Original Paper

Learning Trend Methodologies from BC Greek Sophists to 2000s' Blended Open Source Schooling: A Comparative Analytic Study

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Abstract

The period of recorded history extends to 5,000 years BC, where Sumerian-Akkadian script confirmed the fact of being the oldest discovered record of coherent writing from the preliterate period around the 3000 BC (SE Alcock, 2001; Woods, 2010). Since that date of early basic literacy of human history, B.C pioneers, philosophers, leaderships and professionals exerted every efforts to advance their local environments in politics, state identity, public administration, urban centers, culture and faith, education, innovative thoughts and arts, and civic daily life. Consequently, B.C significant ancient states and civilizations arose and flourished into world sovereign empires, exceeding in several fields their contemporary counterparts the so-called "Big Powers" in the 21st century A.C. Even these "Big Powers" proved helpless in resisting the invisible virus "Corona", which caused the death of hundreds of thousands of persons, and is threatening millions of others in facing health problems or termination later. The status of world states (powerful or marginal) is determined by the quality of its educational systems. Further, the future of civic and productive students as adults is dependent upon the rigor of schooling methodologies, which encompass: learners who are dedicated to learn; teachers who guide and teach; peers who are collaborative learning partners; curricula, which are served by textbooks and material in the classrooms; methods, techniques and technologies as communicative tools of education and management messages; and school environments, which physically host most education factors, processes and services. Hence, this research article examined the educational methodologies cumulative from BC Sophists to the ICTs revolution at 2000+ A.C. a Comparative analytic review was conducted to specify the advances and setbacks accrued during the extended 500B.C-2000+A.C years in the lives of generations as future crucial professional, leaderships and pioneer assets of society.

1. Introduction

Schooling is an ever-persisting developmental activity of life. No one human being can survive and manage life without some sort of informal and formal education. The Sophists initiated this task by a nomadic style at the early literate history of humankind up to the fourth century BC when *Plato, opened the first "one classroom school" in the name of "Academy"* (Stanley, 2007). Thus, it marked the first educational institutionalized residential revolution of schooling, which started by Plato Academy 387 BC.

However, World ancient societies and leaderships continued to advance further. These efforts culminated in the rise of ancient civilizations of BC Egypt, the Roman, the Greek, the Chinese, the Persian, and the Mesopotamians, e.g., Akkad, Sumer, Babylon, and Assyria civilizations (Kuiper 2017; SE Alcock, 2001). Within the above civic climates of ancient nation-empires, a learning- teaching profession had emerged as an informal private practice. As such, Confucius was the master teacher in China. The Great King Hammurabi had privileged of reformer fame in Babylon and the surrounding "Ancient World" (Marc, 2006).

Non-the-less, Plato Academy of "one teacher- one classroom-one school" (OTCS) model of 387 BC was followed by Aristotle's "Lyceum" 323 BC, Isocrates near the Lyceum, Zeno in the Stoa Poikile and other Greek similar projects. Later at the 500 AC, local private initiatives in the Arab Middle East followed Plato Model under names of the Katateeb and Mosques tutoring Circles.

Figure 1 shows 2500 years from BC to 2000s AC of significant educational developments of both analog and digital schooling (Ziad Hamdan, 2008).
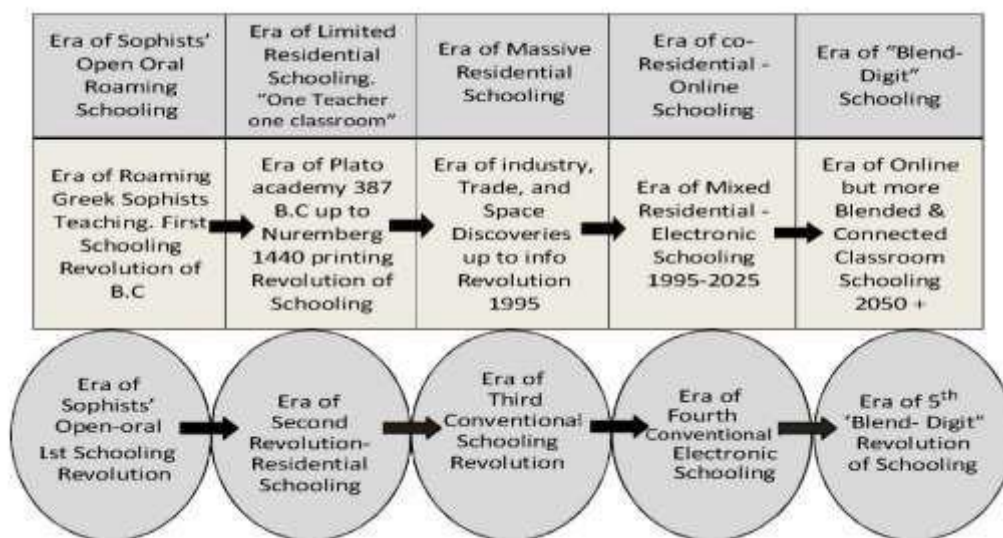

Figure 1. Eras of Schooling throughout Recorded History (Hamdan, 2008)

The OTCS model continued as a learning trend up to the fifteen Century AC. Where Johannes Gutenberg's invented the printing machine in the 1440s (Bellis, 2007). The printing invention had provoked firstly, the rise of the "conventional classroom-based "the Factory Model" (Tarun, 2017) during the Industrial period 1800-1900 (BBC 2014); and secondly, the mass written-books instruction, which prevailed in schooling up to this 21st century.

2. The Research Methodology of the Article

This research article adopted the "Descriptive Retrospective Ex-post-facto (after the fact) Design", where the researcher traces back the cause-effect relationships to reach through data analytics to sufficient conclusions concerning the validity and reliability of the topic data under investigation (Ziad Hamdan, 1989. in Arabic).

- A Brief Review of Learning Trends given the Thoughts of Ancestor Pioneers of BC Era

1- The Babylon Learning Trends at (2000 B.C.-1595 BC), "The Old Babylonian School".

Babylon schooling was society-centered but private business initiatives directed by interested individuals or leaders of one generation to another. However, "scribes" were individually learning the art of writing new texts or copying existed tablets for passing on Babylonian cultural heritage to generations. The graduates of scribing school used to work as counselors of legal affairs, public relations, and a palace or temple administrators.

Gabriella (2019) wrote "The Old Babylonian School" called in Sumerian "*edubba*": "the house of the tablets" or "the house allocated tablets"). The term stands for school, library, and scriptorium at the same time.

Babylon library comparable to today's school's concept, facilities, and equipment (the 2020s), this writer points out that the 2000 BC Babylonian store where schools' authorities kept the tablets for future use represents the school library's in its' ultimate reality.

Further, when Scribals used the space of tablets' storage for learning with some mentoring, including the guidance of an adult, it turned out to actual classroom where learning, teaching, and assessment took place. Finally, the clay tablets were, in essence, eventual school textbooks.

The abundant evidence for scribal training and detailed, reliable knowledge was available. This heritage was due to the digging excavations and discoveries in several Mesopotamian ancient cities, due to workers uncovered thousands of school texts in private buildings located next to each other in a "scribal neighborhood". The Old Babylonian education operated on a small-scale, directed by private initiatives from one generation to the next.

The function of the "*edubba*" was of two-folds: one task was to train the scribe in his writing/copying profession, equipping him to record day-to-day affairs, and the next was to maintain and pass on the rich Mesopotamian cultural heritage.

Further, *the Old Babylonian scribal curriculum also had two main stages of education. In the first, mentors introduced students to the cuneiform writing system as well as performance measurement*

3

scales. These instructions included Sumerian vocabulary, grammar, and models of sentence structure. Education moved from simple to sophisticated and afforded many occasions to reinforce former learned skills and knowledge through repetition.

The teacher (Sumerian "ummia") in the above stage, used to supervise closely the students, who would copy from a teacher's model, or write through dictation. However, in the later stage, advanced literary texts, students copied the texts and were more autonomous and did not have a master's model to copy.

Not all the scribes continued to the advanced curriculum. Only scribes interested in specializing in a particular administrative field, such as legal affairs, public relations, and palace or temple administration, which did not need to widen his knowledge of literary texts (Gabriella, 2019).

2- The Ancient Egypt Learning Trends at 3100 BC-332 BC

Ancient Egypt education was the first organized formal corporate managed by the priests, the second governing authority to pharaohs, the monarchs from the First Dynasty (3150 BC) until the annexation of the Roman Empire in 30 BCE. The Priests were responsible for teaching religion and morality matters, and scribes (the civic assistants) provided secular instruction on many subjects (History.com Editors, 2020; Wikipedia, 2020).

Ancient Egypt extended "from its unification around 2768 years from 3100 B.C. to its conquest by Alexander the Great in 332 B.C. Ancient Egypt was the preeminent civilization in the Mediterranean world" (History.com Editors, 2020).

Education in ancient-Egypt, two groups were involved: the priests and scribes had managed schooling. Priests taught religion and morality while scribes provided secular instruction on reading, writing, and other subjects, including medicine and mathematics. In the ancient Egyptian education system, the same worker of the scribes would teach all the school's assignments (Rymer, 2019).

3- The Greek Sophists Learning Trends at 500 BC

The Greek Sophists initiated 500 years BC, the first semi-professional learning trend in World education history, merited by oral analog informal presentations at open public spaces. It resembled the concept of "classrooms & schools without walls", in contemporary ICTs movement at the current Information Age. The Sophists used the nomadic style to roaming big Greek cities to offer open oratory speeches in different subjects to "voluntary" gathered audiences.

In ancient Greece, a new educationist group called Sophists appeared around 500 BC (Duke, 2014). Sophists had disputed characters. In one view, they were education intellectuals. On another, they were anti-logical fraud. In brief, Sophists as called in Ancient Greece, "wise men" in Athens and other Greek big cities at the 5th-3rd century BC, were widely recognized by conducts such as (Duke, 2014):

- "unique personal character,
- over tuned by gowns, helmets and colored dresses;
- oratory and lecturing forms of teaching;

4

- ability to influence fellow citizens in political gatherings and through rhetorical persuasion. The use of false argumentations and debate".

However, educators cannot deny what Sophists had accomplished for making education a recognized paid profession, as observed in today's schooling. In addition to seeing Sophists, the first semi-professional teachers considered regulating movement for the teacher and teaching profession. The Sophists movement had awakened public awareness for the crucial role of schooling in upbringing generations. Sophists also were the power beyond initiating the first open-ended analog methodology in education, which lasted about 100 years pre- Plato founding the "Academy" and Aristotle the "Lyceum". Also, professionally survived for more than 200 years after that.

4- The Plato Learning Trend at 387 BC -327 BC.

Plato, as a human, a scholar, a philosopher, and a reformer of education, is an exceptionally moral, noble, and magnificent person. Plato, with his unprecedented accomplishments' legacy of the Academy, the dialogues, letters and authored books, and distinguished leadership of philosophers' discussions, was a giant but humble, and excelled performer but dignified self-contained and non-verbal man. Plato, along all of his life, mentioned the name: "Academy" only twice. One described Socrates walking from the Academy to the Lyceum, and another was the mention of gymnastic training (367a) on the grounds of the Academy.

> *Learning Trend Methodology of Plato: this is the first formal entity of residential school called the "Academy", which was the first of its kind in World history as a "one teacher-one classroom school "model) supported by outdoor activities through nature trips at the Academy's surroundings. Plato, on the personal side, was a giant scholar but humble and unique human being. Plato's philosophy and educational heritage had taught human societies and institutions along 2500 years big morality lessons in nobility, dedication, faithfulness, altruism, and the ultimate care for others. He established the Academy, a tuition-free school, and the first residential school and university in the Ancient World. However, Plato mentioned it only twice throughout his lifetime. He accomplished much in writing, authoring, and discussions but let it speak for themselves in reality. Plato was the most faithful dedicated disciple of his master teacher, Socrates. Plato wrote the "Dialogues" after the biography and chats of his master teacher Socrates. Further, Plato was the sole private devoted tutor for twenty years of the intelligent student Aristotle, who became the exceptional tutor of Alexander the Great.*

Further, Plato's notable dedication to his master teacher Socrates through the Dialogues and the ultimate care as an exceptional tutor for 20 years to his elite pupil Aristotle were just incomparable.

Plato strongly believed that "only by being educated can an individual realize his function and contribute to a well-functioning society".

For knowledge and learning, Plato argued that "true knowledge is inherently present in a person's soul and became cloudy by their perception of reality. In debating the issue, Plato stated that the soul once lived in a true reality where it possessed all knowledge. However, it forgot it once it occupied a human

5

body. Thus, Plato says that the 'learning' of new forms (ideas) is simply a recollection of what we once knew" (Tarun Mittal, 2017).

Plato recognized that *only through education can an individual realize his real function in society*. In the Republic, education is considered *only second to justice for the creation of an ideal state*. Plato advocated state-controlled education and was against any form of forced learning. Education is the art of orientation. Educators are encouraged to articulate simple methods to align learning in the right direction (Arun, 2018).

Schooling during the extended period for more than eighteen hundred years (from Plato's Academy 387 BC to Gutenberg's printing machine, 1440), had persisted all along in nature, content, methods, human and educational services, facilities and outcomes. Examples of these "one classroom" schools were "Dame Schools" in western education (French, 1964). The Katateebs (writing classrooms) was another example practiced widely 600 AC-1500 AC in Arab / Islamic Middle East (Figure 3).

3. Plato Academy

Plato had a profound impact on philosophy, education, and culture due to three aspects of his philosophical life (Trelawny-Cassity, 2020): his written philosophical dialogues, the teaching of his student Aristotle, and the educational organization "the Academy". Plato's Academy took its name after the place the Akadēmeia, located three-quarters of a mile from the Agora ("marketplace" or "downtown Athens"). This close distance made it accessible to anyone interested in observing the Academy's activities in Plato's time.

Although the Academy was an essential part of Plato's legacy, Plato himself was silent about his Academy in all of the dialogues and letters attributed to him. The word "Academy" was mentioned only twice in the Platonic literature. In both cases, it refers to the gymnasium rather than any educational organization. One hint is from the *Lysis*, which describes Socrates walking from the Academy to the Lyceum (203a). The other mention is the gymnastic training (367a) on the grounds of the Academy.

The Academy was merited with sacred considerations through the inclusion of a public facility appreciated by the Athenians, the gymnasium. Gymnasia became public places where philosophers could congregate for discussion and where sophists could offer samples of their wisdom to entice students to sign up for private instruction.

The sophists and philosophers' use of gymnasia in the fifth-century BC served a prelude to the "school movement" of the fourth century BC. Such as Plato Academy, Isocrates near the Lyceum, Aristotle in the Lyceum, Zeno in the Stoa Poikile were examples. These enterprises had a close kinship to the educational activities of the sophists, Socrates. They edu-philosophical-contributed to the development of medieval, Renaissance, and contemporary schools, colleges, and universities in Europe.

Plato began leading and participating in discussions at the Academy's grounds in the early decades of the fourth century BC. By the mid-370s BCE, the Academy was able to attract Xenocrates from

6

Chalcedon (Dillon, 2003, p. 89), and in 367, Aristotle joined the Platonic Academy.

For Funding the Academy, much of the Platonic Academy's activities were on the public grounds. Naturally, discussions and possibly shared meals would also occur at Plato's nearby private residence and garden. Hence, Plato considering the Academy's private ownership, and Following Socrates' example and departing from the sophists and Isocrates, they did not charge tuition for individuals who associated with him at the Academy.

While the Academy in Plato's time kept commitments to Plato's personality and a specific geographical location, after Plato's death in 347 BC, chief administrators headed the Academy for several generations. They exerted a powerful influence on its character and direction.

However, all Academy's facility locations were destroyed by the Roman general Sulla's 86 BCE, marked by the end of the physical institution begun by Plato. However, pro- philosophers and Academics persisted in Athens until the sixth century CE. This period witnessed a transition of the Academy from an educational institution to an Academic school of thought stretching from Plato to fifth-century CE neoPlatonists.

5-Confucius' Learning Trend in China at 551 BC- 479 B.C

> *Confucius, the 'first teacher in China' and named the "Master Kong". He transformed teaching by means of ethical, moral, and social standards into a recognized Chinese profession. Confucius is the first philosopher and educationist pioneer who called early before 2500 years for open borders among world nations. Confucius is the first who nationalized education to make it available for all regardless of socio-economic prejudices. Confucius revoked feudalism and aristocratic monopoly on schooling, and established private institutions to teach students of all social classes without Discriminations.*

"Confucius is known as the 'first teacher in China' who wanted to make education widely available and instrumental in establishing the art of teaching as a vocation. He also established ethical, moral, and social standards that formed the basis of a Confucius way of education and life" (Roger, 2020).

Confucius broke links with traditions due to his belief that all human beings could benefit from education. He espoused lifelong learning for the sake of the self-meaning, self-knowledge and self-improvement. He attracted a huge number of followers, who called him as Kongfuzi (Master Kong).

Top Contributions of Confucius to Contemporary Education.

These appear briefly in following (Saugat, 2019):

•   Confucius is the founder of Confucianism philosophy, which teaches people how to live a moral life, besides effectively administering a fair government.

•   Confucius broke cultural boundaries among nations. He called sharply before 2500 years for open "cultural psycho-physical walls" among world nations. This new scholar demand is seen revolutionary even today, since contemporary info- educational policymakers exert the efforts to bring together glocal schooling for more effective learning and teaching, but more to maintain open-ended communication

7

channels among schooling, cultural, and secular transnational societies and institutions across the Globe.

• Confucius was a firm advocate of learning for all, rich and poor, privileged or disadvantaged, city residents and rural children, or desert Bedouins. They all have the right to learn every need for their growth and development. While elite students in traditional education before Confucius having a formal educational position were merited to study six subjects: chariot driving, mathematics, music, archery, calligraphy, and rituals,

• Confucius canceled the old practice of feudalism and aristocratic monopoly, and established private institutions to teach students of all social classes without Distinction.

• Confucius was a strong proponent of the professional training to sharpen workers' skills and to achieve better knowledge and values to qualify them for better teaching.

• Morality for Confucius is of ultimate priority to the conduct of human beings. It relates closely to the issues of values and virtues and includes four practices: benevolence, righteousness, civility, and wisdom.

A Transitional Learning Trend of Private Small Groups' Tutoring in Churches and Mosques, 600-1500 AC.

The Katateeb and Church's /Mosques Circles Learning Trends were society oriented Methodologies, concerned with perpetuation of the elements of local cultures by pupils who keep and move them from generation to another. Tutoring instructors used forms of short didactic oral analog teaching mixed with some writing exercises up to 1450 A C. The current methodology is a transitional-learning scheme of Plato's Academy and Aristotle's Lyceum, "one teacher-one classroom school".

The Katateeb and Church's / Mosque's Circles' Learning Trends at 600-1500 AC.

These school "faith" facilities (Al-Hassan, 2016. in Arabic, Excite education, 2020) hosted relatively small groups of learners, managed by relatively knowledgeable adult men or women teachers in Europe and Arab Middle East. Tutors used the didactic vocal, rote learning, writing assignments and apprenticeship techniques. Curricula concentrated on stuffing students with religious instructions, the "three Rs" or the "Basics" (reading, writing, and arithmetic), philosophy, and some science of the time. Student graduates as literate in these areas and tentatively were capable of dealing with simple ongoing life needs, perform simple public and communication jobs.

Figure 2. Katateeb (Writing Classrooms)

Note. An original photo of the "one classroom School model", dated 1945 AD It is probably the latest practice before Public Multiple Classroom Schools came to the fore in the Arab Middle East. Ahrar (freemen) Bridge / twitter.com

Katateebs were practiced in Arab Peninsula before Islam. With the advent of Islam at the beginning of the seventh century AC, Katateebs spreaded everywhere especially in the newly established Mosques. One unique decree of the first Government in Islam (Al- Rashidun Caliphate), had been issued to regulate the welfare of Arrested persons of inter-tribal disputes. The decree required each prisoner to tutor 12 children as a pre-condition to be freed from detention. This Author believes that the "education-freedom decree" is the honorable understanding of all times. It did lead to magnificent decision that typically produced two precious values: freedom of a human being and the education of a needy child (Al-Hassan, 2016. in Arabic).

However, limited residential schooling continued until the mid-fifteen century AC by then Johannes Gutenberg invented the first automatic printing machine in the 1440s. As one writer put it (Bellis, 2007), "can be credited not only for a revolution in the production of books but also for fostering rapid developments in the sciences, arts, education, and religion through the transmission of texts".

A Brief Review of Learning Trend Methodologies based contributions of Ancestor Pioneers of 1500 to 1960 AC.

"Gutenberg's invention of movable typing in the mid-1400s triggered a revolutionary shift from the use of the mind as storage to the mind as a processor of print-based information" (Bellies, 2007). The consequent effects of this invention on the processes and means of schooling and education were enormous.

The machine typing invention of Gutenberg 1445 had marked the fifteen Century as the milestone of the second revolution of schooling. Schooling that turned massive and open for all was concerned for the religious establishment and the state. Thus, transforming the one classroom methodology of Plato academy 387 BC and Arab Medieval and Renaissance during 600-1500 small Tutoring Circles in thorough practice, magnitude, curricula, methods, and institutions to its new academic and professional multi-classroom schools levels. Schooling had merged into a private and a state daily business. Figures

9

1 represents the subsequent developments of education since the BC era to the "Blend-Digit" methodology at years 2000+ (Hamdan, 2008).

This period had witnessed standardizing of school buildings and classrooms, study sources, teacher preparation and teaching roles, learners' plans and procedures for learning, and steering intended futures.

Sturdy (2017) has recommended for schooling environments "schools like homes have a personality". It should be large enough to comfortably host all students, windows for the sun and air, and furniture viable to move, modify, and use flexibly.

1- Jean-Jacques Rousseau's Learning Trend Methodology, 1768 AC

Learning Trend Methodology of Rousseau, advocates Emile "to learn how to live righteously", to have a free will to grow through the real nature, and to live his/her real childhood in all details. The learner has the ultimate right to think and learn according to its way.

> *Learning Trend Methodology of Rousseau is the first real "Child-Centered Approach" in world education. Before 150 years of Dewey's experimentation with the approach, and 250 years before pro- ICTs' called strongly at the advent of 21st for integrating the "Learner-Center-Paradigm" in a daily schooling. However, Rousseau advocated Emile (his virtual pupil) "to learn how to live righteously", to have a free will to grow through the real nature, and to live his/her real childhood in all details. The learner has the ultimate right to think and learn according to personal own way.*

Rousseau published in 1762 two major books, Literally of the social contract, Principles of political Right. Moreover, "Emile" in which Rousseau set out his views on education, in Emile. Contemporary education has benefited from Rousseau principles of the open-source, free choice, education though nature, not books, and the importance of play and physical activities in learning.

The aim of education, according to Rousseau, is to learn how to live righteously. He divided the growth of a child into three stages (Paul, 2009):

1. To the age, about 12 children live like animals

2. From 12-16 starts to develop

3. 16 onwards, the child develops into an adult.

Rousseau was a naturalist and believed that the "child should be allowed to grow close to nature, and given the right to think in his way".

•   Rousseau believed that the child is a child and not a small adult. He also stressed that childhood is a crucial period in life.

•   Rousseau also believed that the child should learn from nature, and should not be obliged to do things.

He further confirmed "education" comes from nature, from men, and things.

•   Rousseau was the first to give the child his rightful place. He was the liberator of the child.

He points out four stages in the pupil's development.

10

- Infancy needs by habit training of emotions.

- Childhood needs senses training.

- Boyhood needs the training of the intellect. Adolescence is the stage of morality.

Rousseau's views on education are very similar to Mahatma Gandhi and Pestalozzi, who advocated the development of the whole child. He said that our teachers are our feet, hands, and eyes. It also pointed out the importance of physical exercise.

Rousseau stated in this regard, "Give the child constant body exercise make it strong and healthy to make him good and wise", let him work, let him do things. Let him run and shout. Let him be always on the go, make a man of strength he will be a man of reason.

Further, He recommended the heuristic method, a method of discovery to let him learn little or no books, which can learn from experience. He introduced the "play way".

He thoroughly believed that children should never receive punishment, and they should learn the natural consequences of their fault and should be trained to be self-reliant (Paul, 2009).

2- Friedrich Wilhelm Froebel's Learning Trend Methodology, 1837 AC.

The whole movement of pre-school kindergarten systems, including the "Name Brand", the educational philosophy, the goals, the learning contents, the techniques, and outcomes, owe Froebel's most dedicated educational framework for children age 3-6 years. This early education stage is believed highly fundamental for achieving the quality generations at the next growth stages up to adulthood, including the future quality of adult society.

> *Friedrich Wilhelm Froebel is the pioneer and founder of the Kindergarten movement in world education. The Kindergarten provides the child constructive play and self-activity; and concerns itself primarily with the development of a child's character and provides her/him the right motivation to learn. The conventional task of schooling, "transmission of knowledge" represents the least interest of Froebel's Kindergarten.*

Froebel and the Kindergarten Movement

Froebel (Encyclopedia Britannica, 2020) was the founder and the father of the kindergarten movement based constructive play and self-activity in early childhood. Later, upon returning to Keilhau, Switzerland, in 1837, he opened his first *Kindergarten*, or "garden of children", in nearby Bad Blankenburg. The experiment attracted broad concern, and other kindergartens started and widely spread in the environment

Froebel Pedagogy

Education had two sides: the non-teacher- directive mentor to ease the self-development of "self-activity" of the child, and advisor for correcting misconducts learned from the environment. Thus, the teacher should not intervene and impose mandatory education. However, when a child of Kindergarten faces psycho-behavioral troubles, e.g., restless, tearful, or willful, the teacher must seek the underlying reason and try to treat the hardship, which prevents the child from learning and development creative development.

11

The school for Froebel was not an "establishment for the acquisition of a greater or lesser variety of external knowledge"; rather, it should be the place where the pupil comes to know the "inner relationship and unity of things", which mean God, human, and nature. The school should concern itself not primarily with the transmission of knowledge but with the development of character and the right motivation to learn.

3- Johann Friedrich Herbart's Learning Trend Methodology, 1776- 1841 A.C

> *Herbart saw learning as beginning with an idea that the child has previously acquired from experience and social interactions. This task leads the child to create knowledge and has an appreciation for it. The ultimate*
>
> *goal of this methodology is the formation of the righteous ethical character of the individual. For Herbart, Ethics are the eventual focus of pedagogy.*

Johann Friedrich Herbart (Encyclopedia Britannica, 2020) was a contemporary of Froebel. Herbart had studied at the University of Jena under the idealist philosopher Fichte. Herbart was a German philosopher, psychologist, and founder of pedagogy as an academic discipline.

Herbart confirmed, ideas, like things, always exist and always resist change and seek self-preservation. Some ideas may prove under the threshold of consciousness. However, the excluded ideas continue to exist in an unconscious form and tend to remove obstacles (as through education), to return spontaneously to consciousness. In consciousness, ideas are attracting other ideas to form complex systems. These masses correspond to the interests of the individual's belonging, such as home, hobbies, and broader philosophical and religious concepts and values.

In the classroom, the lessons tend to introduce new conceptions, to bind them together, and to order them. Herbart speaks of "articulation"—a systematic method of constructing correct, or moral, idea masses in the student's mind. First, the student becomes involved in a particular problem, and then he considers its context. Each of these two stages TEMP, has a phase of rest and progress. Thus there are four stages of articulation (Encyclopedia Britannica, 2020):

(1) Clarification, or the static contemplation of particular conceptions,

(2) Association, or the dynamic linking of new conceptions with old ones,

(3) Systematization or the ordering and modification of the conceptions deemed of value,

(4) Methodization, or the dynamic application and recognition of what has learned.

Herbart phrased this system of instruction in very general terms. However, successors tended to turn this framework into a rigid schedule to be applied. Non-the-less, it is expected from educators to be familiar with the methods, try them out according to circumstances, alter, find new ones, and extemporize; "only we must not be swallowed up in them nor seek the salvation of education there".

4- John Dewey's Learning Trend Methodology, 1859-1952

> *Dewey is a philosopher, psychologist, educational reformer, and the father of progressive education. He is the pioneer of "service-learning", experiential learning, learning by doing, active learning, learning through the environment, and "democracy with education",*

12

> *Collaborative peer group learning, and peer group projects. These educational milestones served as bases for the rise of new concepts and methodologies such as pragmatic education, hands-on learning, and learner-centered paradigm.*

"Dewey was an American philosopher, psychologist, and educator who helped found pragmatism, a philosophical school of thought that was popular at the beginning of the 20th Century. He was also the father of progressive movement in education, and strongly believing that the best education involves learning through doing" (Cherry, 2020; The Children's Sangha, 2020).

Pacho (2018) named Dewey as the "father" of service-learning as applying it on the experiential education continuum, where experiential learning and directly links his theory to service-learning by explaining that learning takes into consideration not only the curriculum of the course but the learning acquired through participation in activities. As a result, the student's community-service experience includes sensory awareness, emotions, physical conditions, and cognition. It is central, serving as both a process and an outcome.

4-1. Learning by Doing

Dewey believed that human beings learn through a "hands-on" approach. This view of Dewey represents the essence of his reality that students should experience. From Dewey's educational point of view, this means that students must interact with their environment to adapt and learn.

Dewey believed that human beings learn through a "hands-on" approach. This view places pressure on Dewey to comply with his educational philosophy of pragmatism. Pragmatists believe that reality is experienced. From Dewey's educational point of view, this means that students must interact with their environment to adapt and learn.

4-2. The Functions of Schools, According to John Dewey

In 1938, Dewey argued that the primary purpose of education and schooling is not to prepare students to live a useful life but to teach them how to live pragmatically in their current environment.

Progressive education is a response to traditional methods of teaching. It is an educational movement, which gives more value to experience than formal learning. It is based more on experiential learning that concentrates on the development of a child's talents through immersing individual students in live or workable experiences that interest them.

4-3. Democracy as A Way of Life

Dewey addressed the philosophy of "democracy as a way of life". Dewey believed democracy as an active process of social interaction and well-balanced fair conducts in every aspect of life. Democracy is Dewey also a guiding mechanism of moral values that mentor the establishment and evolution of social institutions that promote human advancements.

However, since democracy as a way of life is neither absolutist nor relativistic, unlike other moral issues, it is a consciously collaborative process in which individuals consult with each other. They can identify and address their common problems; indeed, Dewey spoke of democracy as "social intelligence". Within a fully democratic society, Dewey suggested, people would treat each other with

13

respect and demonstrate a willingness to revise their views while maintaining a commitment to cooperative action and experimental inquiry (Gouinlock, 2020).

4-4. John Dewey in the 21st Century

A primary Evidence in the 21st Century Dewey was known as the father of progressive education and was an advocate of social learning. More than fifty years after his death, some of his ideas and philosophies, although looking very different, are being used to promote student engagement in classrooms through the use of technology (Williams, 2017).

Slaughter, 2009 that "our world today has become the electronic world". With technology, students drive social lives. Its use is an effective way to promote student engagement, resulting in a passion for lifelong learning. Teachers have a responsibility to provide a new level of instruction that is relevant, effective, and socially engaging. Through the use of tools such as cell phones, texting, instant messaging, chat rooms, and wikis, teachers can meet students' social needs of students and instruct students using the tools that already suit them.

4-5. Dewey's Contributions to the 21st Century Education

Dewey had offered the field of education several significant thoughts, principles, and techniques, which influenced education until this date. Examples of these appear in the following points (Williams, 2017).

1- The use of the Responsive Classroom curriculum, which benefits any classroom and at any age or grade level. It enables students to have a sense of belonging, feel significant, and have fun, all of which are essential components to a successful classroom.

2- The use of Energizers throughout the school day. Energizers are two to three-minute activities that allow students to be playful, get some physical activity, and take a mental break from the intense academic learning they are doing throughout the school day.

3- Closing Circles such as singing together, thinking about a school day, specifying a goal for the next day, playing a game, and saying a friendly goodbye to express Responsive Classrooms. Closing Circles is to end the school day with a vivid atmosphere with no chaos that often happens in classrooms at the end of the school day.

Closing Circles include activities such as a verbal game, talking about a school day, setting a plan for a class assignment, playing a toy, and exchanging ideas about the school or social event.

4- Dewey is the real inventor of the philosophy and model of learner-centered.

Concepts of student-led responsibility, as opposed to teacher-directed decision-making, continue to align with John Dewey's preference for learner-centered paradigm to support the children's needs and interests' primary focus, not the interests of educators, administrators, or politicians. Montessori teachers stay with the same group of students for three years to ensure that they fully understand their students' needs, interests, progress, and development.

5- The term place-based education is used interchangeably with similar terms such as community-based learning, service learning, sustainable teaching, and project-based learning. John Dewey was a proponent of project learning, constructivism, and community building in classrooms.

14

The ideologies of John Dewey are present in place-based education. Place-based education draws on the progressive idea that education should be multi-disciplinary in nature and that learning activity should be authentic and seek to extend learning beyond the walls of the school.

6-   Dewey was the sponsor of making learning experiences centered around student interests and developing socially responsible citizens; all of these real-world, meaningful connections that occur in situation-based learning, contribute to creating educational experiences that result in socially responsible citizens.

Students can learn a centered paradigm to begin the discussions with their background knowledge and sets of beliefs aligned with learner-centered ideology. Students learn and take on appropriate social behavior by becoming engaged and reflective listeners, who respect the challenge of their peers' different opinions (Hopkinson, 2007). This skill is undoubtedly crucial to the goal of appropriate social learning in ideal classrooms, as presented by John Dewey.

7-   Dewey was an advocate of critical thinking skills in classrooms and created a community of inquiry among students, a culture of critical thinking, inquiry and open-minded discussion in classes in the 21st Century. This passion for critical thinking culture and skills is still persistent up to day schooling.

8-   Dewey's addressed more profound and sensitive issues of public and school generations' concern, such as learning communities, democracy in education, the questions of poverty, war, freedom, and pollution are often occupying topics in the discussions presented today.

5- David Ausubel's Learning Trend Methodology, 1918-2008

> *Ausubel devised presented a new learning-teaching technique namely "Advance Organizers" to serve the deductive educational method, and therapeutic practice in psycho-social therapies. Two types were introduced: Comparative when the demand to learn more of past knowledge or experiences. And Expository organizers when new knowledge or skills are required from students to learn but need anchoring and understanding mechanisms to comprehend the new information.*

Advanced organizers technique (Ausubel, 1960) belonged to the analog deductive reasoning and learning, a long time before Ausubel. Teachers used to write on the title and significant points of the teaching-learning topic, then start lecturing and explaining one point after another.

Moreover, when the fore digital technologies reached its climax by the beginning of the Third Millennium. The new digital concept has merged, "Focal Points in Classrooms" (Gratnells, 2017).

FPCs facilitate greater flexibility in learning arrangements. Many classrooms still have just one central focal point at the front of the room; the teacher's wall – often equipped with an interactive whiteboard, projector, traditional whiteboard, or noticeboard. However, more primary school teachers spend their time continually moving around working with pupils. Hence, they need to be able to interact and teach from wherever they are (Umesh, 2017).

There are increasing numbers of schools that now work with a variety of focal points in each classroom. Few schools can afford multiple screens, though, so as an alternative, you could use several write-on

15

surfaces spaced around the room and that are of an appropriate height for pupils and staff. These surfaces can be a whiteboard, dry wipe painted surface, or write-on sheets or rolls.

Multiple focal points, regardless of their nature, e.g., learning objectives, advance organizers, or general outlines written on the board, enable collaborative peers and nondirective mentoring teachers to organize themselves in small groups along the room walls, middle space. Corners holding various contents and activities, brainstorm ideas, and make short class presentations using the nearest board.

More teachers are using tablets can control what pupils are looking at onboard, from wherever they are in the room. Some can photograph pupils' work from anywhere and display it on the screen so the whole class can see. This technique eliminates the need to gather pupils around one table to look at a piece of work, and more importantly, means the teacher does not need to take action to the front of the room. Incorporating tablet technology in everyday learning allows pupils to present their ideas and thoughts remotely without having to walk to the front of the room.

Some schools are going further and transforming whole walls into write-on surfaces. This action allows for flexibility and versatility. It means an entire class of children could comfortably be writing down thoughts and ideas, and they can present to one another using their area of the wall as the focal point.

Another good idea that some schools have adopted is write-on desks – excellent for group work. Both options are stimulating for younger children in particular, who would have always been told not to write on counters or walls. This novelty can be fantastic social skills like respect for other people's property and discourage vandalism and other malicious behavior from an early age.

6- Hilda Taba's Learning Trend Methodology, 1902-1967

Hilda Taba is a curriculum theorist, a curriculum reformer, and a teacher educator (Taba, 1962). She that students can think to analyze information and create concepts.

> *Taba had presented the "backward curriculum design", as a new born of the "Grassroots developmental model" in early sixties of last twentieth century. The backward and Grassroots designs are inductive methodologies in schooling. The right technique to apply successfully Taba's designs is to delegate the school's Grassroots: students, teachers and school services, the total responsibilities for schooling, from planning, processing, to formative, summative and meta assessments.*

Taba presented in the sixties of the last twentieth century a new design for curriculum development called the "backward curriculum design", which was a newborn of the "Grassroots developmental model". The backward and Grassroots designs are inductive methodologies in curriculum, activities, learning, teaching, and assessment.

The successful critical technique to apply Taba's model is to let the school's Grassroots: students, teachers, and school services, assume the total responsibility for schooling, from planning, processing, to formative, summative and meta assessments

Generalization is possible when data is organized, and students are guided toward conclusions through concept development and concept attainment strategies. According to Taba, the best way to deal with

16

an increase in knowledge is the acquisition of understanding and the use of ideas and concepts rather than memorizing facts alone (LinkedIn Corporation.2020).

Two Alternative Methodologies for Personalized "Blend- Digit" Schooling Sustainable to the Inclusive Development of Generations at the 21st Century

A- The Whole School, Whole Community, Whole Child (WSCC) Inclusive Development Methodology, 2000 +

> *WSCC model. is a Learning Trend Methodology of Building individual's inclusive personality. This learning approach is a comprehensive, compatible development methodology. The community here, which is the criterion bio-cultural and knowledge reference of generations' progress, supports the school's mission in applying its student-centered- paradigm while building the health and academic achievements of individual students.*

The WSCC model of Healthy Schools (Figure 3) is an integrated and collaborative strategy of education leaders and health sector specialists to improve each child's cognitive, physical, social, and emotional development.
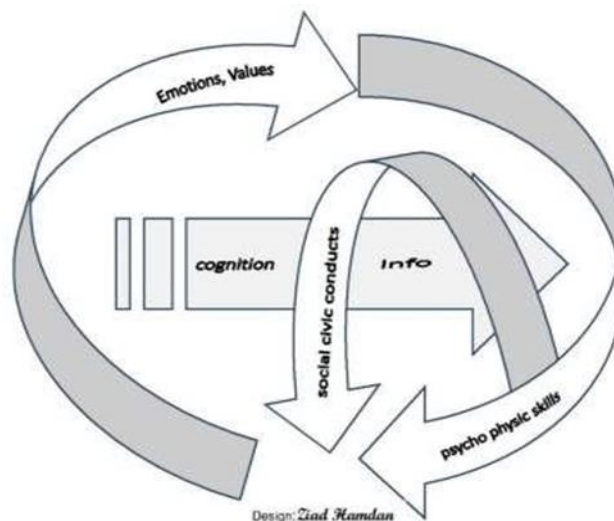

Figure 3. A Projected Diagram for Individual Inclusive Personality Embedded in the WSCC Model

This comprehensive approach tends to realize the ultimate goal of schooling of rearing the whole child. Hence, "the model" resembles student-centered and emphasizes the community in supporting the school, the connections between health and academic achievement, and the importance of evidence based school policies and practices. The WSCC model has ten elements (CDC, 2019) and leads to the development of the whole person in each student.

The ten elements of the WSCC model are:

1. Physical education and physical activity.

2. Nutrition environment and services.

17

3. Health education.

4. Social and emotional school climate.

5. Physical environment.

6. Health services.

7. Counseling, psychological, and social services.

8. Employee wellness.

9. Community involvement.

10. Family engagement.

The big persistent mistake that school systems commit over time is rearing children the cognitive knowledge of the personality at the expense of other fundamental qualities such as emotions, values, physical, action skills, and social civics. This educational policy produces 'a carriage, driving on a cognitive wheel supported by highly commercial cheaply-made reels.

It is of utmost importance for schools and educational systems to make a significant turnaround in building inclusive human personality. This way will enable students to feed all personal growth needs using balanced quality intakes of curriculum content and the use of ICTs' Blend-Digit' nondirective instruction and guidance, collaboration, enabling technologies, and distributed methodologies. Meaningful learning could highly likely occurs.

> *"According to research, nurturing prosaically behaviors may improve academic outcomes—both classroom grades and test scores. Humans are born with prosocial behaviors. Each time we do a prosocial act, our brain releases chemicals that make us feel good, and those same chemicals enhance learning"* (Beachboard, 2019).

However, the WSCC model while focusing on engaging students in activities and assignments of their learning and health, it concentrates on the psychosocial and physical environments for excelling the roles of community agencies and families in improving children's psycho-physical health, behaviors and development.

Family and community, when involved in school affairs, will help in raising students' learning, development, and health. In turn, schools engage families in meaningful alternatives to improve student health and learning, thus supporting and reinforcing healthy behaviors at home, in school, throughout school programs' transactions and in the community.

B- Shelburne Farms' Sustainable Schools Project for Inclusive Development Methodology, 2000 +

Another inclusive learning and students' developmental framework is the "Shelburne Farms Sustainable Schools Project ("SSP", 2001). The "SSP" was developed in 2001 through mutual collaboration between the University of Vermont and Shelburne Farms to offer a blended program, which reconciled school offerings with the developmental needs of generations in Vermont farming localities.

> This model "SSP" embraces two parallel works: Rousseau's learning through "nature environments"; and the previous "*WSCC*" model, where it reinforces community engagement for

18

exploring and understanding the natural and cultural conventions of local communities. Several presentations, field trips, workshops, and reflecting debates are applied to promote the cultural heritage and ecology of environments involved in learning through the "Sustainable Schools Project".

The program titled "Place-based Landscape Analysis & Community Engagement" (PLACE) and provides residents with a panel for exploring and understanding the natural and cultural records of their town territory. PLACE professionals working directly with local schools, town commissions, historical societies, and conservation organizations, can develop several meaningful presentations, field trips, workshops, and reflecting discussions to embrace the cultural heritage and ecology of local environments.

Since then, PLACE has initiated several cultural and educational ties with other glocal (local and regional) partnerships to boost blended school-community programs. The two ventures reinforce collaborative research efforts of community members and UVM graduate students through the PLACE Institute, which have led to integrating an appreciation of the community's heritage into schooling plans for a sustainable future. Since the ultimate goal of SSP is to help schools educate citizens who are responsible, informed citizens, and engaged in building sustainable communities.

In a sustainable school, the campus and community serve as extensions of the classroom. Every aspect of school and community life, such as the way decisions are made, the way energy is used, the origins of its food are opportunities to teach. Students are asked to apply what they learn by improving the well-being of their school and community.

SSP, while adopting sustainability as a focal point, it helps to:

* "discover students' potential as citizens and learners;

* renew teachers' vitality and coherence in their curriculum;

* inspire communities

* create a space for community engagement within the school to improve the quality of life for everyone" (SFSSPP, 2019).

4. Epilogue

The review and analytic of learning trend methodologies of education from early 500 B.C beginnings to the 2000s A.C have revealed to the Author four significant conclusions:

1- An ex-post-facto truth confirms that schooling had started 500 B.C and ending A.C, which both utilizing open, nomadic, individual self / small peer group's initiatives. These initiatives were energized by students' self-choice in goals, sources, guidance, and support services, the direct response to the learning audience's needs, types and forms of achievements and certificate accreditations.

However, the main difference between the two methodologies is, the B.C, was analog face to face, while the 2000s AC is electronic blended and digital. Non-the-less, the best fit learning trend methodology could vary from one local environment to another within the

19

"Learner-Centered-Paradigm and the reconciliation usage of ICTs percentages of 65% "Blend- Digit" and 35% analog facts, tools, and priorities of local environments.

2- The danger of ever-persisting educational propaganda over the process and outcomes of schooling. In that "whose" the center of schooling is? The society, the culture, the sovereign state, the world civic society, the societal generations, the learners, the teachers, or the knowledge and curricula.

The above conventional propaganda concerning the centers of learning is in essence, an argumentation fallacy. Since the education paradigms are primarily designed and administered by society-delegated educators. Further, what is the tag name given to each, the main implications of each remain societal as the teachers, the students, the texts, the support services, the equipment, the classrooms, and school environments continued to be conventional and societal.

The only instance, which the education paradigm can produce real example, such as "learner-self choice- graduate", is delegating each child and small collaborative peer groups, total freedom to learn what, where, how, and when; supported by a limited standby non-directive counseling. Rousseau's "Child-Centered Approach" is a real example in this direction.

3- The learning trend methodologies, which this article has studied, have proved meaningful. Evidently due to the intimate national belonging of scholars' and pioneers as native citizens and due to the high passion for their merited hobbies. Those leaders had exceptional appreciation for their peoples, cultures, histories, and geographies that determined their own righteous identities. Consequently, it is observed that each educational methodology without exceptions had represented the goals and socio-educational priorities of their environments.

4- The fundamental constituent characteristics that determine the identity of successful learning trend methodologies are Learner-Center specific education-Approach, supported by quality attributes such Passion, Vision, Dedication, Self-choice–Self-initiative, Individual and small collaborative Peer Groups, and Info Technologies. Very brief illustration follow.

"Learner-Center specific education-Approach". This general method could be operationally focused by deriving several techniques, such as:

➢ Learner-Learning Eng. Literature-Centered.

➢ Learner- Learning Math. Formula-Centered.

➢ Learner- Learning Plantation Genetics-Centered.

Each learning methodology committed to the Learner-Centered-Approach that should apply the next six quality attributes to generate intended outcomes.

➢ Passion. It is the affective energy that keeps the person moving forward to achieve a strong desire or goal. All the pioneers mentioned in this article, possessed exceptional passion that enabled them, besides other unique personal merits, to accomplish unprecedented fulfillments.

➢ Vision. It is a provisional knowledge of a task or situation that helps the person to understand the circumstances and how to deal with them to reach the required goals, solutions, or new knowledge.

20

➢ Dedication. It is the devotion of thinking, passion, skills, behaviors, time, and space to achieve a highly needed or wished subject or outcomes.

➢ Self-choice–Self-initiative. It is the individual or small peer group decisions for achieving the desired goal, and take necessary actions for the specified ends.

➢ Individual and small collaborative Peer Groups. There is no space or need in the current info digital Age to use outdated "factory model" instruction or massive learning.

➢ Info Technologies. Any educational methodology that does not utilize ICTs heavily is outdated, extremely ineffective, and a waste of time. The priority for any school system should be the integration of info technologies in every aspect and process of education.

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