclusion

History is an important subject at the higher secondary level in the discipline of social science. The present study is related to the attitude and achievement of rural and urban higher secondary school students of History: with special reference to the Midnapore District of West Bengal. It is a quantitative descriptive survey study to ascertain the present study. The researcher used self-made attitude scale toward History for the students to measure the attitude and achievement scores taken from the last board exam. The researcher collected data from class XI students, boys and girls, of rural and urban areas of Paschim Medinipur District of West Bengal and the sample size, was 400. From the findings of the present study, the possible future research directions are mentioned by the researcher regarding the present study. The present study has implications for students, teachers, curriculum developers, parents and administrators. Lastly, students have a positive attitude toward history and are interested in learning history. But there is a need to take positive attention from parents, teachers, and curriculum developers for joyful teaching, learning practice, and motivation.

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Education in The Light of Mathematics

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Abstract:

Here we try to highlight the huge area where mathematics is involved and improved. Without mathematics, we can't even think about many things around us. Mathematics inspires a person to study and gives freedom of thinking. Mathematics provides an effective way of building mental discipline and encourages logical reasoning and mental growth. In addition, Mathematics can give a clear idea about the other subject also. Mathematical knowledge plays a crucial role in understanding the contact of other school subjects such as science, social studies, and even music and art.

"Mathematics is the language of all science". To feel and understand the present situation of the whole department of Science, Mathematics is very helpful. To be the language of science, for any presentation, we need mathematical tools to express what we want to represent. In addition, mathematics provides foundation knowledge and skills for other subjects.

Doing mathematics and solving Mathematical problems increases solving ability and patience, which is also useful in our own life. By increasing patience, concentration power also increases. In addition, solving problems regularly trains our minds to be disciplined. To succeed in life, there is a strong need to develop mathematical thinking, which gives creative thinking and reasoning skills. The development of such skills will have significant positive effects on our life..

Introduction:

"Truth and beauty are the same only in Mathematics", that's the way one can describe Mathematics. Mathematics is the study of measurements, numbers, and space, one of the first science humans want to develop because of its great importance and benefit. The origin of the word "Mathematics" is in Greek, which means tendencies to learn. Many branches of Mathematics in science are related to numbers, including geometric forms, abstract forms, algebra, and others. There are many mathematical equations used in our daily life without realize. Mathematics plays a vital role in all aspects of life, almost in every matter of life. Mathematics involves time tracking, driving, riding, exercising, drawing, cooking, or jobs such as accounting, finance, banking, engineering, doctor, magician and software. For this strong mathematical knowledge is used. Again, mathematics is essential for any experiment by a scientist. Mathematics is a language that describes scientists' work and achievements.

As for mathematical inventions, they have been numerous throughout the ages. When there are no medicines or engineers who can advance technology, they throw numbers onto whiteboards using concepts laid out by mathematicians, sometimes centuries earlier. Some of them were tangible, such as counting and measuring devices. Some of them are not as tangible as methods of thinking and solving. Symbols expressing numbers are also one of the most important mathematical inventions.

The contemplation of the various steps by which mankind has come into possession of the vast stock of mathematical knowledge can hardly fail to interest the mathematician. He takes pride in that his science, more than any other, is an exact science, and that hardly anything ever done in mathematics has proved useless. The chemist smiles at the childish efforts of alchemists, but the mathematician finds the geometry of the Greeks and the arithmetic of the Hindoos as useful and admirable as any research of today. He is pleased to notice that though mathematics has had periods of slow growth, in the main, it has been pre-eminently a progressive science.

Mathematics helps in analytical thinking. While solving maths problems, data are collected, disassembled, and then interconnected to solve them.

- Mathematics helps to develop the ability to think.
- Statistics in sports.
- It helps explain how things work.
- Consider the mathematics of domestic tasks.
- Understanding sports.
- Identify symmetry in the world, both natural and constructed.
- It helps to develop wisdom.
- It increases the speed of intuition.
- Weather tracking: e.g., measuring and graphing rainfall.
- Balancing the checkbook.
- It helps to make the child smarter.
- Identifying growth and patterns in nature: e.g., branching trees, leaf patterns.
- Figuring out distance, time and cost for travel.
- Money can be collected in mathematics when used as a profession.
- Understanding loans for cars, trucks, homes, schooling or other purposes.
- Mathematics of music: keeping the beat, recurring patterns, comparing pitches
- It is important in a constantly evolving world.
- It provides the child with an opportunity to get to the world.

Mathematics in Our Everyday Life

Mathematics is the pillar of organized life in the present day. Without numbers and mathematical evidence, we cannot resolve any issues in our daily lives. There are times, measurements, rates, wages, tenders, discounts, claims, supplies, jobs, stocks, contracts, taxes,

money exchange, consumption, etc., and in the absence of these sports data, we have to face confusion and chaos.

Thus, mathematics has become the companion of man and his helper since the beginning of human existence on earth. When man first wanted to answer questions such as "How many?" he invented math. Then algebra was invented to facilitate calculations, measurements, analysis, and engineering.

The science of trigonometry emerged when humans wanted to locate high mountains and stars.

Therefore, the knowledge of this article arose and developed when humans felt the need and mathematics are necessary for the long planning of life and also the daily planning of any individual.

Although the importance of Mathematics can never be denied, a general fear of dealing with math exists in students worldwide.

Most people nowadays grapple with the calculations, as they find them too tough to handle.

Moving from specific to general, it has a host of calculators dealing with physics, chemistry, general arithmetic's, and many more.

So, students of various disciplines can use this website to solve their math's-related problems without any hassle.

Mathematical rapprochement is necessary for any process, so if anyone wants to reach the height of his life, he should not fail to believe in the role of mathematics in his life, starting with the ordinary citizen. Every day has a daily interest in mathematics.

Mathematics is deeply related to the natural phenomenon, the way to solve many secrets of nature.

Mathematics is necessary to understand the other branches of knowledge. All depend on mathematics in one way or another. There is no science, art, or specialty except mathematics was the key to it. The discipline and mastery of any other science or art are very much related to the size of mathematics.

The Most Important Uses of Mathematics

I think it is impossible to limit the uses of mathematics in everyday life, so we will suffice with some of them:

Can you use any entertainment game without using numbers?

Can you practice any sport without using numbers to learn if you are a winner or a loser?

Can you do your work without using numbers? If you are a teacher, collect your students' marks or a doctor, estimate the amount of medicine for the patient or an engineer, estimate the amount of raw material to be added to complete the work or even a leader in a battle.

Can you enter the store without using the numbers?

Can prayers be organized without using numbers, and what is left of the time for the next prayer?

And much more, whatever you try, you cannot eliminate the use of this important science.

The importance of mathematics is that it is a method based on research and analysis to reach the desired results and is used for calculation and presentation of data; not only the use of this science in a particular field but the use of all areas of life and different sciences.

The Uses of Mathematics in Practical Life

Mathematics is important for all professions in the world. Every aspect of life is highly dependent on the use of numbers and arithmetic. Math is the language of science. It is used to develop the rest of science and interpret its theories, especially physics, chemistry, astronomy, geography, etc. It enables thinkers to test their ideas by doing many experiments.

History of mathematics

"I am sure that no subject loses more than mathematics by any attempt to dissociate it from its history."-J. W. L. Glaisher. The history of mathematics may be instructive as well as agreeable; it may not only remind us of what we have but may also teach us how to increase our store. Says De Morgan, "The early history of the mind of men concerning mathematics leads us to point out our own errors, and in this respect, it is well to pay attention to the history of mathematics." It warns us against hasty conclusions. It points out the importance of a good notation regarding the progress of science. It discourages excessive specialization on the part of investigators by showing how distinct branches have been found to possess unexpected connecting links. It saves the student from wasting time and energy on problems that were, perhaps, solved long since. It discourages him from attacking an unsolved problem with the same method, which has led other mathematicians to failure. It teaches that fortifications can be taken in other ways than by direct attack. When repulsed from a direct assault, it is well to inspect and occupy the surrounding ground and discover the secret paths by which the apparently unconquerable position can be taken [1]. The importance of this strategic rule may be emphasized by citing a case in which it has been violated. An untold amount of intellectual energy has been expended on the quadrature of the circle, yet no conquest has been made by direct assault. The circle-squarer's have existed in crowds ever since the period of Archimedes. After innumerable failures to solve the problem at a time, even when investigators possessed that most powerful tool, the differential calculus, persons versed in mathematics dropped the subject, while those who still persisted were completely ignorant of its history and generally misunderstood the conditions of the problem. "Our problem," says De Morgan, "is to square the circle with the old allowance of means: Euclid's postulates and nothing more. We cannot remember an instance in which a question to be solved by a definite method was tried by the best heads and answered at last, by that method, after thousands of complete failures." But progress was made on this problem by approaching it from a different direction and by newly discovered paths.

History of Indian Mathematics:

Existing oldest known mathematics textbooks are Baudhayana (600 BCE), Manava (750 BCE), Apastamba (600 BCE) and Katyayana (200 BCE), which form part of later Vedic Sutra era literature. This scripture includes the famous theorem that is common to Pythagoras. Āryabhaṭa I (born 476) clearly state his connection with Kusumapura (Pāṭaliputra, modern Patna in Bihar), which had been the imperial capital of the Guptas for much of the 4th and 5th centuries. Some of the great names of the era are Bhāskara I (around 600 AD), Brahmagupta (about 598 AD), Mahāvīracārya (about 850), Aryabhata II (950 AD), Śridharacārya (about 991 AD), Śripati (about 1000), Bhāskara II (about 1114 AD), Nārāya (about 1350), Mādhava (about 1350), Nīlka (1500) and Jye Hadeva (about 1550). In the Middle Ages, many mathematical kinds of literature grew in Arabic and Persian, allowing inseminating the efforts of the two cultures mutually. Long ago, Indian math knowledge traveled the west through the Middle East; thus, the concept of zero and place value left a mark there (Gunatilake, 1999). By the 18th century, Western astronomical knowledge began to influence indigenous people's ideas. Sawai Jai Singh II showed considerable interest in development in this western region (Ghori, 1980, Rahman, 1989). With the emergence and expansion of European imperialism in Eastern Europe, Western mathematics reached India in various ways through trade, Western education of national support, science, investigation and so on. In the subcontinent, indigenous learning institutions collapsed with the collapse of indigenous peoples patronizing them. This paved the way for the expansion of western science in India (Kumar, 1991). Nevertheless, since India has used traditional methods of weight, space, time and astronomical activity that are still prevalent in the country, millions of people use traditional mathematics in their daily lives (Dharampal, 1971). Although not so soon in the period of this study, India produced a mathematical genius in Srinivasa Ramanujan (1887- 1920) (Kanigel, 1991). Many other things were impressively rooted in mathematics when the Second World War broke out (Seth, 1963; Jaggi, 1984). Modern mathematics influenced indigenous mathematics during colonial rule in India. During the Second World War, as the state budget was drastically cut, most of the basic subjects in academics, including mathematics, lost priority to the urgent necessities of the war. Yet, the Indian mathematicians continued to do appreciable work in several branches of mathematics. Some of them were K. Anand Rau (1893-1966), S.S. Pillai (1901-1950), S. Chowla (1907-1995), T. Vijayaraghavan (1902-1955), K. Chandrashekharan (1920-1995), and S. Minakshisundaram (1913-1968) (Seth, 1963). The indigenous interest and achievements in mathematics in the past must have fuelled their urge additionally.

Greek mathematics:

The birth of Greek mathematics owes its impetus to the influence of some of its neighbours, especially Egypt. During the 26th Dynasty of Egypt (c. 685–525 BCE), the ports of the Nile were opened to Greek trade for the first time and important Greek figures such as Thales and Pythagoras visited Egypt bringing with them new skills and knowledge. Ionia, in

addition to Egyptian influence, was exposed to the culture and ideas of Mesopotamia through its neighbor, the kingdom of Lydia.

Some centuries later, during the Hellenistic period, Greek astronomy flourished after Alexander the Great conquered the East. The astronomical knowledge of Babylonian and Chaldean culture became available to the Greeks who profited by exploiting it systematically. This led to the advance of many Greek mathematical tools, such as the use of a numeral system with 60 as its base, which allowed the Greeks to divide circles into 360 degrees. The use of 60 as a base of a mathematical system is not a minor issue: 60 is a number that has many divisors (1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60), which makes it easier to deal with calculations involving fractions. How is it that the Greeks managed to advance their mathematical knowledge to the point that it became superior to the Egyptians, a civilization far older? As early as 3500 BCE Egyptian (and also Babylonian) calculations were the finest in the world. Egyptians used their mathematical knowledge largely for engineering purposes; without it, building the great pyramids and other breathtaking monuments would have been impossible.

The Greeks derived from Egyptian mathematics mainly rules of thumb with specific applications. Egyptians knew, for example, that a triangle whose sides are in a 3:4:5 ratio is a right triangle. This was because, to form right angles, the practical-minded Egyptian land surveyors used a rope divided into twelve equal parts, forming a triangle with three parts on one side, four on the second side, and five on the remaining side. The right angle was to be found where the three-unit side joined the four-unit side. This was a very practical method to form right angles. How Egyptians came up with this method is not recorded. Neither do we have Egyptian records on further analysis related to this issue. The Egyptians were too practical to be concerned with analyzing this in detail. Apparently, their interest went no further than the practical application of this method. A Greek native from Ionia looked at this 3:4:5 triangle and saw in it what nobody else seemed to have noticed. His name was Pythagoras, and he stretched this 3:4:5 triangle issue to its logical limit, triggering an intellectual revolution.

Pythagoras (c.571 - c.497 BCE) was the leader and founder of a particular movement whose followers were known as the Pythagoreans. The members of this school were convinced that the universe could be described in terms of whole numbers: 1, 2, 3, 4, etc. Based on the 3:4:5 triangle known to the Egyptians, Pythagoras came up with a mathematical theorem that bears his name: that, in a right triangle, when the areas of the squares erected on the two smaller sides were added together, they equaled the area of the square erected on the longest side, the side opposite the right angle (the hypotenuse). It is important to note that the Greeks originally stated this theorem regarding geometric objects instead of numbers. The beauty and harmony that the Pythagoreans found in mathematics were so powerful that Greek science was eventually contaminated with a strong mathematical bias. In other words, the Greeks came to believe that deductive reasoning, which was incredibly successful in mathematics, was also the only acceptable way of obtaining knowledge in every other discipline. The observation was undervalued, a deduction was made king, and Greek scientific knowledge was led up a blind

alley in virtually every branch other than exact sciences. This overestimation of mathematics can be seen in a quote from Galen: "Whereas time causes grief and other emotions to alter and cease, when has the mere passage of time ever persuaded anyone that he has enough of "twice two are four" or "all radii of a circle are equal" and made him change his mind about such beliefs and give them up? (Galen, *On the Doctrines of Hippocrates* and Plato 4.7.43)"

BABYLONIANS mathematics:

The fertile valley of the Euphrates and Tigris was one of the primeval seats of human society. Authentic history of the peoples inhabiting this region begins only with the foundation, in Chaldea and Babylonia, of a United Kingdom out of the previously disunited tribes. Much light has been thrown on their history by the discovery of the art of reading the cuneiform or wedge-shaped system of writing. In the study of Babylonian mathematics, we begin with the notation of numbers. A vertical wedge 'ᴠ' stood for 1, while the characters 'ᴠᴠ' and 'ᴠᴠᴠ', signified 10 and 100, respectively. Grote fend believes the character for 10 originally to have been the picture of two hands, as held in prayer, the palms being pressed together, the fingers close to each other, but the thumbs thrust out. In the Babylonian notation, two principals were employed-additive and multiplicative. Numbers below 100 were expressed by symbols whose respective values had to be added. Thus, '<' is stood for 1, '<<' is stood for 2, '<<<' is for 3, '<<<<' is for 4. Here the symbols of higher order always appear to the left of those of lower order. In writing the hundreds, on the other hand, a smaller symbol was placed to the left of the 100, and was, in that case, to be multiplied by 100.

Use of Mathematics in Daily life:

"There is always math around us. It's in the design of what we're living in, in the schedule of our day, in the structure of how we organize our lives," says Joan Moss, Professor Emeritus at the Dr. Eric Jackman Institute of Child Study, OISE/UT. The universal language, Mathematics, is applied in almost every aspect of life. In every step, we go ahead, using math consciously or subconsciously. There are many more reasons to study and be aware of mathematics's importance in daily life. Mathematics is as important for us as oxygen. No matter how boring or difficult it is to study math, it's one of the most crucial elements for us to live our life. It will be harder to survive if you don't know the universal language properly. Therefore, all of us must pay due attention to this subject. As time goes on, more and more mathematics that is done, both in academia and industry, is discrete. "Start by listening to the kinds of questions children are asking or for the comments they are making and start noticing math links. You may be surprised," says Julie Comay, former Kindergarten teacher and current faculty at the Dr. Eric Jackman Institute of Child Study, OISE/UT. "As soon as you start paying attention, you'll just start noticing more examples. And children will respond to your interest by redoubling their mathematical preoccupations. Math becomes a new lens through which to view our world."

In construction:

Planning to construct a new building, calculating costs and profit, required materials as well as the duration of the project need to be Calculating the required materials, geometry, measurement. Therefore, math is an important part when it comes to any construction work.
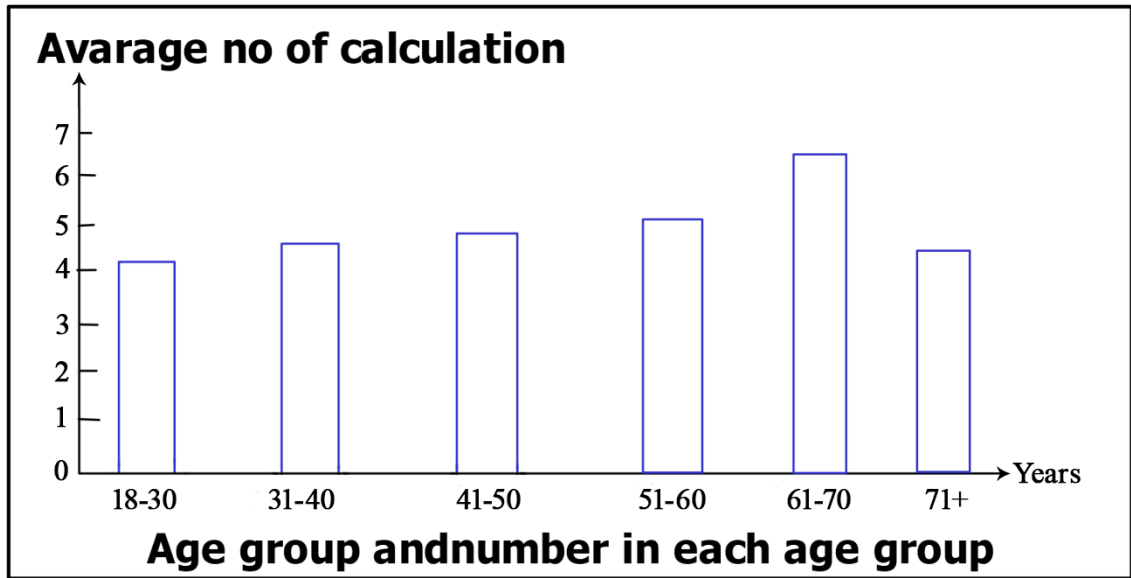
Budgeting

How much will this shirt or blouse cost once the 50% sale is applied? What about once the taxes are added? Do you prefer to gather your things and hope for a great deal at the cash counter? Or know the price before heading there.

That takes math knowledge and a basic understanding of how percentages work.

Managing Money

Your teen will learn skills in algebra class that will help them with money. One important skill they will learn is how to calculate interest and compound interest. Your teen can use this skill to manage their money now and when they grow up. This skill also will help them pick the best bank account. It will also help them decide which credit card is best to have. People who take out loans need to understand interest. It will also help them figure out the best ways to save and invest money.

Art:

Art is born of the attempt by humans to express themselves about the experience of life. Art can take the form of writing, painting, and sculpture, as well as a variety of other forms of expression. There is art in combining function and aesthetics in everyday objects like plates, cutlery, and lamps. Mathematicians have been able to assist artists by creating "tools" of various kinds for them. Such tools sometimes consist of theorems that show the limitations of what artists can do. For example, one cannot attempt to represent more than 5 regular convex

polyhedral in Euclidean 3-dimensional space because mathematics shows there are only 5 such regular solids. Dodecahedra can be used to put one month of a calendar on each face, but the number of faces of a regular convex polyhedron in Euclidean 3-space is 4, 6, 8, 12, or 20. There can be no others.
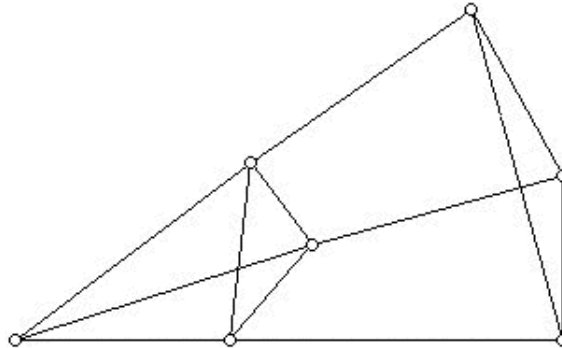

Maths allows you to travel safely:

Maths comes in pretty handy when traveling. Most of us won't realize this because we do these things intuitively. But, if you think about it, when you travel, Maths always comes with you. To go anywhere, you'll need to estimate the amount of fuel you'll need to plan out a trip based on miles per hour and distance traveled. A big one is calculating fuel usage, especially for long-distance travel. Without it, you may be stranded or on the road for much longer than anticipated. Maths can come in handy on your trips by paying for tolls, counting exit numbers and checking tire pressure. Maths can be particularly useful when going on holiday abroad! When you travel outside the UK, you often have to change your money to the currency of the country you're visiting. So, to make your life easy, there is a super simple maths equation to work this out. To change British money to foreign money - multiply by the exchange rate.

In Computer Science:

Computer scientists have to be fluent in the language of computers, and that language is math. Success in this field requires critical thought, abstract reasoning, and logic-all of which are mathematical ways of thinking. Understanding the facts and figures of math are also essential for any computer science job. For example, to build a self-driving car, a computer programmer must be able to use mathematical equations to program turns, acceleration, emergency braking, etc. For all these reasons, most jobs related to computer science require an in-depth knowledge of math, which you can acquire in advanced math courses offered as part of your major requirements. Mathematics teaches the usage of algorithms, which helps to develop logical thinking. Analytical thinking, which breaks down problems from unknown to known, can be quickly achieved through mathematics. Random numbers are used for simulation, cryptography, and some other areas. The way these random numbers are generated is purely mathematical. These random numbers are used in data encryption. Computers run

software and store files. The software and files are both stored as huge strings of 1s and 0s. Binary math is discrete mathematics.
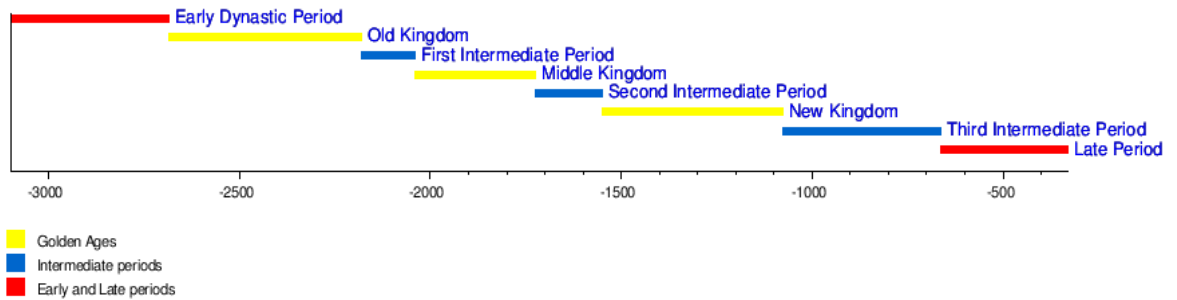
Conclusion:

Then we see that in our daily life, or our professional life, Mathematics is an essential part. Mathematics is of practical value in many professions. In The word of Albert Einstein, "as far as the law of Mathematics refers to reality, they are not certain, and as they are not certain, they do not refer to reality". So, we have to utilize the very useful subject as much as possible to ensure development. With the help of pure mathematics, many bright possibilities are hidden. So, we need to be proactive to capture those. There should be enough facilities and encouragement, especially funding facilities.

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HOW TO CITE

Effective Utilization of Digital Resources for Undergraduate in Technical Education Through Flipped Learning

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Abstract:

The present paper substantiates flipped learning as one of the improvised and improved learning techniques taking into account different interpersonal and social parameters, e.g., communication skills, group discussion, leadership quality, course duration in terms of working hours in respective subjects, digital resources for teaching etc. Following the Washington accord, noticeable differences are observed in terms of the active participation of students throughout the continuous evaluation process. The quality of content is modified according to the need of the hour, and feedback is taken at the end of the course in terms of method of delivery, clarification of concepts, and teaching of subject matter. Improvement in performance is reflected in some particular courses through overall University grading and the increase of attendance and enrichment of communication ability, whereas interpretation deteriorated in mathematics-based engineering science papers. Outcomes are statistically computed assuming the availability of undisrupted internet sources at each student's home. One point implicated while making the factual graphs is that the entire outcome depends on the student's preparation day-by-day. On the other hand, all the screencasts the faculties share are well-organized, so self-learning is not problematic. Apart from these statistical assumptions, results are very significant and justify the implementation of flipped learning.

Introduction:

The present proposal deals with the performance improvement of the biggest stakeholders of any undergraduate technical Institution through the flipped learning process by partially replacing the conventional input-output-based system, and the result is reflected through the acceptability of the end-products in the industrial market and also in the higher education sector. The persistent problem of the presently adopted conformist system is the lack of interaction between the humans at either side of the tables, which not only creates a negative impact on the semester-wise academic performance of the students, but also reflected through lack of innovativeness while making the projects and designs (Zhang *et. al.,* 2016, Creswell 2012). Attitude difference from the point of view of both learner and facilitator marks a negative outcome, which introduces a few novels and innovative concepts from the pedagogical aspects (Bhargav *et. al.,* 2016, Carini *et. al.,* 2006). A few suggestions were proposed and implemented on an experimental basis by a few great educationists (Delialioglu 2012, Walder 2014, Maaloul *et. al.,* 2016) about a decade ago, and further modifications are made to those

earlier models e.g., Activity Learning (Hussain *et. al.,* 2011), Adaptive Learning (Liu *et. al.,* 2011), Flipped Learning (Hamzah *et. al.,* 2017). The last is found to as the most significant and promising from the point of view of students' performance which is obtained based on a comparative analysis with the input-output-based system. Also, the facilitators' feedback is considered for further revamping and implementation of the process for better achievement.

The flipped classroom is a new innovative pedagogical model mostly applicable to a theoretical class where lecture sessions and assignment elements are reversed both in the context of location and duration (Butt, 2014, Enfield 2013, Gilboy *et. al.,* 2015). In this methodology, instead of delivering conventional lecture materials at lecture theatre, video lectures /presentations of specific contents are delivered to all the students before the assigned class (Baepler *et. al.,* 2014), and classroom timing is allocated for discussion with peers and professors, and also for solving assignments. This inversion of pedagogical is technically termed "flipping", where 'home' is converted into the traditional classroom with a 1:1 facility, and the physical classroom is used for concept development and enhancement of problem-solving ability. Therefore, a classroom with this technique is now converted into an area for the extension of learning instead of understanding the basics. This methodology is also termed as utilizing classroom timing into a higher level of cognitive skills [as per the Boom's taxonomy].

Research Methodology

In order to implement the flipped learning technique, we consider the first-year batch. We consider the fact that all students have a standard internet facility, and for particular cases, they may get the facility to form the Institute outside the stipulated class hours. Next, a lesson plan for each course is made with smaller sub-modules, and available video lectures are identified. Those lectures are mostly considered from the SWAYAM platform. After selecting the courses, all students are either provided the links for respective course modules of respective subjects, or the downloaded videos are handed over to the students who do not have a very good internet facility till that time.

After the distribution of video lectures, smaller groups of students are allocated for each class. The classes are conducted as a doubt-clearing session. Students are encouraged to ask questions, and the think-pair-share methodology is applied within the class. This will help students to solve problems on their own. Students are given assignments in class and encouraged to solve them themselves. This part is termed as 'Think'. Once solutions are obtained, they are distributed in several groups to discuss the solutions, known as 'Pair'. Finally, the correct solutions are shared among all the students of the class ('Share').

Laboratory classes are also conducted similarly. For software-based labs, experiments and assignments are distributed along with sufficient video links for understanding, and the same 'Think-Pair-Share' strategy is adopted. But the method is not applicable entirely for hardware laboratory classes. Compatible video links with demonstrations are shared, but that seems insufficient for all students understanding. There lies the provision for improvement.

Present Work

The authors have conducted an extensive study at JIS College of Engineering [www.jiscollege.ac.in], an Engineering College in INDIA, and flipped learning method is applied to the 1st-semester students in 4 (four) different disciplines. Different internal and social parameters are considered input variables, e.g., syllabi, course duration in terms of working hours in respective subjects, human resources for teaching etc. The noticeable difference is substantiated in terms of active participation throughout the continuous evaluation process. The quality of content is modified according to the need of the hour, and feedback is taken at the end of the course in terms of method of delivery, clarification of concepts, and teaching of subject matter. Performance improvement is reflected through the overall University grading system and the increase in attendance and enrichment of communication ability. The encouraging result is the driving force for further implementation of the strategy in the coming semesters assuming the cons non-availability of undisrupted internet sources at each student's home. One point assumed while making the factual graphs is that the entire outcome depends on the student's preparation, and we assume that all the students have prepared their lessons quite well daily. We also assume that all the screencasts shared by the faculties are well-organized so that self-learning is not a problematic factor. Apart from these statistical assumptions, results are very significant and justify the implementation of flipped learning.

Results and Discussions

Based on the data available, we have computed results for three courses for the 1st-semester students, one in basic science, one in humanities, and one in engineering science. We have taken data for two consecutive years, 2016 and 2017. It may be mentioned that data for 2016 is obtained when teaching-learning is carried out in conventional input-output method; flipped learning was adopted in 2017. We have categorized the students' performances following the grades division provided by the University. A comparative study is performed to estimate performance improvement. It is found that improvement is vividly noticeable for a few courses, whereas performance is vividly noticeable, whereas performance has slightly deteriorated for a few papers. Following curriculum and syllabi analysis, it is noticed that papers that required a solid mathematical foundation have not been accepted through flipped learning to date. In contrast, students feel flipped learning comfortable for subjects less mathematical or subjects related to humanities. Fig 1a, Fig 1b, and Fig 1c show the remarkable progress in student performance for three subjects, whereas Fig 1d, Fig 1e and Fig 1f show deterioration of results. For clarity purposes, we mention the name of the papers corresponding to the paper codes used in the graphs:

CH101: Chemistry-I

PH101: Physics-I

HU101: English for Communication

EC101: Basic Electronics engineering

EE101: Basic Electrical Engineering

ME101: Mechanical Engineering

M101: Mathematics-I

The comparative study is graphically represented in Fig 2.
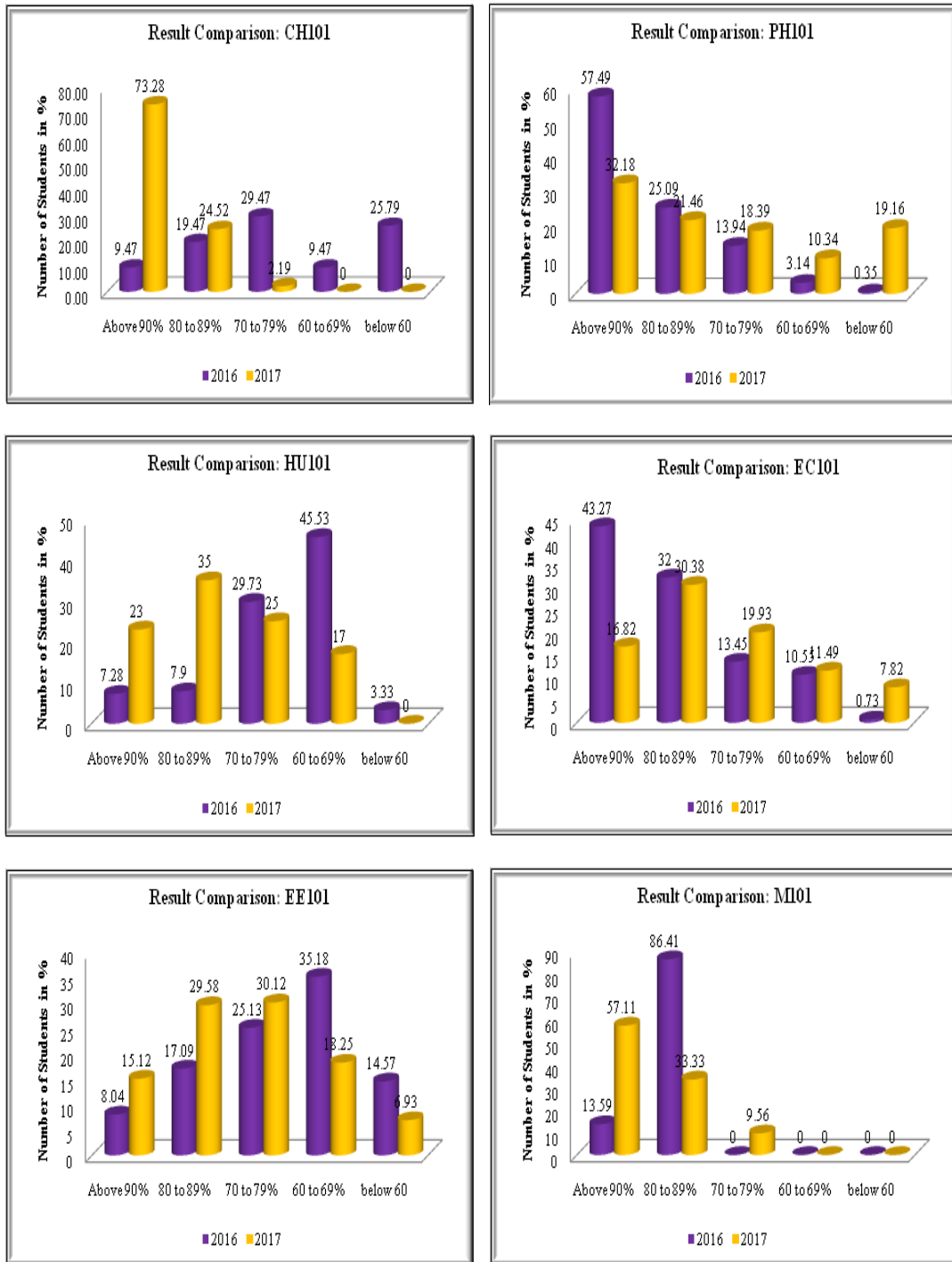

Fig 1: Comparative analysis for results in the paper [a] CH101 for 2016 and 2017, [b] HU101 for 2016 and 2017, [c] EE101 for 2016 and 2017, [d] M101 for 2016 and 2017, [e] PH101 for 2016 and 2017 [f] EE101 for 2016 and 2017

Table 1 presents a comparative analysis of student's results under conventional teaching learning mode and flipped mode. Conventional teaching-learning mode was followed in 2016, while flipped teaching was introduced in the year 2017. The subjects (paper code) considered for the survey are CH101, PH101, M101, HU101, EE 101, EC101, M101 i.e., 7 different subjects were considered for comparative analysis. The percentage of marks is segregated as

1. Above 90%

2. 80-89%

3. 70-79%

4. 60-69%

5. Below 60%

Fig 2 is the pictorial representation of Table 1. Table 1 shows that students have far better results (above 90%) for CH101, M101 and EE101 in flipped teaching mode. For PH101 and EC101, the result is reversed. For the other papers like ME101 and M101, the results are not yet conclusive, and we have to analyze data for a further 2-3 years. It is also found that for a few papers, namely, PH101, EC101 and ME101, the conventional teaching-learning mode has more students in the above 90% category than flipped teaching mode.

Table – I: Comparative Analysis of Student's Result under Conventional teaching-learning mode (2016) and Flipped mode (2017)

|	CH101		PH101		M101		HU101		EE101		EC101		ME101	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Above 90%	9.47	73.28	57.49	32.18	13.59	57.11	7.28	23	8.04	15.12	43.27	16.82	53.13	23.45
80 to 89%	19.47	24.52	25.09	21.46	86.41	33.33	7.9	35	17.09	29.58	32	30.38	37.29	44.74
70 to 79%	29.47	2.19	13.94	18.39	0	9.56	29.73	25	25.13	30.12	13.45	19.93	9.58	7.1
60 to 69%	9.47	0	3.14	10.34	0	0	45.53	17	35.18	18.25	10.55	11.49	0	0
below 60%	25.79	0	0.35	19.16	0	0	3.33	0	14.57	6.93	0.73	7.82	0	5.29
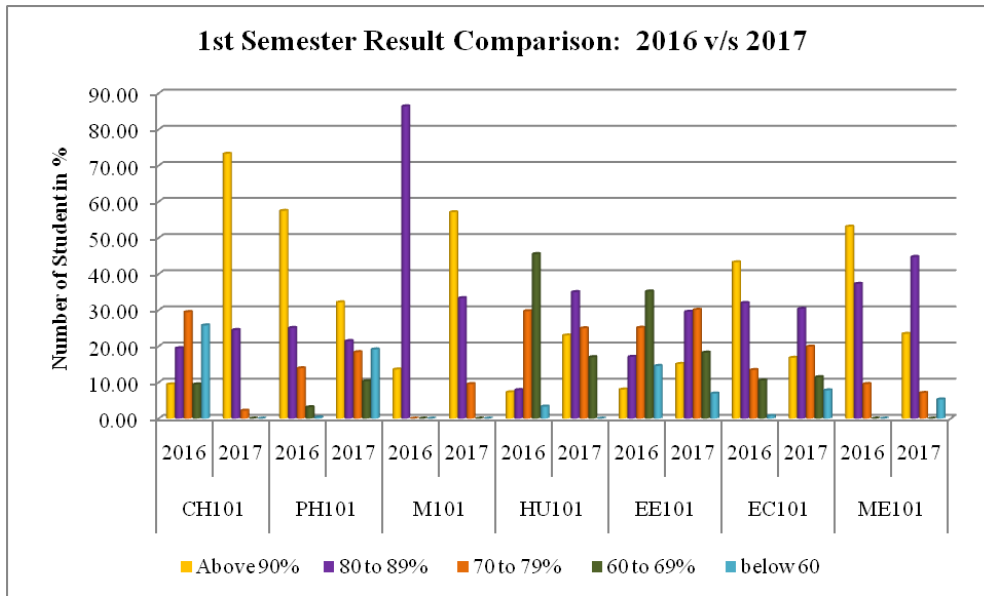
Fig 2: Comparative analysis for seven (7) different papers in 2016 and 2017

Next, we analyze the response of the biggest stakeholders based on the flipped teaching methodology. We have divided the summative response by four major parameters like [i] Quality of Content, [ii] Delivery, [iii] Clarification of Concepts, [iv] Teaching the Subject Matter. Also, we have considered and given due weight to the overall experience. Finally, data is taken for both batches, and the result is represented graphically in Fig 3.
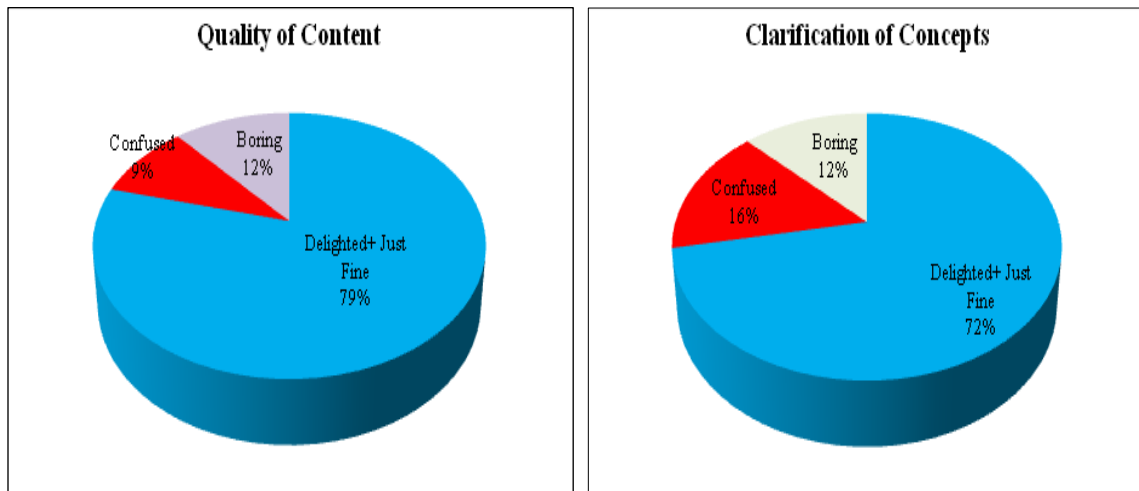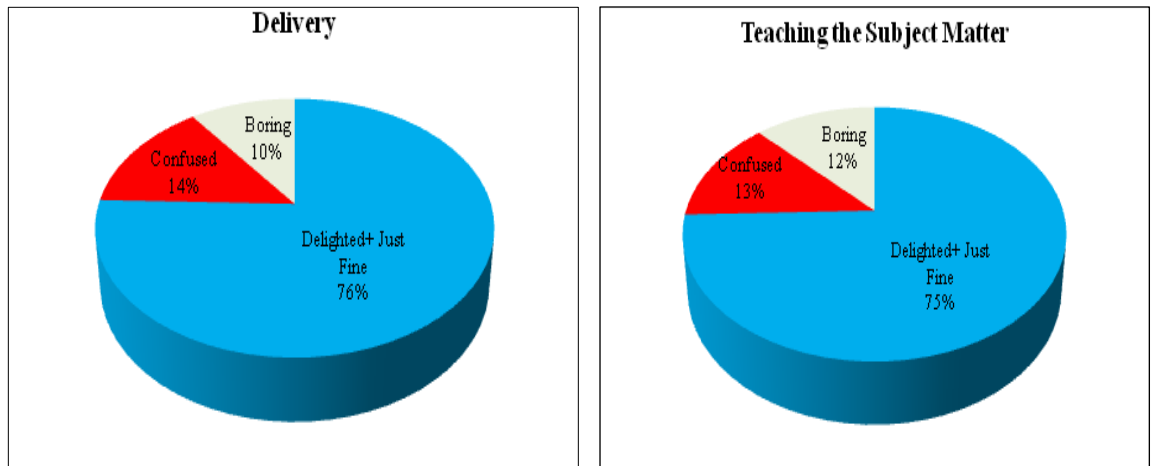
Fig 3: Graphical analysis of different feedback parameters: [a] Quality of Content, [b] Clarification of Concepts, [c] Delivery, [d] Teaching the Subject Matter

In table II, feedback analyses of students are given with three different satisfaction levels delighted, confused and bored. The parameters used in the analysis are quality of content, delivery, clarification of concepts, teaching the subject matter and overall experience. It can be seen from the data that in most of the parameters, the percentage of delighted students are more than 70%, and in most of the parameters, the percentage of bored students is less than 10%. Data are taken for around 1000 students. Students' feedback is most delighted in percentage with respect to the quality of content. The satisfaction level is delighted in the parameter of students' overall experience is 72%. It can be stated that flipped learning has changed the learning scenario, which enhanced the teaching-learning experience. When flipped learning was introduced, the percentage of bored and confused students was minimized. The parameters in which the percentage of delighted students increased at the maximum rate are quality of content, delivery, teaching the subject matter and overall experience.
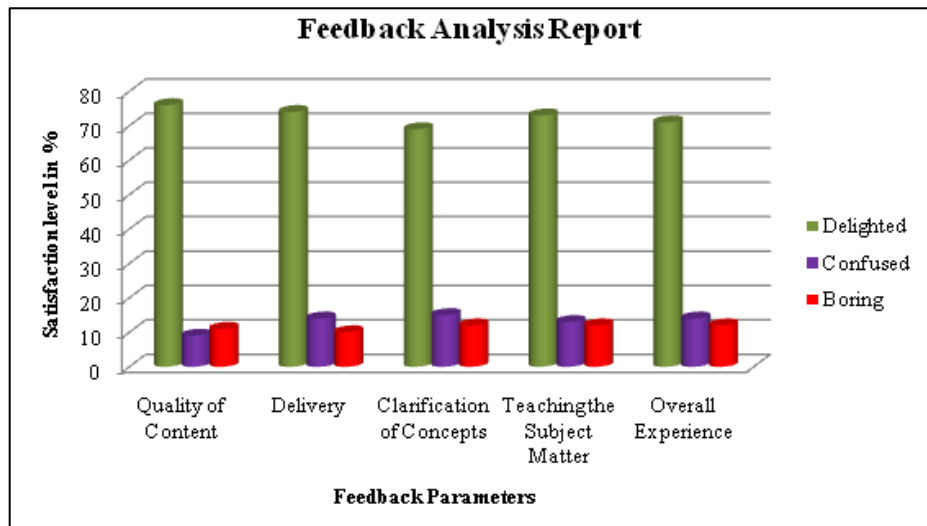

Fig 4: Comparative analysis of different feedback parameters

Table – II: Comparative Analysis of Student's Feedback under Flipped mode (2017)

Parameters	Delighted	Confused	Boring
Quality of Content	76	9	11
Delivery	74	14	10
Clarification of Concepts	69	15	12
Teaching the Subject Matter	73	13	12
Overall Experience	71	14	12

Conclusion:

A detailed analysis is carried out over two consecutive batches for identical subjects in an Engineering Institution, where one batch is subjected to conventional teaching-learning mode. In contrast, the other is obtained when flipped learning is implemented. The comparative analysis gives a mixed degree of performance. While the papers with less mathematical modeling are successful for the newly adopted technology, the core engineering papers involving detailed mathematics provide just the opposite response. One point may be noted in this context that while analyzing, we have assumed that all the students should have identical facilities of receiving uninterrupted internet supply. We further assumed that statistically, all the students prepare themselves before the commencement of any class. The total result also suggests that for a few papers where mathematics has an integral part, the introduction of flipped learning may not lead to a fruitful outcome. Thus flipped learning procedures may be implemented in technological campuses where the choice of subjects sets the path of adaptation.

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CHAPTER

8

Physics Education to Develop the Society and Education

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Abstract:

Wild humans' journey to becoming social beings is based on their understanding of physics. From the use of fire to the use of 5G, physics is the torch bearer. Without physics, the human world is immovable today. The study draws society's attention to the importance and development of physics from the very beginning of the human species to today's superfast age of globalization. In the later part of the study, the matter of discussion is how Bengal has participated in developing the Physics study in time spaces. The development of Physics can contribute to society and the nation. Hence, it is prescribed that physics teaching from schools to universities, from science seminars to space research, should get more importance and dedication as physics is the torchbearer of educated human society.

Introduction:

Modern society is dependent on advanced technology. The public faces the same from purchasing energy-efficient air conditioners to legislative decisions regarding nuclear power plants. Almost all technology is based on scientific principles, and imparting a variety of technical knowledge, and scientific literacy are the most important contributions of the physics community. The involvement of diverse students at all levels is critical to this mission.

Physics education at all levels will focus on creating scientific leadership and a technically trained workforce. Advancement in the physics curriculum is an important part of science education. They are one of the best ways to provide information to society for making scientific decisions and providing technical training to create modern human resources.

The Journey of Physics :

The journey of wild humans to become social beings is based on their understanding of physics. The man understood the law of fire when they noticed the friction in the dry woods and the emergence of a forest fire. But research indicates the history of technology begins even before. Sharp flakes of stone were used as knives, and larger unshaped stones were used as hammers and anvils 3.3 million years ago and thus were likely used by modern human ancestors such as Australopithecus. When man first used fire is still not definitively known, but it was probably invented 1.5 million years ago. Evidence of burnt material is found in caves,

which are more than 1 million years old. So, wild species of modern human beings have unknowingly begun their journey through the understanding and application of physics.

In the Neolithic Period, the journey of the modern human being begun simultaneously with the development of physics. The man moved from getting their food by foraging to farming. Men started living together in groups. Wearing began to be made of woven fabrics instead of the wild practice of using dead animal skins and skulls. They understood the nature of green and grey trees and invented the wheel, the boat, and instruments for agriculture.

During 6000 BCE, The first irrigation systems arose almost simultaneously in the civilizations. Irrigation demands a lot of labor, demonstrating a high level of social organization. Faster and faster, man became human, and wildlife converted to widespread society with the grace of physics. Informal education spread its impact on human life. Generation to the next generation spread their skills and inventions.

The first sailing ships were used during 4000 BCE with oars for navigation. One thousand years ago, people invented small boats to understand the nature of dry wood, but now they understand the physics of water flow and the use of oars.

During 1200 BCE, theproduction of iron became widespread. Iron succeeded bronze. The iron put metal tools into more hands than ever before. Physics, at this point in time, played an extraordinary role. The importance of blacksmiths in society touched a height. Blacksmiths are the first socialized example of understanding most physics fundamentals. Faster and faster, society was developing, informal education was developing, and human beings were developing with physics.

The first time the wind was utilized to power a mill was about 5,000 years after the invention of sailing ships. The Persian people understood the physics of wind. They were horizontal windmills. Later, European windmills came in vertical shapes. Finally, man understood to use of invisible wind to develop civilization to its heights. The human nature of understanding physics is the protagonist here.

Humans understood the magnet long ago. But the first magnetic compass dates from 1044. The nature of magnets, the nature of iron, the nature of wind, the nature of water, fire, soil, and metal–everything helped people develop their understanding of physics. And physics helped people to develop their society. Man became human.

Human society can't survive without education. Formal, informal, guided, nonguided, whatever it may be, education from the previous generation to the present, from the experienced to the novice, is the utmost need of society. Physics helped people to build houses. Houses became institutions. Institutions framed a new society- civilization. Civilized people understood the importance of education. Physics helped the most in this case. Johannes Gutenberg completed the printing of the *Bible*. It was 1455. Physics brought the revolution to human civilization as it never did before. Humans are now getting the most powerful instrument of their entire journey of improvement till then- the Printing Machine. The ancient species understood the law of the circle. In the second half of the eighteenth century : 1765,

James Watt improved the concept of steam engine. The steam engine became one of the most important inventions of the Industrial Revolution.

James Watt's steam engine was enhanced by English engineer Richard Trevithick and used for transportation. He built the first railway locomotive at an ironworks in Wales in 1804. Robert Fulton put the engine on water. The invention of the steamboat changed the scenario. Affordable and economical communication played a positive impact on the educational scenario.

NicéphoreNiépce developed an interest in employing a light-sensitive solution to copy lithographs onto glass, zinc, and eventually a pewter plate in the early 1820s. Then he had the brilliant idea of using his fix to duplicate an image captured in a camera obscura (a space or container with a hole in one end through which light is projected from the outside). He created the first known photograph, an eight-hour exposure of his home's courtyard, in 1826 or 1827. A different journey started with the grace of physics. The modern education system is majority dependent on this technology. From xerox to online classes, the journey started back in 1826/27.

Once it was possible to send information through a wire through dots and dashes, the next step was voice communication. On March 10, 1876, Alexander Graham Bell placed the first telephone call.

After thousands of trials, American inventor Thomas Edison got a carbon-filament light bulb to burn for 13½ hours. The Edison Electric Illuminating Company launched the first power plant in 1882 due to the work done by Edison and others in his laboratory on an electrical power distribution system to light homes and businesses. Education in the light of physics traveled long from the very begging of the **DNA** development of humans. A long journey of fatigue. Smaller and more effective internal combustion engines were developed. The first modern automobile was a three-wheeled vehicle that Karl Benz drove around a track using a one-cylinder engine. In an earlier era, people even lost their lives on strenuous journeys for knowledge. Now, motor vehicles are coming into the market to help people to explore. Life became easy, and people gathered energy and time for their quest for knowledge.

Society became more civilized. Civilized society got a gift in the form of radio in the year 1894 and was sending transmissions over longer and longer distances. Life became more entertaining and tension free with this blessing of physics. Physics made man fly at the very beginning of 20th Century. First came the airplane and then the invention of **Rocketry.** After the development of radio, the transmission of an image was the next logical step. Early television used a mechanical disk to scan an image. Another revolutionary achievement of physics. Just after ten years, John Atanasoff designed the first electronic digital computer. The machine may control the universe after man in the future.

The first nuclear power plant was built in 1950. Worldwide installed nuclear power increased to 100 GW in the late 1970s and expanded rapidly in the 1980s, reaching 300 GW in the 1990s.

The Soviet Union surprised the world when it launched the first artificial satellite, Sputnik 1. Human civilization boards its dream flight in search of the next world.

In 2017 the team behind the AlphaGo artificial intelligence program announced that it had become the best player in the world. Go is a game with simple rules but many possible situations. Last year Alphago defeated great player Lee Seidl 4-1 in a singles game. AlphaGo then played itself and, with continued improvement, was able to beat the version that defeated Lee 100-0. With machine learning, AlphaGo has become better than any human at the game.

Advanced undergraduate and postgraduate courses should reflect physics as it is practiced, making appropriate connections with other science fields and engineering and management schools. In addition, advanced university research opportunities are essential to introduce students to the practice of modern physics. Finally, physics education should reflect the career opportunitiesfor today's students. It's alarming that a very small number of physics majors earn a bachelor's degree in physics, and more alarming is the fact that a lesser number of them get their desired employment.

Secondary teacher education greatly benefits from the involvement of physics education. The development of Physics can further contribute to the training of secondary school teachers by providing courses geared towards the education of future physics teachers and developing and implementing outreach programs. The involvement of diverse students at all levels is required in fulfilling the mission. To touch the target, teacher educators, curriculum committees, and central and state education boards should endeavor collaboratively.

Society and Physics Education in the context of West Bengal
Raja Rammohan Roy and Science Education

Rammohan Roy was the only Indian person to realize the need for modern science education in this country. 1823 A.D. He demanded the introduction of science education in this country through a letter to Governor Lord Amherst. Rammohan Roy himself wrote several books on science. He wrote a book called *Draghizaon Geometry*. It is said that he gave the name "Geometry" in the literature of mathematics. Rammohan Roy published several articles on science in his "Newspaper Kaumudi". Professor KshitimohanSen called Rammohan Roy the father of science in India for his great contribution to the practice of science.

Hindu College and Science Education

Along with Rammohan, conservative people like RadhakantDev, RamkamalSen, Prasanna Kumar Tagore also realized the need for science in this country. As a result of this realization, "Hindu College" was established in 1817 AD by the initiative of local people. In the beginning of education, Hindu College had two departments, School and College. In the college department, besides language and history, chronology, astronomy, mathematics and chemistry were taught in other branches of science. Role of Young Bengals and other Bengali intellectuals From the 1830s, the demand for science education and practice among Bengalis increased. At this time, the Young Bengals' "Academic Association" and the Parthenon

magazine talked about the spread of science practice and rationalism. Besides, many eminent persons like Akshay Kumar DuttaBankimchandraChattopadhyay, and RamendraSundarTrivedi personally wrote several books and articles on science, as well as strong speakers also highlighted the expansion of science education in this country. Akshay Kumar Dutta, the editor of the Tattvabodhini magazine, wrote two famous science books, "Relation of Human Nature to External Matter (1852) and "Physics (1856). That's why he is called the "Bacon of India". Besides Bankimchandra, Chattopadhyay writes VigyanRahasyaParandha. RamendrasundarTrivedi, in his book Mayapuri, writes that science is the only way to obtain pure knowledge.

Institutional Forms of Science Practice and Education

Gradually, science education organizations in educational institutions started from scattered and isolated practices. The first science teaching was organized at Srirampur College. When Hindu College was established in 1817 AD, science was included in the curriculum. Besides, at this time, the Bhu Book Society on Science Despite the publication of several books, he played an important role in the spread of science education. In Calcutta madrasas, Sanskrit colleges and other educational institutions, the issue of science education at the government level, including mathematics and science curriculum, gradually gained importance. 1835 AD General Committee of Public Instruction for every educational institution.Recommends the creation of professorships in mathematics and philosophy. In his report on education in 1854 AD, Charles Wood emphasized science and medical education. In 1857 AD, science education was provided in universities. Later, degrees in science were provided at Calcutta University. Mathematics, Inorganic Chemistry, Geography Medical science was included in the education of medicine and science. 1835 AD, Calcutta Medical College was established, medical education revolution came. 1836 AD Madhusudan Gupta performed the first post-mortem at Calcutta Medical College. In 1836, Madhusudan Gupta opened the first medical education class at Calcutta Medical College. MahendralalSarkar received MD degree from this institute. This way, science practice and education gradually became institutionalized in Bengal.

Characteristics and limitations of science education

Several characteristics and limitations of science education can be observed in the early and later stages of the colonial period. For example, no official initiative or activity has been observed in science education in Bengal. Most of Bengal's science practice and science education were carried out by private or non-governmental enterprises. All the science education provided in the educational institutions was based on theory classes. There was no provision for practical classes. A suitable teacher to teach science subjects was not available at that time. The science syllabus was also not attractive then. There was no special opportunity for science reading or research at the higher level. The conservative mentality of the country also created obstacles in the development of science education. It is pertinent to mention the

threat of social exclusion and the strong opposition of the conservatives against the first autopsy at Calcutta Medical College. In Bengal, no institution has been officially established for science education and basic research in science. We have already said that to protect the colonial interests and under the pressure of public opinion, the government did not do anything but organize science education. The government has not established any laboratories or institutes of higher science education. Because the British never wanted to develop basic research and innovative abilities through science education. "The Industrial Revolution in England proved that advanced technology and science were great tools for establishing power and dominance. In such a situation, it shows indifference to higher education and science research because the government did not want the subjugated India to be strong in science and technology. But it must be remembered that despite this government indifference, science and technical education in Bengal was unprecedented in the first half of the 20th century. Swadeshi Movement (1905) vowed to achieve Swadeshi i.e., self-reliance by boycotting everything British. In Western education, instead of slavery, the determination is made to become self-reliant. Instead of employment, the idea of alternative, independent employment is important. Independent-mindedness is born. And all this affects science practice and science education in this country. At this time, eminent scientists of the country came forward to gain self-strength through the pursuit of science. As there was no scope for independent and fundamental research within the government educational structure, AcharyaPrafulla Chandra Roy founded Bengal Chemical, Jagdish Chandra Bose founded the BasuVigyanMandir, Satyendranath Bose founded the Bengal VigyanParishad, MahendralalSarkar founded the Indian Association for the Sharing of Basic research like Science. By conducting discoveries and fundamental research, they increased national pride by bringing the talent and thinking of Indians to the level of international recognition in science education and practice. Today TanusriSahaDasgupta, ChitraDutta, Shankar Ghosh, Mani LalBhaumik, SurajitDhara, BikashSinha, SandipChakrabarty and so on are glittering stars in the sky of world physics from West Bengal.

Conclusion

Advanced undergraduate and postgraduate courses should reflect physics as it is currently practiced, making appropriate connections with other science fields and engineering and management schools. In addition, advanced university research opportunities are essential to introduce students to the practice of modern physics. Finally, physics education should reflect the career opportunities for today's students. It's alarming that a very small number of physics majors earn a bachelor's degree in physics, and more alarming is the fact that a lesser number of them get their desired employment.

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HOW TO CITE

The Essence of Education in Political Science

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Keywords: Political Science, Society, Politics, Power, Education, Human beings, Social and Political.

Abstract:

Political science is a social science. It has had enormous potential to enrich us to be more disciplined, principled, and informed socially and politically. In this paper, from the above viewpoint, we try to focus on what we learn from political science, why and how we are equipped in our thinking as real human beings and how proper education is infiltrated into our consciousness by studying political science. In general, we always think that political science and politics are synonymous. But both are different from each other. The first is a social discipline, and the other is an activity relating to the exercise of power, influence and domination, in a word, 'Politics'. So the practice/study of political science does not mean the practice of politics. As a social science, the main pivotal of political science is society as a whole and socio-political structures and institutions, socio-political ideas & thoughts, values, norms, socio-political practices etc., as a part. So, one cannot be an expert in politics or become a politician just by studying political science. On the other hand, many issues related to politics are indeed included in the topics of political science. From this viewpoint, it is generally believed that a holistic understanding of politics may develop through studying political science.

It is to be noted that the word 'education' means here what and how we enlighten and enrich our consciousness by studying political science. Just as we need to fulfill our fundamental needs (i,e., food, clothing, shelter, drinking water etc.) to survive, proper education is also necessary to make our life meaningful. Otherwise, there is no difference between animals and human beings. When we engage in regular reading-learning of a subject, the particular process may differ, but the learning goal remains the same. Again, the consciousness obtained from the reading-learning process can be orthodox, dogmatic, or scientific. So, what and how one learns, depends on the individual. The important consideration here is proper knowledge. So, we will try to focus here on finding out how we can enlighten our thoughts, thinking and consciousness in the context of how political science sheds light on various aspects of our life and lifestyle as a whole.

Introduction:

Political science is a branch of education that teaches political behavior and discusses how to acquire and use power. Knowing this, the discussion of the long journey of political thought and theory becomes relevant. The history of political thought extends from slave society to feudal society and from feudal to capitalist society. During the period of enlightenment, the political entity expanded from the basic autocracy and monarchy system to the complex Democratic system that existed in the industrialized and capitalist era.

Although the organizational unit of society is 'man' and the problem of society is essentially a problem of the relationship between individuals and others, the manifestation of this problem

has not always occurred in the same way in all regions of the world. In spite of the basic unity, the problem and the thinking related to the problem and it's solution differed from region to region in the past and present.

The discussion of political practice began at the time of the Greek philosophers - the Sophist's Philosophers, Pythagoras, Socrates, Plato, and Aristotle. According to philosophers and researchers, political science is considered one of the main objectives of civil society to provide social interpretation and to take the teachings literally within that interpretation. As the social system has changed along with the evolution, the change of the idea of civic life is mixed with the change of thought.

The concept of education is closely related to political science. Since the beginning of political science, the seeds of education have been hidden in the ideas related to the state. Along with evolution, human thinking has also evolved. Humans have gained knowledge about various subjects from nature - from that knowledge, philosophical thought has emerged. Real education gives people the light of knowledge, social science or laboratory science, education from everywhere flows along with evolution. In the progressive world knowledge or education has evolved along with change. Philosophical understanding and transmission of knowledge can occur within different branches of social science. Political science is a subject of social science which relates people to their daily life and helps people to gain knowledge about state-society-politics. In this essay, political science and education are briefly analyzed in two phases - theoretical and practical discussion.

In the broad context, an extensive and critical analysis of what a state is, how did the state arise, what is the relationship of the state with the individual and the relationship between the state to state, the difference between government and state, the relationship of the people with the government and governance etc. And so many such socio-political matters have to be complementary to political science, which has established political science as an important subject of knowledge. In the above context, we will try to focus on what we learn from political science following the macro and micro areas of analysis.

Macro field:

At the macro-level, political science provides basic knowledge about a formal political institutions like state and macro structures such as administrative, legislative and judicial, as well as political parties at the national or regional level, local bodies, law, federation, the role of bureaucracy and so on so forth. The main topic of political science is to analyze the state's diversity, ideas, scope and content from a scientific point of view. Human civilization originated in the cycle of evolution. At the beginning of human civilization, there was no concept of a state. Along with social science, the institution called the state was born, according to social scientists and philosophers; along with evolution, people created the social institution called the state to meet their needs. State philosophy is a philosophical approach to the state. State and politics are complementary concepts. The concept of the state is closely related to the working relationship and use of politics. A legitimate power or authority governs a state called

a government that governs civil society. This power or authority enacts laws, judges, maintains peace and order in the society and, above all, works for public welfare.

So at the macro level, political science is concerned with critical analysis of political dynamics, adjustment of the individual to the state, and power- relations among members of a given society, as well as encourages us to discover effective ways to think in depth about socio-political phenomenal in the sense that political science is a pedagogy of political philosophy, economics, sociology, anthropology, history etc. in an interdisciplinary manner. From this interdisciplinary perspective, political science focuses on gaining knowledge about various forms of government and patterns of governance, how to make good citizens, how to originate good leadership, how to form a public and personal opinion, how to make law, what are the functionaries of the judiciary, what is to be done as a citizen in polity and society etc.

According to David Easton, "All mature scientific knowledge is theoretical". That is, the theory is to see and analyze a subject from the point of view of scientific practice. Philosophy and theory are complementary subjects. In this regard, David Easton also said that the theory is the theory of values and the information-based theory, i.e., the theory of political science, means the theory of political values. A proper theory analysis is impossible without values-principles, even if scientific criteria judge that analysis. The first concept of political theory originated from the Greek philosophers Plato and Aristotle. Human social existence and social policy values are born from political theory. Theory provides man the power to establish himself as a social being. Political science helps to analyze human social concepts and events in their theoretical context. In the construction of the theory of political science, it can be observed by two major theories; normative theory, which is established as a way to solve policy values and human and social problems, on the otherhand, empirical theory, which is mainly systematic, analytical, explanatory, positive and objective. This theory is basically a theoretical concept developed by harmony with the new age. There is a flurry of different theories in the theoretical discussion about the state. According to contractarianism, the state is founded on reason and reality. According to biologists, the state has a soul i.e., the state is like a living organism. Marxists view the state as an instrument of class exploitation. According to idealists, the concept of the state is associated with the concept of ideals-morality. Liberals, on the other hand, judged the state in terms of the individual. According to the Gandhian concept, the state is a symbol of violence or anarchy, so Gandhi spoke about the establishment of Ram Rajya.

According to Cambridge Dictionary, Thought means "The act of thinking about something to form ideas and opinions, or an idea or opinion produced by thinking"(Cambridge Dictionary). The scientific way of thinking about the state in the discussion of social science and state philosophy first emerged during the time of the Greek philosopher Plato. Thoughts on art, education, sociology, psychology, culture, science, philosophy and politics emerged in the time of Plato. The term "knowledge" began to be used as early as the time of Plato, and Plato also described the nature and types of knowledge. From this knowledge, the concept of science develops, and also knowledge leads a man to the path of virtue. Greek philosophers divided Knowledge into two parts: pure knowledge and applied knowledge, pure knowledge means an end in itself, and applied knowledge means an end. Plato divided the social class into three

categories in his theory of justice: traders, soldiers and philosophers. According to Plato, justice is a blessing.

It should be noted that in ancient times, the concept of Rajdharma or the King's policy was prevalent in India from the time of Kautilya. The history of Mahabharata also mentions the subject of Rajdharma, besides Manusmriti also mentions Rajdharma or Rajashastra. As can be seen in the history of Western philosophy - politics appeared in the instance of Socrates, Plato and Aristotle in Greek civilization, Kautilya's contribution to the history of Indian philosophy is undeniable. In his Arthashastra and Dandaniti, Kautilya analyzes the royal religion and ethics, besides explaining the king's duties and how the royal religion should be administered. Kautilya's Saptanga theory describes how the structure of the state should be. A state consisting of seven parts i.e., king, Amaya, janapada, Durga, kosha, danda, mitra, is known as Kautilya's saptanga principle. Hobbes-Locke-Rousseau's concept of civil society, Bodin's concept of sovereignty, and Machiavelli's concept of power-politics and secularism are all equally relevant in modern politics and our political life.

From the perspective of the long journey of evolution of political science, we may draw our attention to a synoptic explanation of changing routes of discourses from the ancient to the modern period. According to Aristotle, the father of political science, a man who does not live in society is either an animal or a god. Man has naturally acquired a natural tendency to live jointly as a group. The family emerges from the group life that people develop to satisfy their organic needs like food, shelter, sex, etc. Due to increased socioeconomic interests and demands and to satisfy them for the good life, people formed village communities beyond boundaries of family. To solve various types of socio-political problems, crises, and demands that arise in village communities, a city-state was formed by merging many village communities. In keeping with the evolution of the people's social life, the state's nature also changed and obviously, the Greek city-state has evolved a long way to change into the modern sovereign state.

It is to be noted that Aristotle was the first to raise the study of politics to the level of a comprehensive science. He said there is no supremacy of the individual in a good state. Rather law will be supremely sovereign, and the existence of the state is based on the moral ideas of the rule of law, freedom and equality among citizens, and constitutional government. This is how the concept of political science emerged in an important analysis stage of social life.

Later, Machiavelli, the child of the 16th-century European renaissance, gave birth to a new and modern political philosophy based on rationality. He invented his modern political thought by discarding religion, moralities, etc., of Christian philosophy. Overcoming medieval bigotry and superstitious orthodoxy, Machiavelli incarnated his new political philosophy by highlighting the Royal sovereignty of a strong nation-state free from religious control.

His successors, Jean Bodin and Thomas Hobbes pioneered the philosophy of strong state independent from religious influence. In fact, a new trend in political thought began in 18th century. John Locke's theory of rights and Rousseau's theory of popular sovereignty created a revolutionary movement in the wake of the American freedom struggle in 1776 and the French Revolution in 1789.

In 19th century, a radical transition occurred in the discourses of politics. During this period, philosophy i.e., idealism, positivism, liberalism, and individualism, on the one hand, and Marxism, on the other, flourished.

In the early 20th century, behavioral scientists introduced a new trend in the field of analysis of political science by rejecting the traditional approach of analysis. They abandoned theoretical and institution-centric discussion of political science and emphasized on the political behavior of individual and groups. Because they have thought that institution-centric analysis is only concentrated on the discussion of state apparatus like administration, legislature, judiciary, local self governing bodies etc. which are incapable to enhance knowledge about full identity of socio-political life. So, in modern political analysis, an attempt has been taken to present a complete picture of socio-political life by reviewing the critical functioning of political parties, pressure groups, election and electoral behavior of voters, political participation and political socialization, changed the pattern of authority and bureaucracy etc.

During 20th century onwards, the theories and thoughts of some eminent modern thinkers of political science equipped us to build a scientific and analytical approach for understanding the causal relationship of various happenings like fundamentalism, communalism, terrorism, separatism, violence, in the West and East, politicization of religion, politicization of caste and class, class-caste conflict in Indian society, trends of violence, tensions, etc. which have come down as curses in our live.

At the end of the 20thcentury, civil society's tremendous influence and reactions increased nationally and globally. As a result, various new platforms are being developed, such as Anti-globalization World Social Forum, Green Peace Movement for Environmental Protection, Feminist Empowerment Movement etc., the impact of which in society is taking place in post-modern political analysis.

Micro Field:

Here to say micro-politics, an attempt will be made to give a picture of the power game we constantly play in our daily lives. We play this game in family, clubs, peer groups, offices, institutions, associations, civil life, and even our personal sphere. Such as, to reach the pinnacle of power, we often compromise with enemies rather than close friends. Because when I reach my target, I can keep the enemy under my control. Again in many areas of our life we form alliances with comparatively weaker people to win something. The reason is simple. I know well that I will get more shares if I win something. If another member of the alliance is stronger than me, my share will be less, and the stronger member will control me. We know that scary image does not always succeed in life. So, to get something better, you must be lovable, flexible and torrent. I try to gain something by pretending to be what I am not. And again, to get something, you have to give something. So, even though it is unfair, sometimes we give some goods or gifts in the greed of getting something. This type of game with each other in our day-to-day life is constantly played using suitable mechanisms.

Theoretically, during the last two decades, a slew of micro politics has emerged in political science, adding significant value to existing studies. In contemporary times, we are witnessing

that there is nothing in our day-to-day life without politics, what we can do and don't what we can say or not, what we can live and how and even what we can eat and why – all are encompassing in politics. In this context, where eminent psychologist Freud found the tremendous wave of human thought in 'Sex', Marx finds it in 'Wealth', then B. Russell found it in 'Power'. In modern times, power is so important in social, political and personal life that it has transcended the boundaries of human psychological convictions to all parts of human consciousness. Similarly, Foucault said power is everywhere and comes from everywhere. So power is not an agency or structure, rather, it is a kind of meta-power. That is why he says we need to look at how power works behind every social action in our society, polity and daily lives. Political science, here, opens a vista of knowledge for us in this search.

Conclusion:

From the very beginning of our civilization, why and how we formed society and other institutions; why we want to be members of society; why we follow various rules, values, and norms of society and other institutions; the interrelationship between being a good human being and a good citizen in society; why we want to be social and not to be unsocial or anti-social--- these fundamental questions can be resolved through proper education. Lessons from political science convey that type of education to us.

In addition to that, various ideologies like democracy, capitalism, socialism, imperialism, communism, liberalism, neo-liberalism, utilitarianism, modernism, post-modernism, structuralism etc., which are born from the womb of enlightenment, are constantly being presented in the workings of polity and society. It is possible to learn from political science to build a correct understanding of those incidents.

Last but not least, education is a multidimensional concept. It is said education brings consciousness, and consciousness brings revolution. Here revolution is not in the Marxist sense, but education, in general, brings about a positive change and transformation in the human mind, the positive effect and impact of which is long-lasting and far-reaching in our life. This transformation is the consequence of continuous progress and success. It is enough to be careful that there is a big difference between growth, progress and success. If we increase a company's turnover from 1 crore to 10 crores, from 10 crores to 100 crores, that is growth. So, growing the materialistic possession continuously in all ways is called growth. Ethics aids growth- ethics means honesty, discipline, values and norms; it is called progress. And that progress is guided by humanity, morality and positivity. That is called success. So, far as the enhancement of proper education is concerned, there is ample scope in political science for achieving the destination of growth, progress and success in life.

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HOW TO CITE

Impact on Education in the Light of Art Education as a Pedagogical Subject in the School Curriculum

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Abstract:

Education helps us grow as human beings and contribute to the globe's betterment. Art and art education helps in the all-round development of children. "Art does not solve problems, but makes us aware of their existence," sculptor Magdalena Abakanowicz has said. Arts education, on the other hand, does solve problems. Years of research show that it is intricately linked to everything we as a nation say we want for our children and demand from our schools: academic achievement, social and emotional development, civic engagement, and equitable opportunity. Involvement in the arts is associated with gains in math, reading, cognitive ability, critical thinking, and verbal skill. Arts learning can also improve creative thinking, motivation, concentration, confidence, and teamwork.

Introduction:

Art education is vital for future students. Art allows students to learn about themselves, their culture, and their community. By taking art classes, students will begin to visualize the world differently. The creativity and imagination of students will be pushed through the development of art. It is necessary to cultivate and guide students with quality art lessons to increase their understanding and relationship with the world of Art. Art classes are very influential because they affect students in many ways that other classes cannot. Art classes will help develop a child's creativity, thought process, and way of expression. Art educators will help guide a child's mental development. According to Freedman and Stour (2000), art education conserves "and transmits heritage, helping students to recognize and appreciate the diverse perspectives they will encounter in an increasingly global community" (p. 3). Art allows students to "draw meaningful relationships among the artworks they have created and interpreted and many other cultural texts in the arts, humanities, and sciences" (p. 5). According to Freedman & Bought, in preparation, many parts of the brain are involved when learning about art, and it builds deep cognitive connections. This explains how children understand that one symbol may represent different ideas among many cultures.

Scope for Art Education

The world has woken up to the importance of Art education in their cultural, economic, social, and educational. Therefore, the scope of art education is wide and multi-dimensional. Some of them are-

- Art education helps learners to become professionally skilled and aesthetically competent.

- Education in arts improves life skills in students, such as better memory, enhanced understanding, and an ability to communicate with others.
- Art education has considered a valuable tool for cognitive development in children.
- "Young Children and the Arts: Making Creative Connections", a report released in 1998 and stated that art education can contribute significantly to a child's cognitive, language, and motor skills.
- Through art education, a child can get guidance for their creative expression. Otherwise, most of the time, one must compromise their interest and drop out.
- Art education inspires students to think out of the box.

There is a wide range of scope in art education, and this is because art education consists of varieties of forms to express any artistic vision. The forms include in art education are

- Drawing
- Painting
- Ceramics

- Sculpture
- Photography
- Architecture, etc.

The importance of Art Education

Art in education is an integral part of the development of each human being. Plato emphasized the importance of the arts in the education process. Arts education refers to education in the disciplines of music, dance, theatre, and visual arts. Studying art is important to our society for its development. The arts are what make us most human, most complete as people. The arts cannot be learned through occasional or random exposure, so a continuous process of learning art is important, just like other subjects such as math, science, history, geography, etc. Therefore, education and engagement in the fine arts are an essential part of the school curriculum and a critical component in the educational program of every student from kindergarten to high school.

Sufficient data supports the belief that study and participation in the fine arts in the school curriculum are key components in improving learning throughout all academic areas. Evidence of its effectiveness in reducing student dropouts, raising student attendance, developing better team players, fostering a love for learning, improving greater student dignity, enhancing student creativity, and producing a more prepared citizen for the workplace for tomorrow can be found documented in studies held in many varied settings, from school campuses to corporate America.

The art helps develop neural systems that produce a broad spectrum of benefits, from fine motor skills to creativity and improved emotional balance. However, one must realize that these systems often take months and even years to fine-tune. In a study by Judith Burton, at Columbia University, research evidenced that subjects such as mathematics, science, and language require complex cognitive and creative capacities "typical of arts learning" (Burton, Horowitz, & Abeles, 1999). "The arts enhance the process of learning. The systems they nourish, which include our integrated sensory, attentional, cognitive, emotional, and motor capacities, are, in fact, the driving forces behind all other learning" (Jensen, 2001). The fine arts also provide learners with non-academic benefits such as promoting self-esteem, motivation, aesthetic awareness, cultural exposure, creativity, improved emotional expression, social harmony and appreciation of diversity. These are the fibers of the fabric known as our country's culture.

A 2005 report by the Rand Corporation about the visual arts argues that the intrinsic pleasures and stimulation of the art experience do more than sweeten an individual's life - according to the report, they "can connect people more deeply to the world and open them to new ways of seeing," creating the foundation to forge social bonds and community cohesion. A study of Missouri public schools in 2010 found that greater arts education led to fewer disciplinary infractions and higher student attendance, graduation rates, and test scores.

Arts Facts...Improved Academic Performance
Students who participate in the arts, both in school and after school, demonstrate improved academic performance and lower dropout rates.

Students with High Levels of Arts Involvement:
Less Likely to Drop Out of School
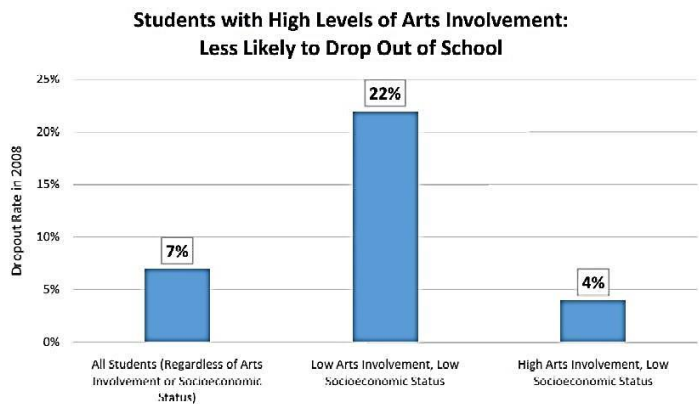
- Longitudinal data of 25,000 students demonstrate that involvement in the arts is linked to higher academic performance, increased standardized test scores, more community service, and lower dropout rates (see chart above). These cognitive and developmental benefits are reaped by students regardless of their socioeconomic status.

- Arts in the schools increase test scores and lower dropout rates. The report, *Critical Links*, contains 62 academic research studies that, taken together, demonstrate that arts education helps close the achievement gap, improves academic skills essential for reading and language development, and advances students' motivation to learn.

- Research conducted between 1987 and 1998 on young people working in the arts for at least three hours on three days of each week throughout at least one full year, demonstrated the following:
  ✓ 4 times more likely to have been recognized for academic achievement
  ✓ Being elected to class office within their schools more than 3 times as often
  ✓ 4 times more likely to participate in a math and science fair
  ✓ 3 times more likely to win an award for school attendance
  ✓ 4 times more likely to win an award for writing an essay or poem

Sources: NEA Office of Research & Analysis (Catterall 2012); Arts Education Partnership (Deasy 2002); Americans for the Arts (Heath 1998).

www.AmericansfortheArts.org

The following are findings reported in Champions of Change: The Impact of the Arts on Learning (Fiske, 1999) that should be noted by every parent, teacher, and administrator:

- The arts reach students not normally reached in ways and methods not normally used. (This leads to better student attendance and lower dropout rates.)
- It changes the learning environment to one of discovery. (This often re-ignites the love of learning in students tired of just being fed facts.)

- Students connect better. (This often results in fewer fights, a greater understanding of diversity, and greater peer support.)
- The arts provide challenges for students of all levels. (Each student can find their level from basic to gifted.)
- Students learn to become sustained, self-directed learners.

Correlating Art activities with other school activities

- Designing the school magazine, making posters for a school function, and stage scenes for drama, dance, music, etc., can be related to Applied Art activities.
- Creating Puppets and their costumes and designing the puppet stage or theatre stage background can be related to subjects like Home Science and Arts.
- Designing utility craft items for society can be related to Work Education activities.
- Creating murals painting on the school walls and classrooms can give an aesthetic look that will spread positive vibes among the students and teachers.

Education policies regarding art Education in India

Since independence, various government policy documents have mentioned art education as an area of immense importance for the overall development of students. If we say at Benzimen Bloom's classification for the development of Cognitive, Affective, and Psychomotor domains, Art Education plays a significant role. As early as 1952-53, the then Education Commission's report emphasized the "release of creative energy among the students so that they may be able to appreciate the cultural heritage and cultivate rich interests, which they can pursue in their leisure and later in life."

The Kothari Commission report of 1964-66 emphasized that education for creative expression acquires added significance in an age that values discovery and invention. "Adequate facilities for training of teachers in music and the visual art in education improvises the educational process and lead to a decline of aesthetic tastes and values." The National Policy of Education 1986 emphasized fostering among students an understanding of the diverse cultural and social systems of the people living in different parts of the country as an important objective of school education. All the previous National Curriculum Frameworks of 1975, 1988, and 2000 emphasized art education by defining its aims and objectives in the school curriculum. Teaching the different arts, dance, music, painting, etc., should be based on the same fundamental principle of providing students opportunities for perfecting their capacities and helping and encouraging them in the process. There was a change in thinking in the objective of art education from the dignity of labor by working on crafts to developing aesthetic sensibility and free expression.

India's National Education Policy 2020 envisions a better education system for its students. The impact of the National Education Policy (NEP) reflects in several art activities, collectively known as Art Education. A new education policy of the NEP brings importance to India's varied cultural heritage in terms of arts, crafts, traditions, and literature. At the same time, highlights the need to preserve this wealth for India's economy and identity. The policy analysis reveals its focus on developing extracurricular activities and nurturing education of the arts. It recognizes the potential and power of teaching arts to students.

The important provisions of the policy mentioned above are:

- Artist(s) in Residence, this feature helps students engage in **arts during their school hours**. It also involves local artists and communities and the recognition of their art. This furthermore provides students with direct experience and out-of-the-textbook learning.
- Student tours under 'Ek Bharat Shrestha Bharat' This program encourages students to choose tourist destinations to study heritage and become culturally aware of the background, architecture, and current situation of historical sites in India.
- Provide Vocational Education from an early age. The policy states that schoolchildren should be exposed to vocational education at a young age. It constitutes internships with Indigenous artists and artisans to teach students the dignity of labor.
- Push Research and Innovative Thinking. Lastly, the NEP wants to endorse a curriculum where students engage in creative thinking for more inquiry-based and analysis-based learning. The commitment to a **National Research Foundation** is also made to sponsor quality research on art and how to make it accessible to all.

Regarding art as a subject, the National Curriculum Framework 2005 states as follows:

The emphasis should be on interactive approaches, not instruction because art education aims to promote aesthetic and personal awareness and the ability to express oneself in different forms.

We must bring the arts squarely into the curriculum domain, infusing them in all areas of learning while giving them an identity of their own at relevant stages.

The arts need to become a vital component of learning in the curriculum. Children must develop skills and abilities in these areas. Students will be introduced to the country's rich and varied artistic traditions through the arts curriculum.

Art education must become both a tool and a subject taught in every school as a compulsory subject up to class ten, and facilities for the same may be provided in every school.

Recommendation for the improvements in the status of arts education in schools:

- Obvious guidelines should be prescribed to schools, teachers, and parents to implement various dimensions of the arts education curriculum effectively.
- Though several handbooks designed as per the National Curriculum Framework -2005 about arts education still much to be done. In addition, teacher education and orientation at different levels need a drastic change.
- Subjects like Art Education, Yoga, physical and health education, and work experience were introduced in the schools and placed in the timetable given.
- Art education should be made compulsory at the Secondary school certificate level.
- Arts education is an enjoyable experiential learning process for the free expression of children. Therefore, ample opportunities should be provided for their creative expression.
- Schools should provide time, space, and resources for arts education activities within and outside the school. The authorities should view this seriously. Otherwise, the recognition of schools should be canceled.
- More awareness must be created regarding arts education among different beneficiaries and stakeholders.

Conclusion

Art and education affect each other and even have some common areas. The child comes to the world with an innate capacity to learn. Art and Art education helps a child to blossom like a perfect flower with all its colour and beauty. Art Education is a primary pathway to learning, a journey of discovery of the meaning of teaching for aesthetic experience. Movement manifests emotion, voice modulation gives way to the inner self, drawing reveals the inner layers of the mind, and Sculpture mirrors the inner self -This is Art education. Therefore, we need Art Education. The main purpose of art education is to develop creativity, individuality, and expression through art activities. But in our culture, however diverse it may be, all celebrate art as part of everyday life.

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OPEN ACCESS

Transforming Lives: English Education and the Marginalized Women of India

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Abstract:

English, the language of the British colonizers, the erstwhile instrument of slavery and oppression, proved to be a boon for Indians. Apart from creating solidarity among the nationalists and helping achieve a pan-Indian identity, English proved to be instrumental in transforming the lives of Indian women in manifold ways. English education has been immensely beneficial especially for those women who experience the intersection of class, caste, race and gender on an almost daily basis. Replacing the existing exclusionary system of education in India, monopoly of a few- the upper caste male, English education opened up new horizons and vistas for both the *savarna* and the *avarna* women, gave them new voices and representational spaces. This paper attempts to examine and critically analyze the impact of English education, from the days of its inception till this day, on the lives of Indian women in general and the marginalized lower-class and lower-caste women in particular. I will attempt to explore to what extent English has helped achieving a more egalitarian society in India. Along with the positive effects of English education, the other side of the coin has also to be taken into account. I will also discuss the role of English in creating a new kind of caste system, with marginalized women being its worst victims.

Introduction:

"Perhaps the most enduring legacy of the British empire in India, alongside its commitment to parliamentary democracy," observes Tarun Timalsina in "Redifining Colonial Legacies: India and the English Language," "has been the English language." As an inevitable consequence of the long British colonial presence in the Indian subcontinent, English, the tongue of the colonial masters, has, far from remaining a foreign language, become one of the languages of India. The language, which was initially implemented to serve the purpose of creating a class of English-educated clerks and officials to smoothly run the British administration, and, which was, in its earlier stages, the second language of a few, gradually became an indispensable part of our daily life. As K. Suneetha Rani puts it: "People questioned, debated, adopted, manipulated and mastered over English but on the other hand admired it, followed it and owned it" (2). A language, which earlier would only had been an instrument of slavery and oppression and division on the lines of race and class proved to be immensely beneficial for Indian women, oppressed and repressed by patriarchy. English, unlike the existing Sanskrit and Persian, accessible only to a privileged few, was accessible even to

women belonging to the marginalized communities like the *Dalits* and the *Adivasis*. English, with its immense emancipatory potential, opened newer horizons and created aspirations in the minds of these wretched beings. In a nation of immense linguistic and cultural diversity as India, it is English that binds us together, that helps creating a pan-Indian identity. English, a language equidistant from all the native languages of India, is usually preferred to Hindi as a common language of communication. In the present era of rampant urbanization, globalization and digitalization, proficiency in English has become the basic prerequisite. Apart from discussing in some detail these positive impacts of English in the lives of the downtrodden Indian women, this paper will focus on the pitiable condition of those women whose aspirations for upward social mobility are being nipped in the bud owing to the inaccessibility of English to them.

Though I will, in the following paragraphs, attempt to discuss the inception, development, trajectory and impact of English education in India, my focus, in keeping with the topic of my discussion will be on the impact of English education on the lives of Indian women in general and the underprivileged and marginalized ones in particular. Women's education (here I am talking of Western education in particular) has always been a hotly debated issue in India. As K. Suneetha Rani puts it:

In all these debates, English education became the central focus, for not only was it perceived as a colonial heritage but also it was believed to corrupt Indian women and thus lead to the collapse of moral values and the institution of family in India. (3)

Any discussion on women's education in the nineteenth century cannot exclude the issue of English education since "education in the nineteenth century meant education in the English model if not in the English medium" (Rani 3).

Implementation of English Education in India: The Colonial Era:
Macaulay's *Minutes*:

English education in India has its roots in the British colonial era. Lakshmi Holmstrom presents the scenario/ backdrop against which English education was implemented in India:

Before the coming of the English, there were two kinds [of] schools in India: Sanskrit institutions, attended mainly by Brahmin boys and teaching classical law, literature and the scriptures, with their Muslim counterparts which taught Islamic classics in Arabic and Persian; and schools where non-Brahmins were taught in the regional languages….(quoted in Murthy pp. 1-2).

"A(a) single shelf of a Good European library was worth the whole native literature of India and Arabia," declared most infamously Thomas Babington Macaulay, the British historian and Whig politician who was appointed as the first Law Member of the Governor-General's Council after the passing of the Charter Act 1833 and who was elected the President of the General Committee of Public Instruction (GCPI) in June 1834 . "Honours might be roughly even in works of the imagination, such as poetry, but when we pass from works of imagination

to works in which facts are recorded, and general principles investigated, the superiority of the Europeans becomes absolutely immeasurable," argued Macaulay in his *Minute on Indian Education* of February 1835, the treatise that prioritised Occidental education at the expense of the traditional Indian one imparted either in Sanskrit or in Persian- the languages used by Hindu and Muslim scholars respectively. The East India Company was, by then, sponsoring Indian academic institutions where either of these two languages was the medium of instruction. Imparting secondary education in the vernacular languages of India was unthinkable at that time since all of the significant texts were written either in Sanskrit or in Persian- the languages of the Hindu and the Muslim elites respectively. As becomes evident from the quotation above, the outlook of Anglicist (as opposed to the Orientalists) Macaulay was purely utilitarian. In the practical-minded Macaulay's opinion, these two classical languages were as much inaccessible to the vernacular speakers as was English, then a foreign tongue. He further added that texts composed in these two languages were incompatible with what he called "useful learning." Therefore, in order to "educate a people" who could not be "educated by means of their mother-tongue," the need of the hour was to "to teach them some foreign language." As he realised that it was literally impossible to "educate" (for him' education is synonymous with European education) the masses with the limited resources of the British colonial machinery, they would better invest their energies in creating a class of anglicised Indians , "a class of persons Indian in blood and colour, but English in tastes, in opinions, in morals and in intellect," who would bridge the gap between the rulers and the ruled. The chosen few would receive the Western education, and, they, in turn, would convey the same to the masses, a system of education known as "Downward Filtration Theory."

The main aim of the British was not to Enlighten their Indian subjects. They were clearly motivated by an intent of smoothly running the administrative machinery and to indoctrinate the masses through this elite, English-educated Westernized class. All the efforts of the British East India Company were therefore directed towards gaining a strong foothold in the Indian subcontinent. But what Macaulay and his sneering peers, blinded by white supremacy, failed to foresee was that this very decision would ultimately boomerang on the British themselves. It is the "Western ideas and ideals like democracy, enlightenment and self-determination" (Kirkpatrick 170) that made a significant portion of the Indian elites aware of their fallen situation, the injustice done to their country as well as their worth and potential. All these gave impetus to the anti-British freedom struggle. The English might have attempted their best to divide Indian people, but it is English that helped forming an "all-Indian political identity" and "achieving national integration" (Kirkpatrick 170). Otherwise it would have been much difficult, if not impossible, in a multilingual country like India, to collectively resist the colonizers.

It was the phenomenal English Education Act 1835, introduced by Lord William Bentinck, the then Governor-General of the British East India Company, by which "the funds that were allocated to uplift to support the Indian languages in the country were now redirected to

'westernize' the country" (Saxena) that paved the way for English becoming one of the Indian languages rather than remaining an alien tongue. Administrative works were henceforth to be conducted/ carried out in English and English would eventually replace Persian as the language of the higher law courts.

Wood's Dispatch:

The next significant step taken in this regard by the British colonial administration was the 1854 recommendations of Sir Charles Wood, the President of the Board of Control of the British East India Company. In this formal dispatch, widely and unofficially (Wiki) known as Wood's Dispatch, sent to Lord Dalhousie, the then Governor-General of India. In this dispatch, which is considered as the 'Magna Carta' of English education in India, Wood suggested the use of vernacular languages as the medium of instruction at the primary level, Anglo-vernacular languages at high schools and English as the medium of instruction at the higher levels, i.e., in the colleges. Wood's Dispatch was also put significant emphasis on women's education which was to be supported by the government. On Wood's recommendations, government schools in all districts and education departments in all provinces were set up. Prestigious institutions for higher studies were set up in the major Indian cities. The University of Calcutta, the University of Bombay and the University of Allahabad, all established in 1857, were to change the course of education in India, leaving everlasting impressions. The University of Punjab (1882) and the University of Allahabad (1887) followed afterwards. It was, however, not until 1876 that women could attend exams at the university (Calcutta University, 1876).

Western Education for Indian Women: The Christian Missionaries:

Though girls' schools started imparting education in India as early as in 1818 by Christian Missionaries, as Partha Chatterjee keenly observes, the deep-seated fear of proselytization (here conversion to Christianity) and exposure of Indian women to potentially harmful and corrupting western influence prevented most of the Indian families from sending their daughters to these schools (Rani). There were indeed women like Pandita Ramabai (1858-1922), who, oppressed and repressed by the Hindu society, and no longer being able to withstand the restrictions, chose to be converted to Christianity to break the shackles. Such threat and fear, however, started subsiding as westernized girls' schools were being set up by Indians themselves.

Women's Education and the New Patriarchy: Docile *Bhadramahila* and the Educated Rebel:

As a result of the endeavours taken by great social reformers like Iswar Chandra Vidyasagar, there could be seen a visible growth in women's education as westernized secular education was supposed to alleviate the fallen condition of women and empower them. But it would be wrong to assume that the contemporary Indian society wholeheartedly supported the idea of girls attending schools imparting Western education that would encourage them "to become immodest, undisciplined and un-controllable," needless to mention the "deep rooted fear of

early widowhood." (Rani 3). In his brilliant and path-breaking thesis, Partha Chatterjee discusses how women's education was, after all, "a project of making ideal woman" (Rani 3). Since "a new patriarchy started to dictate the nationalist Indian woman in a colonial set up," a new woman, the *bhadramahila*, educated yet preserving traditional Indian womanly virtues, was to be created who would maintain the purity of the inner spiritual core or the ghar, while the world or the bahir would be the domain of men. It was thus problematic as women were allowed to be educated for making the private sphere better, to become better daughters, wives, daughters-in law and mothers who would be able to nurture their children in a better way. "The private sphere was emphasized as that was considered to be the primary and the sole space and commitment for women and also that they had and they were allowed no concept of the public sphere," observes Rani.

Despite the attempts to make better housewives, not all women were complicit in such project of making a class of *bhadramahilas*, tradition in the garb of modernity, and instead, questioned and rebelled against the codes of conduct, injunctions and restrictions imposed on them by patriarchal society. As Sanjukta Dasgupta points out in the chapter titled "Colonised: The Bengali Woman Writer in British India" in the book *Influence of English on Indian Woman Writers*, it is their English knowledge that empowered women writers like Rokeya Sakhawat and Swarnakumari Devi to "traverse intellectually and linguistically beyond the cultural lines on control." (Natarajan). The social reform movement of mid nineteenth century Maharashtra can be considered as "an offshoot of English education" and women novelists like Kashibai Kanitkar and Indirabai Sahasrabuddhe introduced the concept of gender equality through their writings (Natarajan).

Western Education for Indian Girls by Indians:
New Hope for Subalterns: Savitribai Phule and Fatima Begum Sheikh:

The first Indian girls' school set up at Bhide Wada in Pune, Maharashtra by any Indian was the school founded in 1848 by the renowned social reformer, educationist and Indian feminist Savitribai Jyotirao Phule (1831-1897), her husband Jyotirao Phule and her mentor, the revolutionary feminist Sagunabai (Kandukuri). For women like Savitribai, belonging to the so-called backward Mali community, who used to experience the intersectionality of gender, caste and race on an almost daily basis, English education, "the sole blessing … to come out of centuries of toil and exploitation" became "an effective means of subverting hegemonic structures." (Rani). It must have required a mammoth of courage, determination and resilience on her part to curve such a space for women like her amidst the strictly hierarchical, Brahminical and patriarchal society where traditional education was a male Brahminical monopoly. Savitribai, trained in two Western teachers' training institutions, employed the Western curriculum that included mathematics, science and social studies (Wiki) instead of traditional Hindu Brahminical texts like Vedas and Shastras (Kandukuri) which were accessible

only to a few. Neither verbal abuses, nor stones and dung hurled at her could stop Savitribai whose clarion call to the subalterns was:

> Throw away the authority
> Of the Brahmin and his teachings,
> Break the shackles of caste,
> By learning English.

About one hundred and fifty girls were studying in the three schools run by the Phule couple in Pune towards the end of 1851. The patriarchal anxiety and fear regarding the success of women's education and the hurt male ego rings in the voice of officials of a government school published in the *Poona Observer* dated May 29, 1852:

The number of girl students in Jotirao's school is ten times more than the number of boys studying in the government schools. This is because the system for teaching girls is far superior to what is available for boys in government schools. If this situation continues, then the girls from Jotirao's school will prove superior to the boys from the government schools and they feel that in the coming examinations, they can really achieve a big victory. If the Government Education Board does not do something about this soon, seeing these women outshine the men will make us hang our heads in shame.

True to the male chauvinists' fear, it was indeed secular education that would give birth to thousands of Savitribais who would, rather than remaining docile, obedient and subservient to men, learn to question and push the boundaries.

After the couple, supposedly engaged in sacrilege, were expelled from their house, they took shelter at the house of Jyotiba's friend Usman Sheikh. A deep friendship developed between Savitribai and Fatima Begum Sheikh, the wife of Usman Sheikh. Encouraged by Savitribai, she enrolled herself in a teacher training course and graduated, along with Savitribai, from the Normal School. She is considered as the first Muslim woman teacher of India. "Their (Savitribai and Fatima's) friendship, camaraderie and sisterhood," as Divya Kandukuri puts it, "define the core values of what we call intersectional feminism today." In the 1850s, Savitribai and her husband established two educational trusts- the Native Female School and The Society for promoting the Education of Mahars, Mangs and Etcetras and there were many schools under these two. It is the English education taught in the schools ran by the Phule couple that created such empowered girls like Mukta Salve, who, at the age of fourteen, composed a path-breaking essay on the sufferings of Mahars and Mangs.

Ram Mohan Roy, Vidyasagar and Bethune School:

Established in 1849, Bethune School, named after its founder, John Elliot Drinkwater Bethune, was the Second (the First being that established by the Phule couple a year earlier) women's school not only in India, but in the entire Asian region. The school, which started its humble journey as Calcutta Female School with financial assistance from and in the residence of Raja Dakshinaranjan Mukherjee (1814-1878), the eminent social reformer and free thinker

belonging to the Young Bengal group, acquired the status of the first women's college in India (Bethune College) in 1879.

Drinkwater Bethune was also helped by the great social reformer Ishwar Chandra Vidyasagar who felt that it was only education, and not any mere legislative act that can uplift the women of his country. Vidyasagar, a tireless crusader against social injustice and dogmatic religion that oppressed women, made educating women his lifelong mission. Vidyasagar vehemently campaigned for women's education, organized a fund named Nari Shiksha Bhandar, urged families to send their daughters to schools and opened thirty five girls schools, allowing thirteen hundred girls to enrol themselves in those schools.

Raja Ram Mohan Roy, the champion of women's causes, who is chiefly remembered for his pivotal role in abolishing the evil practice of sati, also advocated women's education. Roy, a staunch believer in equality of sexes, urged women to come out of their cloistered existence and receive the same education as men. In the Anglo-Hindi School founded by Roy in 1822, girls could study with the boys. Ram Mohan Roy was also one of the proponents of the Brahmo Samaj movement propagated women's education.

English Education in Post-Independence India:

After remaining for several centuries under the cruel clutches of the foreign rulers, India was nearing her independence. Significantly enough, it was English, the native tongue of the British colonial administration, and not any Indian language, that became "a major factor in creating a pan-Indian freedom movement in the nineteenth century" (Kirkpatrick, 170). Peggy Mohan puts it most succinctly in Wanderers, Kings, Merchants: The Story of India through its Languages :

Meanwhile in India, the movement for swarāj, or 'independence', was gaining ground, and this was a big chance to shake off the oppressive linguistic burden the British had imposed. India could go back to an administrative structure based on Persian, as in Mughal times. Or it could go forward into a new egalitarian age based on socialist principles, where rich and poor alike spoke the same language, and the children of the rich and the poor sat side by side in class in neighbourhood schools where there were no fees, learning their lessons in Indian languages, English could be banished with the stroke of a pen.

The Parliamentary Debates Over English:

Language became one of the most contentious issues in post Independent India. It was not an easy task to choose a single national language for a linguistically diverse country like India. Such a sensitive issue had to be handled with utmost care and sagacity. Our Constitution makers, being aware of this fact, hotly debated on this issue while framing the Indian Constitution in the Constituent Assembly. Some were in favour of crowning Hindi as the national language. The were of the opinion that English, the language of enslavement and oppression should be done away with in the free country. Many others, mainly from the non-

Hindi speaking areas, immediately opposed to the idea of the supremacy and dominance of one Indian language over other regional ones. Using multiple regional languages as official languages might appease people belonging to different linguistic communities. But that could further aggravate the problem rather than offering any solution. Ambedkar argued that while one language can unite, two languages will inevitably divide people. He was in favour of adopting Hindi as the official language since it would help developing a common Indian culture and therefore unite India (Journals of India). Apart from the opposition from non-Hindi speakers, there was another problem with Hindi and that was its dialectical variations. Hindi has almost thirteen different dialects and choosing one among them was another difficult task. Since no unity could be reached among the warring factions, a compromise had to be made and this came in the form of Munshi-Ayyangar formula. English would, henceforward, continue to be the official language of India, along with Hindi.

Radhakrishnan Commission and Mudaliar Commission:

The University Education Commission, the first education commission in independent India (Slideshare.net) chaired by Dr. S. Radhakrishnan recommended in its report submitted in 1948: "English be studied in high school and universities in order that we may keep in touch with the stream of ever growing knowledge. This would prevent our isolation from the world and help us to take advantage of the wider reach of the English language." English would be the medium of instruction for higher education. It is the Commission that pointed out the need for establishing rural universities and women's colleges. More and more women, not only the privileged urban ones, but also those from the margins would therefore be able to shape their destinies rather than confining themselves solely to the roles of obedient daughters, dutiful wives and caring mothers. The same commission emphatically suggested development of professional education in fields ranging from agriculture administration and commerce to medicine and engineering and technology. Needless to say, the need of English will be felt like never before as most of the knowledge in these professional fields was, and is still to this date, available in English.

Mudaliar Commission or the Secondary Education Commission, established by The Government of India in 1952, put special emphasis on the organization of special programmes so that secondary education among girls and the scheduled castes and tribes could be expanded.

Giving Voice to the Voiceless:

English education has also given louder voice to thousands of voiceless Indian women. Women authors have got wider platform and worldwide recognition owing to their writings being published in English. The works of *adivasi* (tribal) female writers like Susheela Samad (Munda tribe), Alice Ekka (Munda tribe), Usha Kiran Atram (Gond tribe) and Jacinta Kerketta (Oraon tribe) would not have been accessible to thousands of readers across the globe, had these not been translated in English. Publishing houses like Adivaani and Zubaan are playing a significant role in this regard. These tribal women have come forward to represent themselves

and their communities and in their writings we get insider's perspective. On the other hand, authors like Temsula Ao, the eminent author and ethnographer, retired English professor and recipient of 2013 Sahitya Academi Award, has penned several books in English. In a similar way, it is because of English translations that Dalit women writers like Bama Faustina Susairaj and Urmila Pawar have gained worldwide readership. Authors and activists like Meena Kandasamy has, apart from writing in English, translated other Dalit women writers' works to English.

The importance of English education on the lives of the most downtrodden and exploited section- women from the Dalit and Adivasi communities is of paramount significance. English education, apart from granting them 'upward economic mobility, modern status and access to globality" (Paik) has helped them escape a hierarchised system of education in the vernacular schools that stigmatize them on the basis of caste. English, the common global language allows the marginalized section of India- the Shudras, Dalits and the Adivasis (aboriginal people) "to live as equal and respectable citizens of the global community" (Shepherd). It is only in English that a common intelligence pool can be created and thoughts and ideas can be exchanged not only on national but on international level. It would help achieving a pan Indian and global solidarity among the marginalized people, and particularly women belonging to those marginalized castes, classes and groups who are doubly or triply marginalized.

The desperate need and urgency to master English rings in the voice of Chandrabhan Prasad, the notable Dalit intellectual: "For complete emancipation Dalit/Adivasi parents ought to give English education- if necessary working more hours, borrowing money, selling jewellery, even mortgaging properties" (quoted in Omvedt). The primary reason for such endorsement of English education is not because English is a sacrosanct language but because it is the "language of access and power," (Omvedt) the key to the global storehouse of knowledge of all kinds, the path to emancipation. The Dalit villagers of Banka village in northern Uttar Pradesh even went to the extent of erecting a temple in black granite dedicated to the Goddess English who is, as English teacher Amarchand Jauhar aptly put it, "modelled on the Statue of Liberty, holds aloft a pen and India's constitution, and her pedestal isn't the usual lotus but a computer monitor" (quoted in Rahman). The presence of the computer monitor immediately evokes the image of digital literacy. The life changing potential of English for those occupying the peripheri is understandable. But to what extent is English education accessible to these marginalized people in general and the women in particular ? That needs to be discussed.

Present Pan-Indian Scenario-English literacy and Digital Literacy:

"English has opened new horizons in every sense of the words and I owe who I am today to the ability to speak the language," says a costume designer from Venezuela. The same is true in the context of India.With increasing urbanization, a very important dimension of globalization, there can be seen an ever-increasing demand of English (Brit Council 8). As more and more people are moving to the urban areas to exploit newer opportunities, there can be found more

people exposed to English. Basic English skills are required for newer urban jobs. The hourly wages of those who can speak English is much higher than those who cannot. But whether everyone is being able to access proper English education remains a vital question.

In the contemporary pan-Indian scenario, proficiency and fluency in English has become a basic prerequisite for lucrative "skilled" white collar jobs. "Spoken English" assumes paramount importance in this regard. Despite having good command of the subject of specialization, it is English language skills of the prospective employees that is tested by the companies. (Deeksha Sharma). many of the students of vernacular-medium students, especially those from rural or remote areas, fall short here. As Subroto Dey observes most ingeniously:

Historically, English has been the preserve of the elite and the privileged in India. It is well-known fact that the first people to benefit from English education in India were the privileged and elites, who could send their children to English-medium schools and accumulate cultural capital over time. It is not only English as a language of instruction but the way it is spoken (accent) that creates a hierarchy in the society and allows the privileged to garner immense cultural capital (Bourdiew and Passeron, 1977) to be used for social mobility (EPW Engage).

Therefore, it is the same language which has immense emancipatory potential and is a key to upward social mobility, that strengthens the already existing binaries of the urban/rural and elite/subaltern. As the Centre for Research and Debates in Development Policy in India's 2014 report reveals, only twenty percent of the Indian population possess the ability to speak English. When it comes to "fluent" English, the kind of English desirable by the employers, it comes down to a mere four percent. Therefore, alarmingly enough, as Sunil Bhatia puts it, "4percent of the country's population has the ability to determine, control, and oppress the majority 96 percent simply by virtue of knowing English." Thus, argues Sunil Bhatia, English has created a new kind of caste system where the urban, English-medium educated elite caste reigns supreme. The fluent and smart English is more to do with accent, voice modulation, style of communication than with English grammar skills and depth of Knowledge in English language and literature. Parents belonging to the economically weaker section of the society, quite naturally, cannot afford to send their children to the English-medium schools where such grooming is done. The situation is even worse for the girls.

One's access to internet and various online platforms depends on her/his English literacy. Internet has become an inseparable part of our daily lives, especially since the outbreak of the COVID-19 pandemic. As most of us were confined within the four walls of our homes during the seemingly endless nationwide lockdowns and strict social distancing norms, many of us either chose to or were compelled to go online. The pandemic has, in many ways, brought unforeseen changes in work culture and education system. People are still grappling with the changes. Classes, examinations, seminars (webinars), conferences and interviews were conducted online. Even today, when the grip of COVID 19 has loosened, so many things are still being done in online or in blended mode. The trend of online shopping has increased to a considerable extent. These latest trends are especially challenging for the majority of Indian

women constituted by those from the backward and underprivileged section of society. I would here focus on an article by Regina Mihindukulasuriya published in *The Print*. Here, Mihindukulasuriya analyses a paper commissioned by Meta (formerly known as Facebook) entitled "Collect, Collaborate and Create: Women and Social Media During the Pandermic" written by Sattva Consulting, a Bengaluru-based firm. The findings, based on "secondary research" (sources like news reports and university research) and supported by "select one-on-one interviews" with women from diverse socioeconomic background, point out a "stark gender imbalance in social media usage" among the five hundred million (approximately) internet users of India. Males constitute sixty seven percent of social media users, whereas the percentage of females are just thirty three. While investigating the causes of such gender imbalance, the issue of economic class and geography comes to the fore. The "upper class" urban elites constitute the lion's share of Indian female internet users as they are "more aware about data privacy and cyber security" compared to their rural or working class counterparts. Indian women as a whole are digitally less literate than men and fewer of them own devices like smartphones, tablets and computers.

But what has all this to do with English? English literacy, needless to say, is inextricably linked with digital literacy. As the above-mentioned paper significantly points out, currently most of the online communication and content in India is in English and not in the regional languages/vernaculars. Therefore, it is the language barrier that bars women from economically weaker section and rural background to access and properly use the internet without help from family members or friends. "Such women", according to the paper, "can't read terms and conditions of social media use, privacy updates and other app updates in English", and it hinders "meaningfully accessing social media platforms." Things might have been different a decade or few years ago. But in this altered global scenario, and especially after the pandemic, the necessity of internet has increased to such an extent that those who cannot rip the benefits of internet and social media platforms are bound to lag behind. Thus, women who are not proficient in English, fails to "upskill and diversify their income stream" and to "develop new skills". Their aspirations for upward social mobility emancipation from the confines of their homes are nipped in the bud.

Conclusion:

English education, which began to be imparted in the Indian colonial context to create a class of English-educated and westernized Indians who would be operational in the smooth functioning of the British colonial machinery, proved to be a boon in disguise for Indians. Substituting the existing system of education accessible to be and monopolized by a choiced few- mainly upper class and upper caste male, English education created a space for all. Which started as a mission of creating *bhadramahilas*- educated enough to become eligible and better housewives and mothers, helped women question and rebel against the restrictive norms of patriarchy that oppressed and repressed them. It is the English education that particularly

helped the *avarna* women- the subalterns without any voice, to create representational spaces where their ideas and thoughts could be articulated. The need of English, the global language that links India with India and India with the world, is forever increasing. English education, in today's global scenario, is inextricably interlinked with digital literacy, both of which are must for communication, education, commerce and employment today. However, since English is not still accessible today to many Indian women, especially those from the remoter areas and backward classes and castes, it creates another kind of caste system based on English literacy. Notwithstanding these detrimental effects, which are not inherent in the language itself, banishing English as a medium of instruction at the primary level will only cause more harm. The need of the hour is to handle the issue in a delicate yet effective manner. The vernacular and English, rather than replacing, should complement each other.

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CHAPTER

12

Role of Language Laboratory in Second/Foreign Language Teaching and Learning

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Introduction:

The history of the Language Laboratory is not very old. It originated in the USA but rapidly gained ground in the UK in the 1960s. It has formulated some important teaching techniques in a few countries, including India, especially in teaching foreign languages. Essentially language laboratory is a device that promotes self-learning. Here the learner can hear the language spoken from recorded tapes, and then they practice speaking in the same manner. The language laboratory mainly concentrates on listening (comprehension) and speaking, leaving reading and writing skills to be developed later. When speaking, it tries to develop correct pronunciation, intonation and accent. It also aims to develop an ability to use the words, idioms and phrases in the language in the correct way. Lastly, it helps communicate the learner's ideas effectively in the language. A small group of learners is taken in Language Lab. Batch. It enables a group of 20 learners to use the same material at a time.

Role of Language Laboratory in Developing Language Skills

A language laboratory is aware of individual differences in language aptitude worldwide; IQ is not an important factor in this difference. Language Laboratory recognizes this difference, so its approach is essentially individualistic. Much time is allotted for oral and auditory experiences in Language Laboratory. It allows students to hear the language spoken by a native speaker and to practice speaking in the language among themselves. A language laboratory is a well-designed and carefully- produced pattern of drills. In this way, it relieves the teacher of endless repetition of the same patterns.

Language laboratories are valuable as they offer students a structured eLearning environment successfully and reliably. A language laboratory is a kind of educational technology that facilitates the teacher's role in creating a more attractive learning environment in the classroom. Language laboratory becomes an alternative of language books and can offer their students more practice hours and up-to-date exercises as books.

Types of Language Laboratory

Generally, Language Labs are of five types as follows:

LEVEL I: A type (Audio System)

LEVEL II: AA type (Audio-Active System)

LEVEL III: AAC type (Audio-Active Comparative System)

LEVEL IV: AACC type (Audio-Active Comparative with controls System)

LEVEL V: AACI type (Audio Active Computer-based interactive System)

LEVEL I: A type (Audio System):

At this level, the teachers and the students are well-equipped with a tape recorder, audio cassette and a microphone to teach students. The teacher played tape recorder, and students listened and learned the pronunciation of the words. However, this level has only one-way communication and no opportunity for feedback.

LEVEL II: AA type (Audio-Active System):

Here in this level, students can not only listen to audio programs or messages transmitted by a teacher but also can record or listen to the teacher's oral response through tape/cassette/ microphone recorded in the teacher's control. This level is two-way communication.

LEVEL III: AAC type (Audio-Active Comparative System):

Level III provides advanced technology compared to LEVEL II AA type (Audio-Active System). 2 track cassette tape recorder is given to every student and can be controlled through remote from the teachers' console if necessary. Materials can be achieved directly from the teacher-instructor or programs sent to them from the teacher's cassette recorder and pre-recorded nonerasable tapes inserted into a tape recorder. Students can control the cassette recorder and re-record it as many times as they wish in a continuous format.

LEVEL IV: AACC type (Audio-Active Comparative with controls System):

Level IV provides adequate teacher and student control function for full-scale inter-communication. A teacher can check all students' prosperity at once by raising questions or conducting an examination. Here students can control the tape or cassette recorder by playing, pause rewind, and fast-forwarding as per teachers' instruction or their prudence. They can obey and record delivered messages or responses per their needs in a particular situation. Students may be self-employed or can follow teachers' instructions. AACC system enables students to learn at their own pace.

LEVEL V: AACI type (Audio Active Computer-based interactive System):

Here the computer is used to teach the student. The Level V AACI system illustrates a computer-based interactive language system. The course material is already brought up into

the computer and presented to the students. A full range of software formats, such as audio CD, Audio Cassette, CD-ROM, AV cassette etc., is provided. In this level of language lab, an internet connection is accessed. The teacher can easily evaluate how AV channels help the students through program material/instruction.

A language lab is practical

A new language cannot be learned just by studying the theory, which does not guarantee a successful language-learning experience. Practice in Language labs is entertaining and interactive to acquire the four main language skills: LSRW, i.e., listening, speaking, reading, and writing. Students learn more comprehensively through a language lab.

Self-learning:

The students are encouraged to self-study and progress in self-guided but structured and progressive training to achieve the goals and objectives set by the school or educational institution.

Complimentary:

Language labs allow students to reinforce material learned in class by putting them through interactive practices with group members.

Monitoring and Evaluation: Language Lab helps the teachers monitor each student's progress and receive reports of strengths and weaknesses. It helps the teacher to adapt the classroom activities better.

Students learn much faster in the language lab

Practice leads to success! The same phrase applies to language learning. The interactive courses of language lab help students learn very quicker than in the old regular classroom setting mode. This progressive model promotes natural learning. Here the learners intuitively learn the different concepts of language. Language law motivates students to achieve higher levels of language retention and progress.

The teacher takes on a more important role in the language lab

We are scared that technology may replace the role of the teacher and that the teachers' need will become obsolete in this Edu world. The language lab has broken this myth because it provides supplementary materials that facilitate and compete with the instructor's role. The teacher need not waste time explaining everything and can focus on the important parts of the course. The structure of the language lab courses focuses on interactive resources, which not only facilitate the work teacher puts in when preparing lessons but also allows them to prepare the materials in less time with a greater volume. In this course, student information is collected, and instantaneous reports of the lesson's progress against objectives are provided. The teacher can use this information to guide the direction of the class.

Use more resources and varied activities than in a traditional classroom

Language labs help students to practice any foreign or second language with much wider exposure. A variety of activities and exercises are designed on the computer. Learning occurs within a structured framework, in the formal context and in an attractive way that motivates the student in the language learning environment and promotes language use. Here the students watch videos and practice their pronunciation through a speech recognizer, in this way, they learn new vocabulary and many more things.

Language labs allow for diversity in the classroom

Language laboratories provide interactive courses, and teachers are attentive to the students because, for different schools, students' levels are different, and language labs are made to meet students' individual needs. But, on the other hand, teachers can monitor the class and evaluate from time to time as per course objectives and major difficulties of the student and can reinforce the class accordingly.

Labs foster communication in the classroom

Language labs also lead in communicating among student-teacher as well as student-Students with activities and exercises essential to verbal communication and comprehending the language. The Language lab includes tools for creating groups for communication, hosting conversations via chat, promoting messages on the board, and accessing a community of students by uniting those studying the same language in a group.

Language labs are an intuitive tool for both the student and the teacher

Professional Technical skills are not needed in this language learning method for use in the classroom, the teacher only requires basic computer skills, and students will welcome the added technology they are already so adept with.

Language labs optimize computing resources

Higher education institutions have classrooms with computers there for students to complete school work or study other subjects. A sufficient number of faculty computer labs and office computers for administrative work are also available. Language labs easily recycle resources an academic institute already has and adapt them to the language course.

As a whole, language labs are considered to be very comprehensive as well as a cost-effective tool for every educational institution to monetize their language training and also develop student's skills for effective language learning, especially in second/foreign language, with the help of the latest technology and educational content. Language Lab provides the solution for designing a structured academic curriculum with the aim of establishing an educational center with an international vocation audience that seeks the highest quality in teaching-learning skills in foreign/second language learning.

Advantages of Language Labs.

Language lab. Provides practice in a harmonious way in four language learning skills, i.e., listening, speaking, reading and writing. Through the lab, students can learn extensively.

- Language lab removes inhibition in speaking in public and fills the heart with the joy of learning.
- Language Lab helps to develop speaking skills in average learners.
- Learners develop and practice linguistics and rhetorical skills in Language Lab. through a n exchange of information.
- Very quickly, language lab speeds up comprehensively. As a result, even low-grade and average students can learn a foreign language easily.
- Students can learn according to their time and pace and can record their voices.

Disadvantages of Language Lab.

- Some types of knowledge cannot be verified by experimentation. As a consequence, language lab has limited applicability.
- In a language lab, more than 20 students cannot be accommodated.
- It needs high-quality teachers to control the whole process.
- The teacher cannot arrange separate equipment and other material for individual students due to a lack of resources.
- Sometimes language lab behaves mechanically due to a lack of human resources.
- When too many students want to attend, the responses are disorganized and ineffective, as the

teachers listen to the students randomly.

Conclusion

The language laboratory is a very effective tool for teaching and learning speaking and listening skill. It helps practice and assess one's speech in any language. It helps to allow the student to listen to the model pronunciation. They can rewind/repeat and record the same. They also can listen to their performance and compare it with the model / recorded one. In this way, they do self-assessments. Since the language laboratory allows every learner of any language freedom to learn according to their own pace, it is flexible as it does not require a teacher's presence all the time. At the same time, teachers can assist individuals as well as collectively. The language laboratory allows each participant their privacy to speak and listen.

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