

Reforming Massive Analog Curriculum Pedagogies Through ICTs Learners - Centered Paradigms

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Abstract: Our time is turning at high speed towards the Info Global Age (IGA) in forms of digital online, blended, and clouds. Paper schooling, trading, and living are becoming crafts of the past. In the IGA, schooling goals, tasks and implementations have mainly turned into individual self and collaborative peer groups priorities, not a family or an education authority formal concern. This research article explored the characteristics and role of Learners-Centered Paradigms (LCPs) in Reforming the Massive Curriculum Pedagogies (RMCP) through Iit This Author had initiated early research investigations since the advent of the 21st in online, blended, personalized, self and collaborative peer learnings and "Learners-Centered" models. He explored and wrote extensively on these concepts and practices before the 1990's ICTs widespread and the initiation of the "Digital Super High Way" in mid-1995, besides other related inventions into East / West schooling.

Keywords: "Digital Super High Way," Info Global Age, Massive Analog Curriculum Pedagogies, ICTs Learners - Centered Paradigms

Introduction

The main problem beyond the perpetuation of massive conventional paper and didactic schooling in developing and marginal states is educators' negligence or the lack of belonging and professional knowledge to reform fundamental problems using effective solutions or procedures.

In the secure urban life of today's developed countries, most people have lost the fact of the life span of the earth Globe-people were nomadic food gatherers, garnering an existence as best they could harness from nature. For about 10 000 years, the Agricultural Revolution changed from food gatherers to food producers. Throughout most of subsequent human history, civilizations have based on high living life for a 15% privileged minority, and 85% surviving people continually hard work for the majority [1].

There is considerable inequality in the distribution of world income. The wealthiest 15 % makes almost 80 percent of world income [2].

However, the deficient products of developing countries are self-alienation of several internal shortcomings, such as insufficient resources, careless use of the resources, population overgrowth, which exceeds the financial capacity of the GNP to feed, educate, to establish societal institutions, including family partnerships.

"The population problem is almost completely limited to developing and underdeveloped countries. About 97 percent of the expected growth in the world's population between now and 2050 will be in the developing countries of Africa, Asia, and Latin America" [3].

Cultural forces are usually a source of inefficiency in developing and underdeveloped countries. Personal considerations of family, likes and dislikes, favors, or traditional friendship or enmity are more critical than market incentives in motivating behavior. Interpretation of religion and past beliefs without sufficient knowledge or subjectively will inhibit growth opportunities needed for the compatibility of developing countries with developed states' advancements.

"Infrastructure, such as transportation; and communications networks, the Internet, digital equipment and facilities, produced what is currently known The Digital Divide Between the wealthy and developing countries; and are necessary[4] for efficient commerce. Roads, bridges, railways, and harbors are needed to transport people, materials, and manufactured goods. Phone and postal services, water supply, and sanitation are essential to economic development. The absence of dependable infrastructures can impose severe barriers to economic development".

The 1970s and early 1980s witnessed a constant growth in the external debt of many developing and underdeveloped states. Since the mid-1980s, most of these countries have experienced difficulties making the payments required to service their debts. In other cases, the local governments appeared broke incapable of paying their employees' monthly salaries.

Ziad Hamdan, 1988 presented in Arabic a blended open-source approach based on personalized clinical individual and collaborative peers' prescriptions. However, alas, the 'Reading Arab Nation does not read!' [5] [6]

[7]. In 1990, Ziad Hamdan offered in Arabic another individual self-fulfilling strategy for schooling titled "Learners Administer Themselves."

Moreover, Ziad Hamdan [8] had expanded the blended tenets of the above two works in Arabic in the third work in English under the title "Re-Schooling Society with a clinical personalized approach for the education of inter-independence"

This Author continued contributing to the education-based ICTs focusing on the "Blend-Digit" approach. He accomplished in this regard 50 works: chapters, books, and research-refereed papers, mainly in English and published in conferences, official sites, and refereed journals. This article includes some examples of ICTs oriented researches in the current direction.

Generally, the "Blend-Digit" learning methodologies, ICTs' software, hardware, methods, techniques, equipment, facilities, and services are available in sums far exceeding what instructors, teachers, and students on school and university levels need or can use in and out the classrooms. Hence, there is no excuse for educators, teachers, and learners not shifting to the use of the "Blend-Digit" schooling 1-12 and BSc, Masters, and Doctorate.

What is needed to overcome the stalemate of inactive collaboration is brave decisions of ICTs specialists and educators supported by glocal education systems to engage in critical discussions for deriving new plans and strategies at local and transactional levels.

Questions of the Articles

The Author offered three questions, which answers had led to the formation of ICTs learners-centered paradigms capable of reforming massive analog curriculum pedagogies.

1- *What are the prerequisite technologies to the Reformation of the Analog Massive Curriculum Pedagogies into Learners' 'Blend-Digit' Formats?*

2- *What techniques, training programs, and plans to promote the applications of ICTs Learners - Centered Paradigms in schooling?*

3- *What Types of Learners-Centered- Paradigms to Reform Massive Curriculum Pedagogies?*

Q1: What are the prerequisite technologies to the Reformation of the Analog Massive Curriculum Pedagogies into Learners' 'Blend-Digit' Formats?

Having technologies available in the school does not mean that neo-teachers and learners are using TCTs in their daily teaching and learning, or should have to use every tool or device; since different technology options are available to serve diverse needs of new teachers and learners. However, various benefits accrue through using technology types, devices, and activities in and out of the classrooms. Examples of these follow [9]:

- Improve students' engagement and retention of learning.
- Promote collaboration in learning and teaching among school personnel.
- Share instant feedback from one side to another new teachers, learners and support services.
- Prepare learners for a better future.

Further, no one educator or an ordinary person can logically talk or use 'Blend-Digit' schooling until they have experienced and deep practice ICTs in the learning-instructional plans and school environments at the building, the local, regional communities and open space eClouds levels. Brief guidelines follow.

1- *Initiating intensive short "Blend-Digit" courses and training workshops* for neo-teachers and learners on ICTs' cardinal knowledge, skills, values, field practices, professional collaborative peer conducts, and roles in Blended and Digital learning and instruction.

One effective short-cut way to implement the training "Blend-Digit" courses and workshops is asking the real neo-teachers and learners to use the new blended and digital curricula and texts in connected classrooms, carols, library hall, or at a distance in the case of digital online studies.

Tutoring skills comprise several skill areas. Here are ten examples of tutoring skills and why they are essential for tutors to have [10][8]:

* Patience * Positivity * Empathy * Confidentiality * Technical Knowledge * Active listening * Communication * Leaders Problem-solving and * Time management.

Moreover, All learners online have open opportunities, considerations, and challenges. The experience may differ from other learning environments, but in the end, they benefit learning! They are self, independent, inter-independent, and collaborative achievers. The following online skills are necessary for them to organize, communicate and collaborate learnings with school communities [11]:

- Organizing plans of inputs, processes, informative and summative learning outcomes.
- Preparation of schedules, factors, processes, and summative learning achievements.
- Practicing spaced learning.

- Focusing on learning and overcoming procrastination.
- Using appropriate online skills in learning.
- Engaging in collaborative peer discussions, assignments, projects, and presentations.

2- Transform analog paper curricula and texts into "Blend-Digit" materials like microlearning units, self-fulfillment micro blended and online lessons, micro multi-level achievements levels[12], Lecture Pods (video format presentations, independent micro study units, collaborative peer projects, group research, presentations, assignments, and discussions, or academic critical analytic reports[13].

3- Transforming analog didactic pedagogies into Blended and digital alternatives.

Blended and digital learnings are here to stay. They will remain fundamental tools for empowering teachers to provide personalized and mastery-based inst, andon; and offer learners appealing achievement options to grow and excel. Blended learning is an instructional methodology that utilizes technology to provide a more customized approach to learning, giving learners control over the time, place, path, and pace of their learning [14].

However, one common misconception observed, especially in developing and underdeveloped environments is mere technology appearance into the school day can constitute blended learning. The nominal presence of technology in schooling is a misconception to give the impression that the school is a "Blend-Digit" institution. Instead, the educators' and neo-teachers abilities are on the ground immersing technologies into the plans and processes of learning and instruction to personalize blended learning and maximize the impact of teacher time through direct instruction to needy learners.

4- Transforming analog conventional schooling environments into blended and digital for the use by needy learners, facilities, and equipment. The following changes should be observed before introducing the "Blend-Digit" "learning-instruction programs [15][16].

- "blend-digit" librarians
- ICTs' Technical services. e.g., labs & printing, Internet and network,
- ICTs support services, e.g., telecommunications services
- "blend-digit" facilities. e.g., Connected classrooms, connecting classrooms, conference/meeting room,
- ICTs equipment. e.g., study carrels, seats for 1to1 peer tutoring, round movable tables for peer discussions, assignments, or projects.

Q2: What techniques, training programs, and plans to promote the applications of ICTs Learners - Centered Paradigms in schooling?

This Author believes that each child living in the Digital Age can learn, think, innovate, and perform knowledge, values, and skills regardless of their intelligence. The problem beyond education inefficiency lies in educators and school systems. They both persisted for thousands of years on the societal welfare propaganda, "learners'-prepared-society," and massive teaching through "teacher-centered-content pedagogy."

The learners will be their instructors and standby helpers in info technology matters to some teachers. With the bit of guidance, they choose what to learn, plan, prepare, coordinate, study, learn, assess individually and with collaborative peers the quality of formative achievements, and move on to other learning tasks. When a learner or a small peer group has trouble, they could ask for quick help from their assigned blended instructor or educational psychologist, face-to-face or remotely online.

Learners, neo-teachers, and study courses are connected (when officially decided) by digital chips implanted in required texts, mobiles, and other hand digital machines. Further, neo-teachers can trace the locations of learners, their active achievement topics or activities, and even the nature of tasks occupying them out of the curriculum. Hence, there is no excuse for learners not to learn and achieve and for teachers not to counsel and guide, except when one party or both do not want to do their part! In addition, as contemporary societies, institutions, and school systems are living the 21st century, the "Blend- Digit" Age and the First Information Revolution.

As learners presume most of the responsibilities, which the ordinary neo-teacher carries on in teaching in and out the classroom, one can be sure that the "Learner-Centered-Growth Needs (LCGNs) and Glocal Learning Paradigms" (GLPs) are in effect working.

However, several operational concepts and procedures are necessary for establishing successful field applications of the LCGNs and GLPs in schooling. They are explained briefly as follows:

- Launch a complete and determinant replacement of the current 'teacher-society-schooling paradigm in public and private schools to disseminate learners-goals and hobby needs model where the learners represent the core of the human education universe.
- Establish and activate ICTs global platforms. ICTs have become in the current Global Digital Age a strategic educational necessity, not a peripheral choice.
- Establish and activate School Digital Societies (SDSs) [17].
- Adopt Open Source Education
- Adopt Multi culturally Responsive Pedagogy
- Develop online learning courses in consideration of fundamental validity and reliability criteria[18] :
- Specify the knowledge level of online courses or textbooks comparable to previous and higher curricula.
- Specify the period necessary to perform the course by learners and neo-instructors.
- Specify the topics, which benefit achievement more through individual learners' torturing and collaborative peers' assignments, presentations, and projects.
- Specify the learning spaces, which learners could study the course: home, work, school library or booths, countryside trip.
- Specify the lowest fees possible learners pay to register for the course.
- Specify the gains, which learners achieve upon completing the course. Course goals and objectives, course syllabus, lists of knowledge topics, skills, values, and behaviors could help learners focus cognitive, affective, and psychomotor attention [19] in these regards.

· Use extensively online learning. Due to the considerable effects of ICTs on every side of life, including education, most organizations and educational institutions are moving away from face-to-face schooling. Online learning is becoming more widespread [20].

'Studies have shown five times more online learning techniques compared to using offline learning methods, and within 40% to 60% less time than traditional face-to-face learning. Individual learning pace (95%) and minimized traveling (84%), and 85% of learners say that their online learning experience was better, or at least equally satisfactory, as their face-to-face classes' [21].

· Use extensively microlearning. 'Studies of learning have shown that short learning pieces (small chunks of information, skill, or experience), infuse with learner interactivity, produce far better and more affecting learning than long, continuous lectures or presentations. For this, many faculty are replacing their traditional lectures with microlearning units' [22].

Microlearning breaks learning materials into smaller chunks. The smaller units are easier to consume as learners can explore the material at their convenience and pace. Research shows that microlearning is 27% more effective in transferring knowledge than traditional classroom learning 10%, can cut learning costs by 50%, and can increase the speed of learners' developments by 300% [22]. NeoTeacher needs to briefly explain how periods per week will achieve a particular part of the course.

* Use Extensively smartphones enable learners to actively asynchronous text-based digital learning. Mobile technology provides part-time, online, and graduate studies when learners, particularly adults, work full-time and have families and other commitments. The three tips are next[23]:

Tip #1: distribute learning tasks meaningfully on available periods.

Tip #2: Focus only on essential tasks and compensate for any missed period at the nearest time.

Tip #3: Make and stick to your schedule

· Transform analog materials into open digital and blended learning sources easily accessible for mobile devices. Let individual learners and peer groups be at the center of the experiences and interact on mobiles with the content or activity at all times.

* Keep your due dates organized in the phone's calendar and synced across all your devices.

* Keep track of the steps you have to take to complete the course with a calendar and study schedule.

* Commit to dealing with the inevitable distractions that come with a phone.

* Use extensively gamification [24].[25] [26]. Gamification means taking elements of game playing and applying them to learning contexts to lessen feelings of dullness in online learning. 89% of employees reported better results when workers were more game-like and 72% of employees believe that gamification motivates them to work harder. 89% of employees reported better results when more game-like work, and 72% believe that gamification motivates them to work harder. 72% of employees believe that gamification motivates them to work harder. Gratification can boost learner engagement by up to 60%!

- Utilize engagement extensively in boosting learning

'Engagement is the energy that bridges the gap between knowledge and behavior change and delivers real achievement results.' Without engagement, there will be no learning nor instruction [27]

Q 3: What Types of Learners-Centered-Paradigms to Reform Massive Curriculum Pedagogies?

When students assume the responsibilities of teachers who practice conventional roles, methods and massive class management, they perform the first nominal character of "Learners-Centered-Paradigm". However, if they progress further in using digital technologies; they are in effect applying selectively technology-to-date-learning leaning paradigms.

In this paragraph, we offer two categories of paradigms. One presents semi-conventional subject matters and techniques but differing mainly in that the students themselves are the owner, their makers, and responsible for success or failure. The other types are highly integrated cyber technology devices, plans, methods, students fully delegated, with limited mentor/new teachers/teachers, administrators and parents.

A- Conventional Learning at large Paradigms

Large number of prototype paradigms could be offered in this category, but space issue, will suffice the following three samples.

1- Open flexible, one learner's type, one time, one purpose paradigm. Examples: one school grade; one topic or experience; one location inside the school, out of school, or field trip paradigm; on cloud/sent, eClouds, or IoT paradigms.

2- Knowledge paradigms. e.g. "Learners-Centered-social studies. paradigm"; "Learners-Centered-math studies. paradigm"; or "Learners-Centered-foreign language studies. paradigm" which concentrate on school academic subjects that students will learn on their own with little guidance from advisor teachers.

3- Activity paradigms. These paradigms serve two purposes: procedures for learning and achievement mechanisms of required curriculum knowledge. Students study the knowledge individually and with collaborative peers; discuss and analyze it; solve problems and blended cases blendly and online. The overall design looks simply like this: "Learners-Centered-science studies/ activities. paradigm".

B- Future Trends of Learning paradigms

Three future learning paradigms that are imperative for each pupil to learn early in the elementary school, side by side with math, science, language, social studies and others. These are: Learners-Centered- Social Behaviors Paradigm; The Learners-Centered- inter-independence collaborative learning paradigm; and the Learners-Centered- ICTs collaborative paradigm. Teaching and learning these courses preferably starting at the elementary, and continue with more details, intensity, and exercising to the end of Bsc. These courses are exceptionally important for growing civic generations for themselves, their communities, and global world societies.

First: the Learners-Centered- Social Behaviors Paradigm (Learners-Centered- affiliation. Paradigm).

Social behavior is essentially civic contact or the conduct of civil society. It is like any human phenomenon, results from logical biological, physio-psychological, social, cultural and environmental premises. It is as such related to the growth of the individual in various personal areas: body, perception, cognition, and movement. Social behavior is a balanced integration of the individual's immediate personal status and the type and degree of the social and physical sense of the environment. There a taxonomy of comprised of seven social behaviors, validated by extensive scientific fields research in seven Arab countries [28]. They are briefly illustrated in the following:

1- **Coexistence** (the formative growth stage is the age of birth - 2 years): the first and least effective social behavior in a school civil meetings, where the baby, the individual, and community have a neutral or formal relationship with others.

Coexistence is any term or behavior expressed by individuals and communities' acceptance of living and dealing and studying with or beside others without the need for interaction or direct interaction with them. The individual co-exists in formal or neutral relationships with others in the environment. Consider the following behavioral examples of coexistence:

- I study (or work) with peers without dealing with them closely.
- I know the names of many students but I do not know much about their lives and work.

2 - **Adaptation** (the standard stage of age growth is 3 - 6 years old). It is the behavior of giving and taking and knowledge of others around; and dealing with daily habits of life in the family, school, work, market, language,

and other life requirements, where the school is compatible with the community and socially acceptable recipients of them. Consider the following behavioral examples of adaptation:

- I put on appropriate clothing and go to work or school as usual.
- I disturb peers around during work or study. (Negative)

3 - Appreciation (the standard growth stage is 7 - 12 years old): Appreciation is a word or behavior in which an individual expresses feelings of sympathy towards others, positively or negatively, joy or sadness. Fear, envy or praise, encouragement, love, dislike, dissatisfaction, thanks or admiration. The visits, the compliments, the prayers, the wishes, the endings, the gifts, the condolences, the friendship, the affection, the cards, and the letters are all gestures of appreciation.

The inability, weakness, or refusal of the individual to one or more of these behaviors indicates an imbalance in the behavioral self with the environment, as it appears in the form of various behavioral disorders. Examples of Appreciation:

- I respect the serious individual in his work and daily transactions.
- I call by telephone or send a message, card, of courtesy.

4. Compliance, obligation, or commitment (the formative growth stage is age 13-20 years old) are the behaviors of written and delegated law, convention or habit in the family, work/job, school, university, market, road, and other administrative, economic, and service environments.

The obligation is every word or behavior in which the individual respects customs, traditions, systems, ethics, laws, provisions, dates, regulations, and promises during work and life in the navel, job, school, university, market, or road. Consider the following behavioral examples in the commitment:

- I maintain family traditions in my daily activities.
- I stop when driving at the red light.

5. Cooperation (the standard phase for cooperation growth is age 21-30 years): It is the behavior of common interest of the people: individuals, groups, and institutions, official and private; Agreements, joint ventures, contracts, jobs, cooperatives, and companies, including marriage; are all mechanisms for the conduct of cooperation.

Cooperation is any term or act of an individual with one or more individuals to achieve the mutual benefit that concerns them all. Or any act of verbal and action by the individual in agreement with others to achieve a direct benefit will return later in the future. Private and public business agreements and contracts, jobs, cooperatives, partnerships, including marriage, sales, purchase, interests, responsibilities, and people's needs for money or effort or something that others need directly or after a specified time, are all civic progress behaviors of cooperation. Consider the following examples.

- I coordinate with friends to study or work for better outcomes for all.
- I share with my brothers the responsibilities of spending on the family.

6. Participation or Sharing others (the standard stage for participation growth is age 31-40 years old) is the behavior of giving or helping to fill a temporary need for people to change their situation partly for the better. Providing expertise, opinion, knowledge, counseling, advice, charity and donations with money, blood and time are examples of engagement behavior. The opposite of sharing is deprivation and failure to help when able to. Let us look at the following behavioral examples in sharing:

- I offer others the need they ask for immediately.
- I see time is my age. I resent sharing it with others. (Negative)

7 - Integration (The standard stage of integration growth is the age of 41 +): It is the behavior of belonging, altruism, and sacrifice offered from an individual or group to others. e.g. administrators, teachers, and pupils. It is the behavior of fateful change for the best, as happens when teachers and administrators maximize efforts to work in order for students to excel in growth and learning. And when students engage in the attention to teachers and interaction during learning and take the assignments as homework for the better performance more than required in normal circumstances. Consider the following behavioral examples of integration:

- I think that the students do not believe in their side, I do not care about belonging to them.
- I take care of the pupils when their family conditions cannot help.

Second: The Learners-Centered-inter-independence collaborative learning paradigm

It is the reality of the “Inter-independence civic personality” [29]. The concept of inter-independence was firstly introduced by this Writer in a published work in Arabic at 1987, under the title: “Clinical Schooling-Toward an approach for the education of personal inter-independence”; then in English at 1992, under the title: “Re-Schooling Society with a Clinical Approach for the Education of Global Inter-Independence”, both published by Modern Education house, Damascus- Syria.

It was written, “Contemporary technologies have contributed immensely to the solving of human problems and to better communication and mutual understanding. However, people and institutions, especially in developing countries, seem cornered by ever-flowing information and worse yet, threatened occasionally by the excessively corrupted content of this information. What appears crucially needed nowadays is turning to two-way rational communication that fosters new means of responsive but equitable relations; in which all parties exchange needs in thoughtfully constructive manners. That is: the concept and practice of inter-independence [30].

With inter-independence, individuals are more free of its strength, the limits and needs and those of others. It is expected that while one can maintain a highly integrative own self and a mutually exclusive identity, it tends without much hesitation to share selectively own qualities and shortcomings for the sake of achieving better independence which is free of dismay, threat, or uncertainty.

The basic parameters of one's inter-independence are seen in his/her own self-using and of self-initiation, self-direction, self-productivity, self-security, self-confidence, self-reliance, self-sufficiency, self-autonomy and rational collaboration and affiliation with others. It may follow then, that for any educational institution to be capable of inter-independence, means tentatively to survive and to share his survival with others for the enhancement of more mutual worthy and higher order goal higher-order primarily for epistemological and professional excellence [31]

However, the driving force of inter-independence is collaboration, which is a human life-work philosophy, a way of thinking and relating to others, and is in its self a behavioral paradigm.

To succeed however, collaboration calls for a relationship built upon mutual trust, commitments to shared relationships and goals, a sense of shared ownership, jointly developed tasks and responsibilities, mutual authority and accountability for success, the philosophy and working principles and techniques of inter-independence, and sharing resources and rewards (Bishop, 1993). Further, a real feeling of mutual trust among inter-independence partners should be continuously available to motivate working together without too many risks.

Third: The Learners-Centered- ICTs collaborative learning paradigms

The world societies and institutions by the advent of 21st, live the age of digital knowledge and technologies. These advancements not only guide and operate every factor, action, and tool we are using in daily life, but they are expanding our thinking and behavioral fields to infinity.

While Developed countries are utilizing digital knowledge and technologies to semi fullest in producing new information, communications, methodologies of education, ways of life, and scientific discoveries in medicine, economics, and upper space; Developing countries are way behind the contemporary the ICTs strides. In general, they are persisting in living the past and fearing inventions in almost every aspect of human endeavors.

As a result, backwardness, ignorance, and the lack of renewal are prevailing in the fields of scientific knowledge, communication technologies. Hence, health care, educational methodologies, equipment, the administration of public and private sectors, economics, and political governance need to reform immensely.

Samples of Learners-Centered- ICTs collaborative paradigms

Paradigm One: A Grand Global Educational Paradigm Encompassing the Sophists Era BCE1000 Until the First Info Revolution 2000 ACE

This multi-inclusive grand paradigm encompasses the major educational trends across the past 2500 years. Figure 1 shows 2500 years from BCE to 2000 ACE of major educational developments of both analog and digital schooling. While Figure 2 gives Examples of macro learning methodology developments depicted in Figure 1 of schooling eras; from Sophists open oral instruction, One Teacher- One classroom-One School, Factory model class hall, ‘Blend-Digit’ schooling, up to connected classrooms, e-clouds’ learning and certifications open to infinity in the current “blend-digit paradigm. Refer to Hamdan, 2009; Ziad Hamdan, 2020, for theoretical and application details.

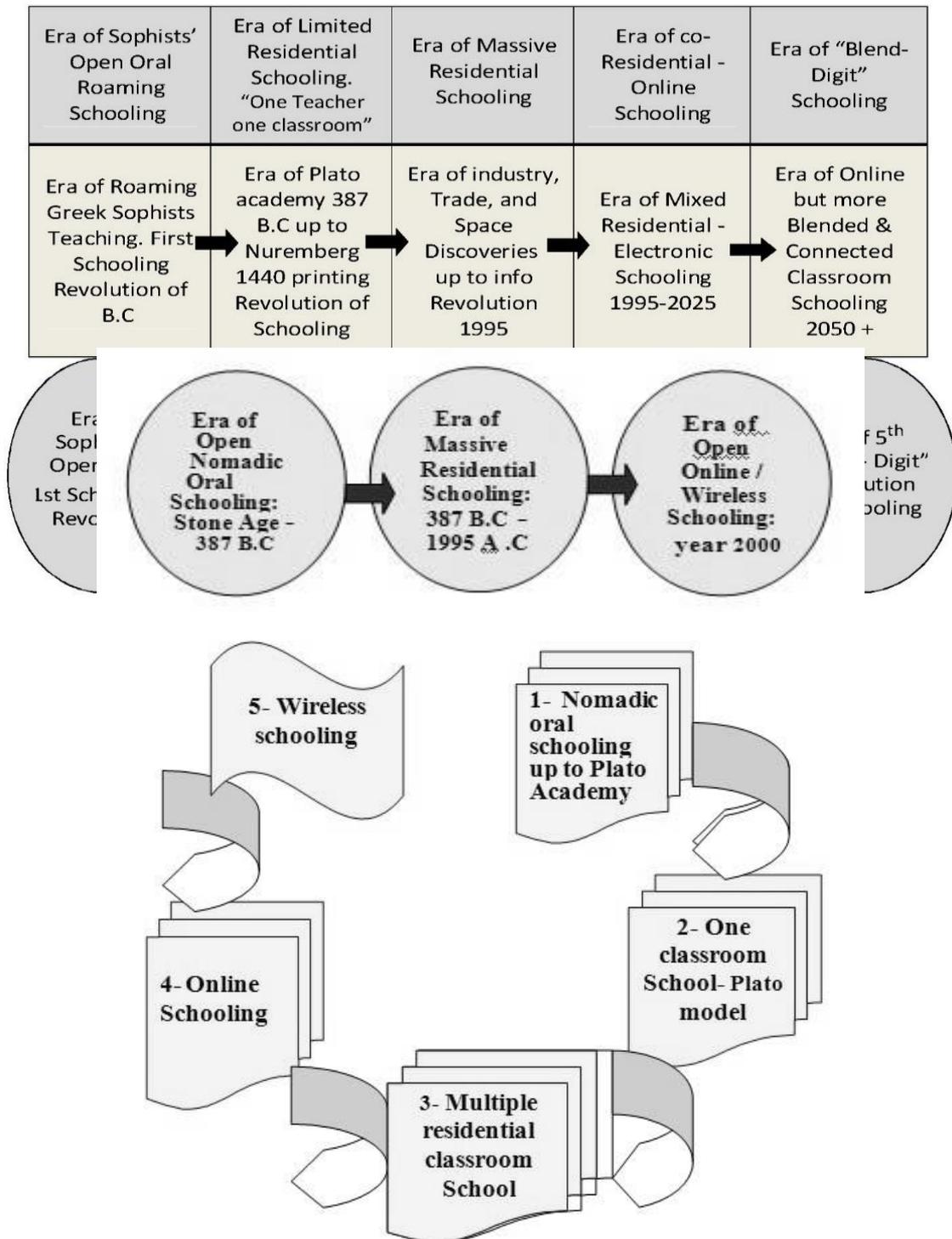


Figure 3: A diagram of major Trends of schooling. Sophists 1000 BCE to 2000 ACE [33]

Paradigm Thwo: Learners neo-Blended Learning Centered Collaborative responses of School Services

This neo-blended learning paradigm had countered Teacher-Centered paradigm, which goes back in roots to Plato Academy (387 BC).

A group of U.S university professors convened 2014 to debate the fate of lecture room in higher education in comparable to some online techniques. They concluded that "the future of the university won't be

without bricks, won't be all clicks, but will certainly be far more clicks than bricks; confirming thus the lasting role of blended learning in higher education [34].

Factor A

Factor B

Processes

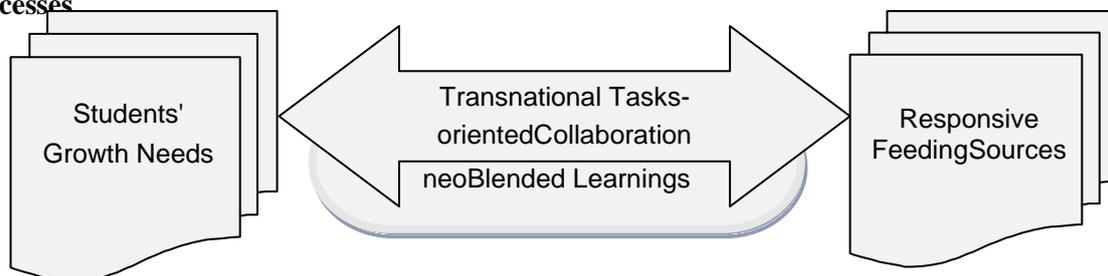


Figure 2: Components of the Transnational Paradigm: Collaborative GrowthNeed-Responsive source transactions

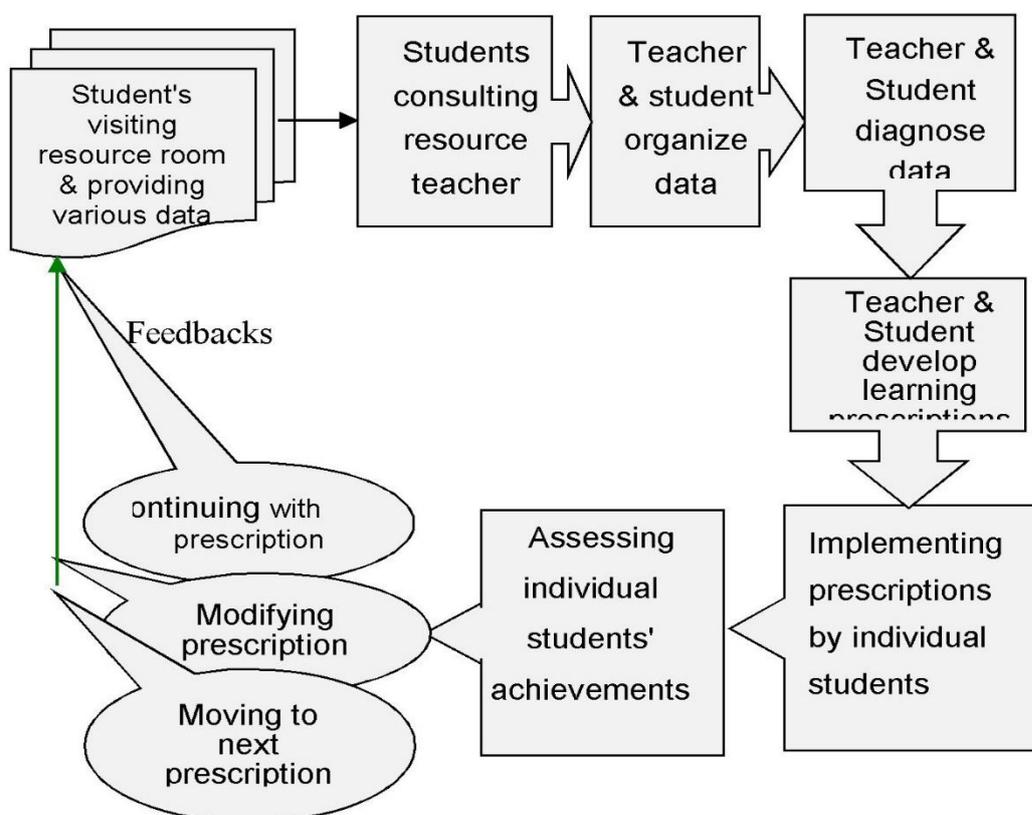


Figure 3: The constitutional seven steps of TCnBL paradigm and theory

Paradigm Three: Succeeding Generations in the Info Global Age through a Prescribed Personalized Approach for Blend-Digit Learning

Time by the beginning of Third Millennium is critical for school systems living the Global Digital Information Age to abandon the outdated massive/large group method, which caused throughout education history huge societal losses as a result of student dropouts, failed courses, underachievers, wasted a bulk of gifted and superiors, more deviants and outlaws, low-quality professionals and mediocre institutional and state leaders (Hamdan (2015 and 1999 in English, and 1988 in Arabic).

ICTs have very recently made big changes in the structure and process of schooling. Learner-Centered-Paradigm has transformed individual students to play the "axis of educational universe"; digitizing the curricula by means of blended, online and cyber clouds approaches of learning and instruction.



Figure 1: Four Learning Tracks of Personalized Schooling- students as literates, professional specialists, societal/institutional leaderships and academic pioneers

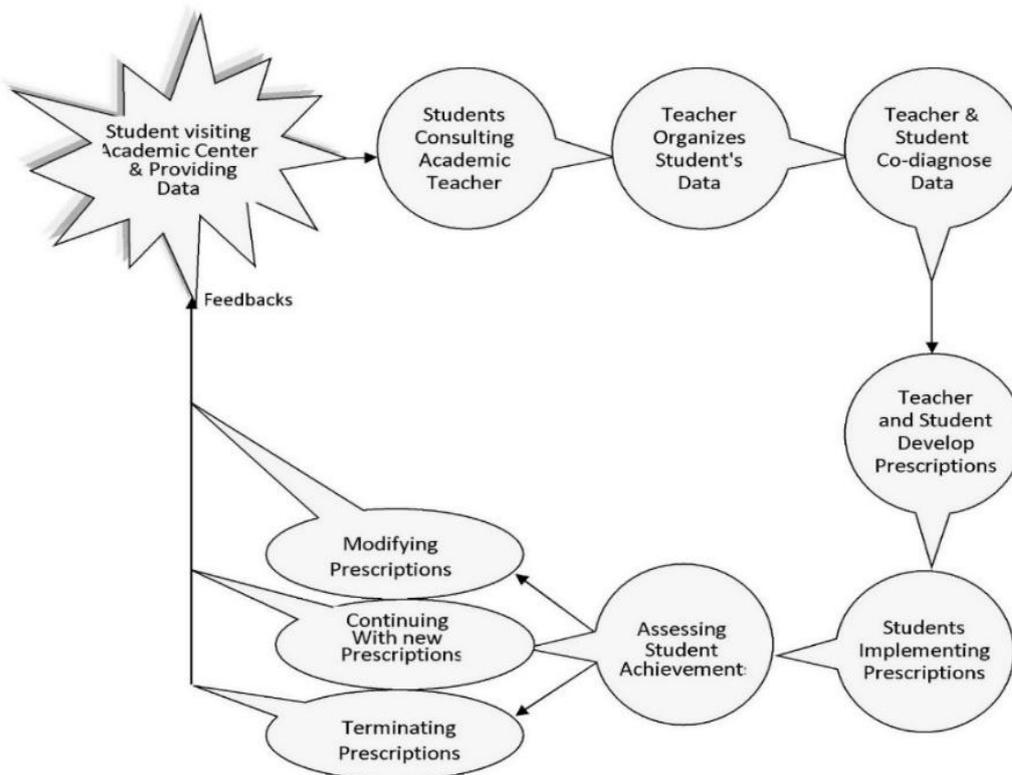


Figure 2: ICTs Integrated "Blend-Digit" Personalized Learning

Current Paradigm is “a different and more advanced approach of schooling than previous educational practices. It combines simultaneously the merits of prescriptive, blended and online learning tenets and techniques, which embrace when scientifically applied learning free of conventional teachers while moving students to learning choices open to infinity in curriculum options, human resources, tools, techniques, facilities, flexible time and decisions to proceed from one topic to another, and from level to higher. The Paradigm gives students open freedom to decide and initiate needed learnings individually and in peer groups”. Figure 1, and Figure 2. Refer to Ziad Hamdan, 2020, for theoretical and application details [35].

Paradigm Four: Reforming Inclusive Quality Educational System for a Sustainable Glocal Learning

Paradigm five is a comprehensive Reforming Inclusive Quality Education System. It is a Blend-Digit operational framework, composed of any behavioral or working factor in the Exact and Applied sciences of four components: inputs, processes, outputs, and multiple streams of meta quality assessment feedback. Each of these consists of several elements that determine individually and in clusters the required nature and outcomes. Illustrations in [36] (Figure 1).

ICTs’ software, methods, techniques, equipment, facilities, and services are available in sums far exceeding what they need or can use in and out the classrooms. Hence, there is no excuse for educators nor teachers and learners to not shifting promptly to “Blend- Digit” Learning paradigm.

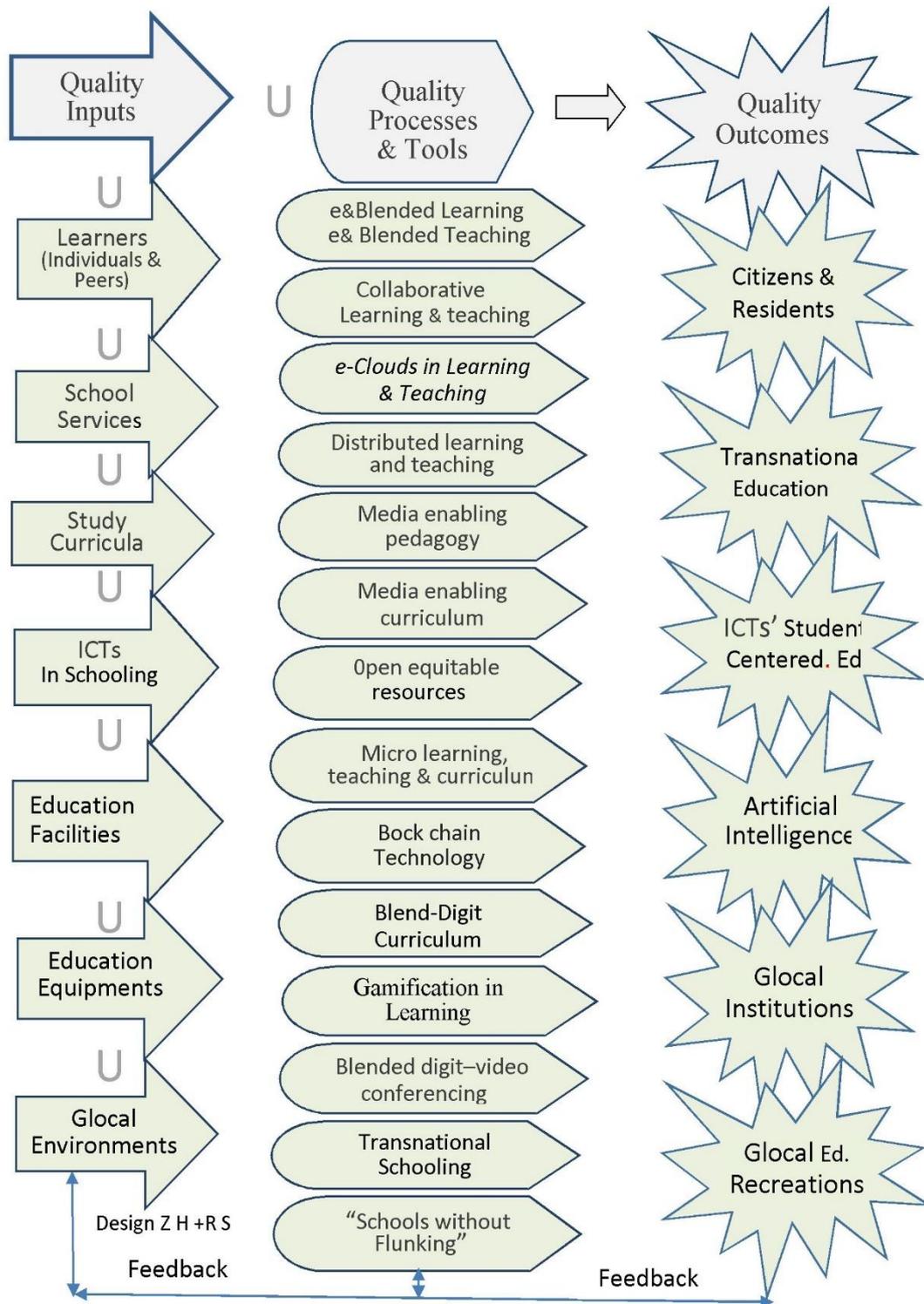


Figure 1: Reforming Inclusive Quality Education System

What is urgently needed for overcoming the stalemate of inactive collaboration is dare interaction decisions of all ICTs specialist and educator parties involved at local, glocal, /transactional, and global levels are four procedures:

- ❖ Transform the current teacher-society-schooling paradigm into learning learners-generations model where the learners represent the core of human educational universe.
- ❖ Establish and activate ICTs glocal platforms everywhere on the Globe to break down the “digital divide”.

❖ Establish and activate school digital societies (SDSs), and Establish and activate 'Blend-Digit' "hot trials school laboratories;" where new ideas, tools, techniques, software, and skills are experimented, validity and reliability examined before public and private dissemination for use. Refer to Ziad Hamdan, 2021, for theoretical and application details.

Conclusions

Many motivational media and classifications move psychologically learners forward towards their learning goals. However, the essential principles for neo-teachers and learners are to watch that:

- * The learners are interested in the chosen engagement media.
- * Administer a comprehensive inventory of motivators.
- * Let learners choose their motives.
- * Allow learners to change their engagement motives throughout formative learning.
- Establish and start "hot trials school laboratories;" where new ideas, software, tool, techniques, and skills have been experimented with, validity and reliability examined before field approval.

One big psycho-educational 'favor' from learners and neo-teachers is to consider: Do not be horrified of terms such as ICTs, a 'Learner-Centered- Paradigm,' 'Growth Needs,' and 'Glocal Learning.' The counseling psychologist or the family could turn the role of conventional teacher and learner around 360°.

These awkward massive pedagogies compress millions of learners' details into one entity called society. Confining learners in one macro concept like "society" will automatically deprive them of many micro personal details, such as growth and hobby specifics, characteristics, priority needs, handicaps, and future ambitions. Thus, the outcomes seem trivial. Learners continue incapable of being optimal selves nor of being competent societal.

The alternative to the above ineffective expectations is "generation-centered schooling." Learners' data is reconciled internally regarding their normal growth and special needs, including hobbies. Secondly, be amended in consideration of public issues and priorities to produce compatible quality citizens for themselves and the general welfare of society.

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