1- A Paradigm of Transnational Collaborative neo-Blended Learning: toward an exchange theory of growth need – responsive source transactions.2014. Prof. Dr. M. Ziad Hamdan, Hamdan Academy for Higher Education Online

Abstract

Contemporary digital technologies supported by Globalization are exerting profound effects on daily ways of life and as well on the nature and methodologies of schooling and higher education. A new educational approach has emerged out of globalized digital technologies that is transnational blended learning. Parallel to above developments, two adverse events are threatening the education of generations: instable world economies and hundreds of millions of new students who are attending college each year. While the economic hardships restrict the ability of families and nation states to finance the extra needed facilities to host the huge influx of new comers, the limited number of existing schooling and higher education facilities are incapable to accommodate the millions of additional learners. The end results of these conflicting uncertainties are risking the professional future of millions of young people unless an urgent thoughtful solution is undertaken. It appears educationally promising to this generations' impasse, is to endorse a new methodology of higher education (and k-12 schooling), that is transnational collaborative neo-blended learning. This paradigm of education is built upon a principle of "guided open in- open out learning" and enables students individually and as small groups, mostly online, to progress in achievement tasks without many external constraints. However, What is tentatively required to realize this change is to transform the conventional human services, infrastructures and "mass" educational methodology of schools and universities into non-directive counseling, organizing, sharing and supporting resource centers.

Key words: growth needs, neo-blended learning, responsive sources, transnational collaboration, TCnBL paradigm, TCnBL exchange theory.

Precedents for Transnational Collaborative neo-blended learning - a Prelude

Teacher Centered paradigm goes back in roots to Plato Academy (387 BC),

Learner-Centered Paradigm (LCP) on another hand has its beginnings in Dewey's writings and movement of Progressive education during 1897-1930. The recently used terms of learner-centered model are merely "restatements of old ideas with new labels."

While teacher centered "mass approach" has dominated the educational scene for some 2400 years, and is fading to end within foreseeable years, student centered appears at the forefront of Information Age and is transforming into blended learning and elearning."(Barr and Tagg 2004; European Graduate School 2014; Minter 2011; Rong and Yingliang2006).

In this context, Hamdan (1992) wrote that Info-Global Age has freed the working means of education from earth to the limitless open cyber space. Hence the behavioral fields of schooling goals, priorities, and practices are extending their domains to infinity. What is currently observed in educational realities is nearly as predicted more than two decades ago. Eric Schmidt, reinforced the above notion by predicting (Internet Stats Today 2013; Wikipedia 2014) that "everyone in the world will be online by 2020". . On governmental level, e.g.U.S.A, President Barack Obama called 2013 for "the nation's classrooms to be transformed into digital learning centers". (eSchool News 2013a). In the real practice (eSchool 2010; Stansbury 2008;Thompson 2014), State Educational Technology Directors Association (SETDA) reported that nearly 98-percent connectivity is observed in U.S. schools and proposed further "High-Speed Broadband Access for All Kids" to provide a technology-rich learning environment for the coming years..

Elearning, despite rising heavily in practice across the globe, is expected to never be the sole approach for schooling due to different nature of individuals, in growth needs, in cognitive modalities, and availability of responsive sources. There will be environments that are high, fair or low in elearning, but will never reach the 100% or 0% points practice in this regard.

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"(Schaffhauser 2014); confirming thus the lasting role of blended learning in university education

In regard of blended learning (BL) , different practices are observed, examples of these are (Barr and Tagg2004;Clayton Christensen Institute 2012; Rong, Xiaomei and Yingliang2006): Rotation, Flex, A La Carte, and Enriched online. The Rotation type includes: Station Rotation, Lab Rotation, Flipped Classroom, and Individual Rotation. For the effectiveness of BL, more studies endorsed this result. A national U.S survey explored 2013 this effect and confirmed that a significant percentage of 403,000 sample supported the use of elearning in schooling (Project Tomorrow 2013). Another U.S survey reported (Piehler2014) that 93 % of respondents stated that digital technologies has a positive effect on student engagement. More effective results of BL and e-learning are also reported as follow (Salazar-Xirinachs 2014):

1. *"Ways of thinking*: that includes creativity, innovation, critical thinking, problem-solving,   decision-making   and   learning.
2.*Ways of working*: that refers to communication, collaboration and teamwork.
3.*Tools for working*: most of them based on new information and communications technologies and information age literacy, including capabilities to learn and work through digital social networks
4. *Skills for living in the world*: such as sense of global and local citizenship, life and career development; and personal and social responsibility".

However, due to current Globalization and more accelerating developments of information and communication technologies (ICT) a third educational paradigm and theory have merged with a name of "Transnational Collaborative neo-blended learning (TCnBL)". The TCnBL paradigm views learning as an active "open in- open out" process initiated by learners based on felt needs and is realized through local, cross borders and online transactions with qualified academic, technological, professional, and technical sources. The TCnBL theory states that "each time individual and small group students interact directly and online with local and cross-borders sources to fulfill growth needs in exchange of agreed upon return benefits, TCnBL is occurred".

TCnBL is an eclectic approach of blended education. It is relatively different from its counterpart blended learning in terms of individual students initiatives, guided self decisions for learning in regard of goal, time, space, device, and

social modality. TCnBL is here to stay due to considerations related to human nature, personal preferences, learning styles, socio-economic conditions, and availability of collaborative learning sources. Having said that, TCnBL is formed based on:

1-The principles of <u>individual and humanistic psychologies. </u>TCnBL <u>is mainly an individualistic human </u>approach for education which enables individual students to progress in learning according to their personal self-paced speeds, study preferences, and daily engagements. Generally, <u>individual and humanistic psychologies</u> provide students with rational free will for learning at the time, location, for the goal, content, experience, and by what media. Brief illustrations (West 2014) in this regard follow:

- Flexibility in learning time which provides students choices when and how long they learn.

- Flexibility in social modalities of learning which allow students a choice about with whom they work: individually, with one other person, with small groups or with larger groups.   - Flexibility in learning techniques.

- Flexibility in choice of learning tasks.

2- The principles of collaboration, interaction, and tasks benefit exchange.

3-Transnational online/ distance driven tasks. While conventional blended learning is normally accomplished within local environments or locations, "TCnBL" is generally a cross border cyber activity, communication, and utilizes responsive sources and services.

4- Diagnostic and formative assessment oriented activity. These measures represent the working backbone of "TCnBL" and the guiding operational mechanisms for building learning and achievement.

5-Student's self initiated and field directed activity. Local and cross border responsive sources are mainly on-demand helpers, counselors, co-organizers, coordinators and summative achievement proficiency evaluators.

6-The systemic framework for education. "TCnBL" is built upon the principle and practice of psycho- educational system approach (refer to figure 2)

7-Technology-enabled responsibility (INTEL and LENOVO2014) that necessitates extensive utilization of digital ICTs. The preliminary procedure to realize this merit in "TCnBL" is adopting a "1:1 computing", e.g. a laptop, a mobile, a tablet or other digital devices.

8-the overwhelming number of new students joining yearly college education. It's estimated globally in higher education (Nagel 2014a) that attendance at 2025 will increase from 200 million students now to 250 millions. This means that four new universities would have to be constructed somewhere in the world every week with a capacity of 20,000- to 30,000 just to accommodate the influx of new students. The realization of this issue is beyond financial capabilities of most developed countries, not to mention the developing and underdeveloped ones.

9-The demands of the college and the workforce for students who can communicate, collaborate, and problem-solve. Many schools are stuck in older models, preparing students instead to acquire memorized information and take tests. Today more than ever, society (Lenz, 2014) needs schools that can respond to 21st century demands by creating 21st century learning environments.

"TCnBL" as a "Technology-enabled responsibility" tends, besides utilizing heavily World Wide Web, connected halls and technology resource centers, is apt to investing any contemporary digital devices and techniques available for students. Examples of these technologies which are intensively observed in today learning practice are the three below:

1- Learning mobiles: Project Tomorrow's Annual Speak Up survey polled some 3.4 million students, teachers, administrators and parents on the use of technology in education. The results showed (Nagel 2014b) that *"All middle and high school students have access to mobile devices and are using them for schoolwork"*. Another survey (Bolkan2014) confirmed similar findings and added that mobile devices are leading to a real paradigm shift in the way educational technology mobilizes learning.

2- BOYD "Bring Your Own Device". eSchool News (2013b) reported that BOYD is among the ten most significant developments in educational technology during 2013. *"BYOD initiatives have become more prevalent in school districts across the U.S.A. Further, School administrators have started to implement BYOD policies that allow students to connect to school networks with their own devices"*.(Schaffhauser2014; Stansbury 2014).

3- The MOOCs "Massive Open Online Courses" which adopts a path similar to that of e-learning, is another effective widely used device in elearning. MOOCs are available in every academic subject from elite institutions such as Harvard University, Kyoto University and the University of California, Berkeley. The academic legality of MOOCs is currently accredited by accepting MOOCs as elective courses, or by means of summative testing or content equation against university courses (eCampus News2013a;eCampus News 2013b; eCampus News 2013c; Layton 2014; New, Jake 2013;Kranz 2014). Nowadays, MOOCs (WINKLER 2014) are experiencing the turning point toward certification by shifting from being free open studies to certification paid examinations.

It appears from the above that digital technologies are reinventing the process of education. In fact, it is expected by means of TCnBL to produce the most profound and lasting educational revolution in how students will learn, think critically, collaborate, communicate meaningfully, exchange ideas, solve problems, be self- reliance, and dignified inter-independent persons and professionals.

It is [anticipated](#) within the coming ten years in light of accelerating comprehensive technological developments, to observe schooling institutions being transformed to TCnBL communities. These online affiliations will collaborate transnationally together for the welfare of all through digital knowledge, and technology integrated communicational and educational systems.

Thus, to continue education committed to static massive methodologies, without considerations to the demands of globally ongoing psycho- educational and technological developments, is seen as a countering setbacks not only for the reformation of education, but also to the ultimate progress of generations. TCnBL, its paradigm and theory could be promising learning mechanisms for enabling students to reconcile their roles as native and world citizens. Asia Society (2014) noticed the possible preceding schooling calamity by stating:"today's digital age, the "Net generation" students are constantly connected, creating, and multitasking in a multimedia world everywhere except in school… the school system must be reinvented to be accountable for most important matters such as teaching, learning, and assessing in new ways". Once more, TCnBL, its paradigm and theory aim at reforming the identity and process of education for such recommended goals.

Theoretical and Technological Foundations of " TCnBL", its paradigm and theory   There are six direct foundations from which the academic and working identities of "TCnBL", its paradigm and theory are derived: five psycho- social and one technological. Brief explanations follow:
1- Need theories   Individuals grow as they experience needs. These needs serve as drives, motives, stimuli, impulses, or incentives to achieve better person's demands. This research utilizes two needs framework: "Growt**h** Needs of students and Responsive source" needs for matters of belonging and self- actualization**.** Examples of need theories to which current research has psycho-academic roots, are (Gawel1997; Hamdan 2006): Herzberg's

Figure1: Hamdan's Pyramid of individual needs as a dignified social being
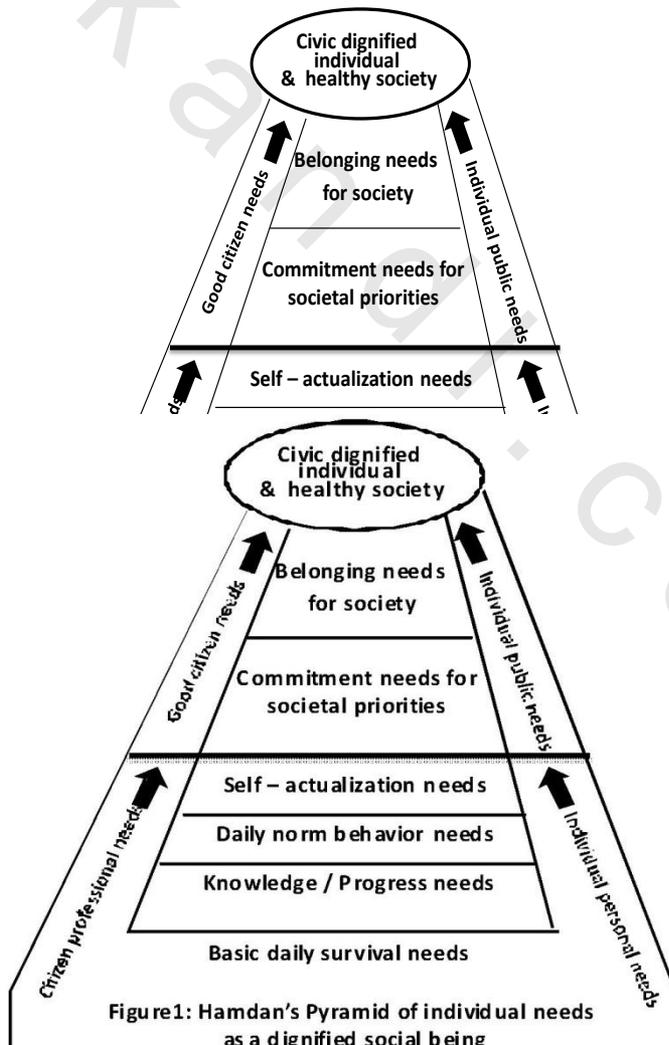
3- Learning theories. While "TCnBL" represents in itself a new eclectic theory of learning, its academic and psychological descents go back to major learning schools, such as (Hamdan 2003):
* Thorndike's connectionism, Incremental learning, laws of readiness, effect, personal set and prepotency of elements;

• Pavlov's and Watson's stimulus, conditioned and unconditioned stimuli/ responses.
• Guthrie's law of contiguity.
• Skinner's operant conditioning and reinforcement.
• Hull's systemized behaviorism and habit family hierarchy.
• Tolman's purposeful behaviorism and molar behavior.
• Gestalt's theory, laws and principles.
• Piaget's cognitive adjustment theory, cognitive structures, cognitive readiness, and mental operations.
• Psycho-physiological theory and brain neurons and cognitive mechanisms.
• Freud's Psycho-analytic theory.
• Pandora's social learning theory.

4- Exchange theories. "TCnBL", its paradigm and theory have psychological and academic origins in exchange theories of (Blau1964;Homans1958;Thibaut and Kelley1959) George Homans, Peter Blau, Kelley and Thibaut. "TCnBL" and its paradigm embrace the behavior exchange theory through well thought and organized transnational transactions between students growth needs and academic, educational, professional, technological and technical assets of cross borders sources.

5- Globalization and Transnational Transactions. Due to numerous effects of Info- Global Age supported by digital communication technologies, a new form of education has emerged since some years ago, that is cross border schooling. Transnational Collaboration represents the backbone of "TCnBL" paradigm.

Jackson wrote 2014: "a world-class education" calls urgently for schools to produce students that are globally competent in "world cultures, languages and how its economic, environmental and social systems work". A group of experts stated at the Globalization of Higher Education

Conference (2014) that "International partnerships will continue to be the catalyst in fostering cross-border education**.** "The combination of an international brand and a credible local partner is very powerful.**"**.Another source (Devaney 2013) added tha*t "Students will be able to connect virtually with teachers in different schools, expanding both the number of classes available to them and the educator expertise".*

6- Digital information and communication technologies (ICTs). While previous foundations serve basically as theoretical frameworks for "TCnBL", contemporary "ICTs" represent its operational mechanisms. "ICTs" as observed, are changing immensely the educational methodology of schooling. The latest U.S "Digital School Districts Survey" (Schaffhausen2014) confirmed that American schools are using technology extensively for management, communication, continual improvement, and for learning". Further, Technology Industry survey, 2014 and other studies **(**eSchool News 2010; Evans 2013; Hallahan2014; Stansbury2008;Thompson 2014) reported similar results.

Systemic Elements Constituting "TCnBL"

TCnBL and paradigm are conceptualized upon three basic systemic components:

Inputs which include two factors:

Factors A- Learners' Growth Needs: These are basically academic, educational, professinal demands felt by individuals, interest groups, local communities, schools, college departments and institutions for attaining new careers, knowledge, skills, values, and interests; or improving and maintaining other comparable ones. Parties of "Factors A" initiate contacts with "Factors B- responsive sources" for fulfilling their "Growth Needs". Both Factors A and B collaborate together throughout the course of exchanging transnational messages.

Factors B- responsive sources: They are academic, educational, professional, technological, technical, and logistic institutional assets and services available to be exchanged with cross borders "Growth Needs" beneficiaries for financial and psycho-academic returns.
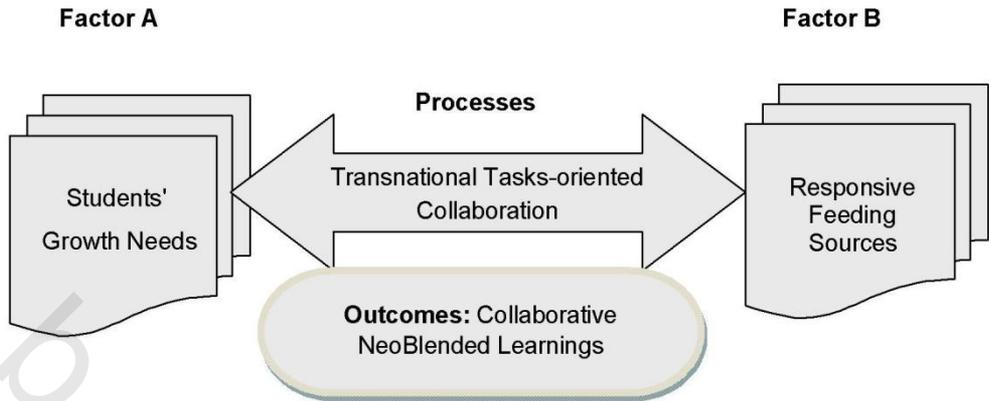
Figure 2: Components of the TCnBL Paradigm: Growth Need – Responsive source transactions

Processes: Transnational Collaborative interchanged online and direct transactions dedicated to maintain quality planning, sharing, counseling, guiding, assessing and managing to achieve intended blended learning tasks. **Outcomes** - Collaborative Blended Learnings: They are products of transnational online and direct transactions between learners in "Factors A" and "responsive sources" in Factors B" to achieve stated "Growth Needs".

Learning mechanisms embedded in the paradigm and theory of TCnBL
Hamdan (1993) in a work titled "Reschooling Society" embedding a reformation approach close to current TCnBL, proposed seven major steps adapted here for TCnBL paradigm and theory as follows (figure 3):

Step one: Students visit the academic counseling resource room and submit all necessary data concerning their individual growth study needs. Students in this step provide individually various personal, family / social, psychological, achievement and behavioral information, by filling special forms, and/or answering related questionnaires, tests or personal interviews. The available data will benefit academic counseling teachers and other clinical-educational personnel for understanding the nature of students needs and in suggesting appropriate learning treatments in next steps.

Step two: Students consult academic resource teachers concerning their needs, or declare these needs for possible psycho-educational treatments. The

teachers may also suggest to students a need or a set of needs that profit a forthcoming learning or personal growth demands.

Step Three: The counselor teachers review with students themselves their data for understanding the needs and specifying its nature and degrees. In this respect, they gather and organize all available psycho-educational data of learning needs from different electronic records and normal sources. They look for possible achievement gaps or inadequacies and necessary compensations. Finally, decisions are taken on future learning and subject areas involved: learning , re-learning, educational, psychological, social, personal or behavioral.

Step Four: Analysis and interpretation of available data to identify factors or causes stimulating students' needs. These factors could be: developmental concern themselves with new learning knowledge or skills; personal representing forthcoming aspirations; social embedding relations with others; or behavioral exemplifying performing competencies of a task in school or daily life.
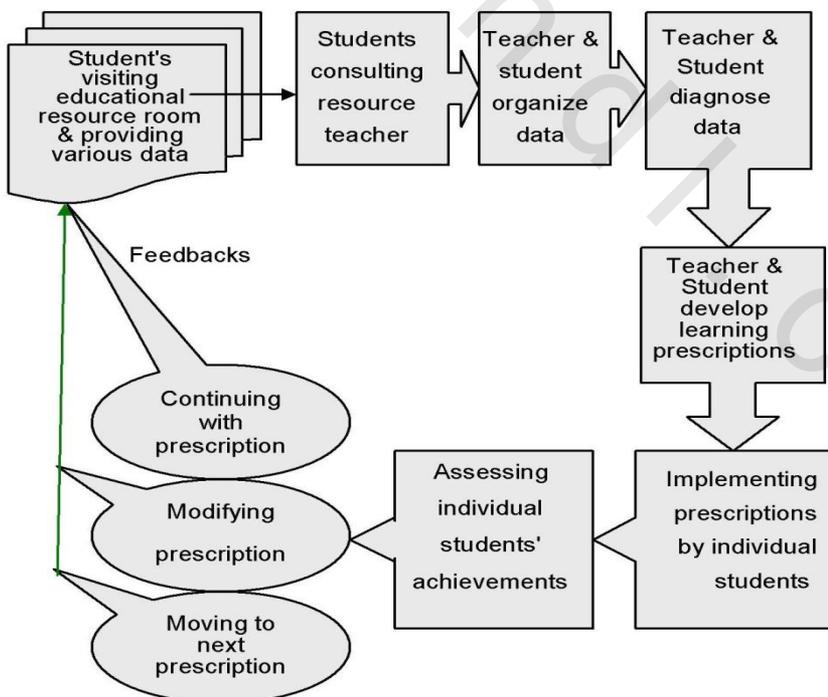
Figure 3: The constitutional seven steps of TCnBL paradigm and theory

In these cases and many others, academic counselor teachers with the collaboration of psychologists, social workers and other school professionals, identify cause and effect relationships among observed / declared needs and their stimulating factors. The result will lead to the formation of educational or behavioral prescriptions in next steps to satisfy students' observed needs.

Step Five: Developing achievement prescriptions appropriate for fulfilling students' needs. The prescriptions specify in clear terms the psycho-educational demands of students, the characteristics and standards of new achievements, the transnational collaborative responsive sources available for new learnings, and the formative assessment activities and success criteria through which students will experience while implementing the prescriptions.

Step Six: Implementation of prescriptions by individual students in collaboration of local and cross borders non-directive counselors, academicians, info-technologists, and other appropriate clinical-educational personnel. Actual student learning, achievement, and fulfillment assessment of "growth needs" happen mainly throughout this step.

Step Seven: Summative evaluation of students' educational / behavioral achievements. This step will lead to one of three schooling decisions: Moving to next prescription due to successful achievement, modifying prescription due to emerging difficulty or sub-learning needs, and continuing with prescription due to insufficient performance (figure 3).

Prerequisite operating Factors of TCnBL and paradigm into Schooling and   Higher   Education
Though principals and other administrative personnel as Gordon (2014) informed, can transform their conventional roles to effectively move their schools to new levels of connected teaching, learning, leadership, and to promote connection with collaborating fellow learners and educational responsive sources regardless of their geographic distance, Still, there are three other factors that determine the identity and practice of TCnBL on ground and cyber space. These are illustrated in the following.

1. The Clinical Academic and Counseling Resource Teacher: TCnBL paradigm requires a new brand of teachers who are non-directive and professionally qualified in academic specialties, diagnostic clinical techniques, counseling and guidance skills, and on-demand assessment. It should be

emphasized here that colleges of education have to reform their training programs to fit the multi-dimensional roles of resource teachers. TCnBL teachers of the future monitor learning environments, and mainly help learners in planning, organizing, counseling, and co-steering the path of learning. They will be likely coaching, but (Devaney 2013) "the real games of learning on ground and the cyber space will be played by students".

2. The Student Initiator: The student of TCnBL whether is an adult or young person is self - motivated who initiates fulfilling the felt needs and pursues the suitable paths for achieving of required results with a minimum degree of guidance or external help. The TCnBL student is also a committed responsible individual who can take decisions, carries them out and holds herself / himself accountable for the consequences.

Therefore, extroversive students, particularly who lack above characteristics should be trained first on independent working skills to help them depart from the general practice of large groups schooling in which they play the role of receivers throughout learning, teaching and daily interactions.

3. The Educational Connected Resource Room*:* This (ECRR) room is the third basic operational factor of the new TCnBL methodology. It replaces the traditional classroom and is comparable in role and function to the health clinic in medical care, but with more emphasis on academics. The ECRR operates according to "open in – open out" schedule for fulfilling students' psycho-educational consultations and learning prescriptions. Conventional classes or lecture rooms could be easily converted to ECRR facilities by furnishing them with effective digital equipments and softwares for serving various students' educational and counseling needs.

Epilogue: Rebooting School and College Environments for the Practice of "TCnBL", Paradigm and Theory

 The dissemination of any educational change needs introducing firstly deep changes in the hosting environments in regard of human services, methodologies and infrastructures**.** Otherwise, ultimate failure will be its fate regardless of claimed merits or good intentions. Considering the "TCnBL", four serious modifications should be taken to qualify schools

and colleges for the successful practice of this new paradigm. They are briefly as follows:

1- Changing the Conventional Mass Centralized Culture of Teaching and Learning

Teaching and learning, since Plato Academy 387 BC and up to the end of 20th century, are governed by strict centralized culture where teachers act as the center of knowledge universe and absolute referenced authorities. However, with intensifying ICT developments since nearly twenty years ago, time has come to outdate the teaching paradigm to a new learning culture, where:

- Didactic teachers are transformed to none- directive counselors and stand- by academic resource educators.
- Students perform the responsibilities of learning on ground and the cyber space.
- Achievement moves from rote learning and literal memorization of facts to understanding, analyzing, thinking critically, innovating, and problem solving.
- Mass summative evaluation and rote examinations are substituted for diagnostic and formative assessments.

Needless to indicate that introducing above decisive cultural changes in learning and teaching necessitate conducting online as well on-ground intensive awareness sessions, informative lectures, seminars, pre and in-service training, electronic chats and conferences, among others.

2- Professional Development of Schools' and Universities' Personnel
There is a general agreement among educators (examples follow) on the ultimate importance of professional development of school and university workers for the successful dissemination of new programs, curricular changes, trends, different methods and theories of learning and instruction, advanced discoveries in education, academics, and digital info-communication technologies.

The   lack of pre-service professional courses and training in education colleges, or the absence of in-service training of school and university personnel will lead to the failure of educational innovations. However, examples of related shortcomings(Lepi 2014) are noted in U.S.A:
* *"80% of schools underutilize the technology available to them,*
* *Fewer than 7% of schools have teachers that are tech literate enough to integrate technology into their lessons,*
* *36% of schools provide no technology training for teachers."*

 Another U.S educator stated that "faculty training still ignoring the fact that digital media literacy continues to rise in importance as a key skill in every discipline and profession. Despite of this, training in the supporting skills and techniques is rare in teacher education and non-existent in the preparation of faculty"(Nagel2014a). More sources assured the eminence of training for teachers, librarians, and educational personnel to achieve digital literacy and info skills (ASCD 2014; Daccord 2014; eSchool News 2013c; Devaney 2013 ; Devaney2014; Garrett 2014; Piehler 2014; Project Tomorrow 2013; Stansbury 2013).

 ## Remodeling School and College Environments

Introducing a new program, methodology or innovation into schooling necessitates renovating the hosting environments to fit the dissemination requirements of the intended educational change. Classroom facilities for example should be converted to educational and counseling connected resource rooms or centers, and provided with more digital equipments and devices. Cyber oriented human, educational, psychological, technological, and administrative support services ought to be available in sufficient quantities and qualities.

Issues of high importance to effective operation of TCnBL into schooling involved also Improving the ratios (Lenovo 2010) of computers per technician, students to technicians, students to all technical support staff, staff to plan, develop and implement the new technology.

Renovating Learning assessments and policies
it is critical for the success of TCnBL to redesign learning assessments and

policies to fit the demands of students' growth needs and the requirements of TCnBL philosophy and practice. It is proposed here, beside the limited use of summative evaluation at the end of each studied course, to adopt two types of assessment: pre-learning diagnostic and during learning formative assessments.

Diagnostic assessment concerns itself with specifying where each student stands in regard of required knowledge and skills before learning, specifying thus where he or she will start and what content will learn. Diagnostic assessment could be accomplished by conducting online/ direct interviews, counseling sessions, questionnaires, or questions.

Formative assessment on another hand can (Stansbury2010) provide data useful to systemic change in policies at the district level, and changes in instruction at students' learning level.

Formal and informal formative assessments measure what students are achieving. The data obtained could then be used to modify teaching and learning goals and activities to further students' engagement and performance. Although there are more on-ground and software tools available for formative assessment of learning, e.g. "Socrative, Geddit, Kahoot and Google Forms"(Clark2014), this Author recommends for matter of simplicity and for breeding the values of students' self- made decisions, self- confidence, self- initiation, self- continuing learning.. to provide each study topic or course with built- in assignments / activities by which individual students can move in learning from one topic or skill to another based on self assessment of her/his progress.

References

- AllPsych ONLINE (2011). Classical and Operant Conditioning. http://allpsych.com/psychology101/.
- ASCD (2014). ASCD PD Online. http://www.ascd.org/professional-development/.
- Asia Society (2014). Seven Skills Students Need for Their Future. After Dr. Tony Wagner's book, The Global Achievement Gap. http://asiasociety.org/.
- Barr , Robert B. and Tagg, John (2004). From Teaching to Learning - A New Paradigm for Undergraduate Education. http://critical.tamucc.edu/.
- Blau, Peter (1964). Exchange and power in social life. New York: Wiley. http://books.google.jo/.

• Bolkan, Joshua (2014). Survey: Most Mobile Device Deployments Are Not 1:1. **THE** Journal, http://thejournal.com/.

▪ Carter, Denny (2013). Cracking the MOOC 'assessment nut'. www.ecampusnews.com/.

• Clark, H. (2014). 4 Powerful Formative Assessment Tools for the Chromebook Classroom. edudemic , May 8, 2014. http://www.edudemic.com/

• Clayton Christensen Institute (2012). Blended Learning Model Definitions. http://www.christenseninstitute.org/

• Daccord, Tom. (2014) Helping teachers grasp mobile learning's possibilities. *www.eschoolnews.com/.*

• Devaney, Laura (2013).The Classroom of 2024: Four future hallmarks. eSchool News. http://www.eschoolnews.com/.

• Devaney, Laura (2014). Librarians' new digital role. Vol. 17, No. 5 eSchoolNews.com/.

• European Graduate School EGS (2014).PLATO– BIOGRAPHY. Http://www.egs.edu/library/plato/.

• eCampus News (2013a). MOOCs could be a sea change. eCampus News.htm/.

• eCampus News (2013b). The ABCs of MOOCs: what it's like to enroll? Resource Center, http://www.ecampusnews.com /**.**

• eCampus News (2013c) - Staff and Wire Reports. MOOCs: the future of higher education, or a passing phase? Educator's Resource Center, http://www.ecampusnews.com/

• **eSchool** News (2013a).Obama to ask for increased eRate aid. http://www.eschoolnews.com/

• eSchool News (2013b).Top 10 ed-tech stories of 2013, No. 6: BYOD and social media. http://www.eschoolnews.com/

• eSchool News (2013c). Special Report: Powering the Digital Classroom. http://www.eschoolnews.com/.

• **eSchool** News (2010). Schools need models for linking data, practice. **eSchool** News.com/**.**

• Evans, Julie (2013). From Chalkboards to Tablets: The Digital Conversion of the K-12 Classroom. Speak Up 2012 Educator & Parent Report. http://www.tomorrow.org/.

• Garrett , J (2014). Developing a Framework for a Customized Faculty Development Evaluation Plan. Faculty Focus, M A Y , 2 0 1 4 . http://www.facultyfocus.com/.

• Gawel, Joseph E. (1997). Herzberg's theory of motivation and Maslow's hierarchy of needs. Practical Assessment, Research & Evaluation, 5(11). http://PAREonline.net/..

- Globalization of Higher Education Conference (2014). Exporting American Higher Education Around the World. Tuesday, March 25, 2014. http://www.globalizationofhighereducation.com/.

- Gordon, Dan (2014). Connected Teaching, Learning and Leadership. http://thejournal.com/

- Hallahan, James (2014).TECHNOLOGY INDUSTRY SURVEY 2014. MORTIMER SPINKS & COMPUTER WEEKLY, 2014 -WWW.MORTIMERSPINKS.COM/.

- Hamdan, M. Z. (1992). "Re-Schooling Society with a Clinical Approach for the Education of Global Inter-Independence". Damascus- Syria: Modern Education house.

- Hamdan, M. Z. (2006). The Impasse of Education in Developing Countries-Problems and Proposed Solutions. Damascus, Syria: Modern Education House

- Hamdan M. Z. (2003) Learning Theories - Applications of Learning Psychology in Education. Damascus: Modern Education House.

- Homans, George C. (1958). "Social Behavior as Exchange". American Journal of Sociology **63** (6): 597–606. Retrieved March 2014

- INTEL AND LENOVO (2014) –Whitepaper, Seven Steps to Improving Learning Outcomes with Technology-Enabled 1-to-1 Learning. SPONSORED BY INTEL AND LENOVO. thejournal.com/.

- Jackson, Anthony (2014).Global Competence. Asia Society. http://asiasociety.org/

- Internet Stats Today (2013). Internet Users in 2020. http://www.internetworldstats.com/

- Kranz, Garry (2014).MOOCs: the Next Evolution in E-Learning? Workforce.com /.

- Layton, Julia (2014). How Massive Open Online Courses (MOOCs) Work. How Stuff Works. http://people.howstuffworks.com/

- Lenovo (2010).Whitepaper."The Unique Challenges Facing the IT Professional in K-12 Education." School Dude. Com and the Consortium of School Networking. In Lenovo-Whitepaper. Seven Steps.

- Lepi, K. (2014) Why Professional Development Matters. Edudemic. May 10, 20*14.* http://www.edudemic.com/

- Lenz, B. (2014).Watch What's Working: A New Deeper Learning Resource.edutopia MAY 9, 2014 http://www.edutopia.org/

- Minter, Mary Kennedy (2011). Learner-Centered (LCI) Vs. Teacher-Centered (TCI) Instruction: A Classroom Management Perspective. American Journal of Business Education – May 2011 Volume 4, Number 5. http://journals.cluteonline.com/.

- Nagel, David (2014a).6 Technology Barriers in Education. Campus Technology, 02/05/14. http://campustechnology.com/. After, Johnson, L and Others (2014). NMC

Horizon Report: 2014 Higher Education Edition. Austin, Texas: The New Media Consortium.

- Nagel, <u>David</u> (2014b).One-Third of U.S. Students Use School-Issued Mobile Devices. Project Tomorrow 04/08/14. THE Journal, http://thejournal.com/

- New, J. (2013).University of Maryland University College to offer credit for MOOCs. http://www.ecampusnews.com / .

- Piehler, Christopher (2014).,Survey Finds 50 Percent of K-12 Teachers Get Inadequate Support for Using Technology in the Classroom. THE Journal, http://thejournal.com/.

- Project Tomorrow (2013). Speak Up 2013 National Research Project Findings- A second year review of flipped learning. Speak Up 2013 National Findings. http://www.tomorrow.og/.

- Rong Liu, Xiaomei Qiao & Yingliang Liu. A PARADIGM SHIFT OF LEARNER-CENTERED TEACHING STYLE: REALITY OR ILLUSION? Arizona Working Papers in SLAT – Vol. 13, 2006. http://slat.arizona.eduncoh.slat.arizona.edu/.

- Salazar-Xirinachs, José M. (2014). 21st Century Skills and the Age of Responsibility. Keynote remarks."Global Trade and Development Week 2014", Kuala Lumpur, Malaysia. http://www.ilo.org/global/

- Schaffhausen, D. (2014).Report: Most Schools Delivering BYOD Programs, Training Teachers in Mobile Devices Usage. T.H.E. News Update, thejournal@1105newsletters.com/.

- Schaffhauser, D. (2014). Is It Time To Dismantle the Lecture Hall? Campus Technology http://campustechnology.com/.

- Staff and Wire Reports (2010). Schools need models for linking data, practice. **eSchool News**.*com/*

- Stansbury, Meris. (2014) . The 6 hidden tricks for Bring-Your-Own-Device success. Reinventing the Classroom. eSchool News. www.eschoolnews.com/.

- Stansbury, Meris (2013). More training is key to better school data use. eSchool News, http://www.eschoolnews.com/.

- Stansbury, Meris (2010).Boost Student Achievement with Connected Teaching, Next Generation Collaboration, Top News. Nov 18th, 2008http:sessions,/www.eschoolnews.com/.

- Stansbury, Meris (2008). Ten ways to boost learning with technology. **eSchool** News.com/.

- Thompson.Greg (2014). IT Trends, Bandwidth for All. The journal. http://thejournal.com/.

• Thibaut, N. and Kelley, H. (1959). The social psychology of groups. New York Wiley. http://archive.org/..thib/socialpsychology.txt.

* Thompson.G . (2014). IT Trends, Bandwidth for All. The journal. http://thejournal.com/.

• West, Peter (2014). What you should know about self-paced blended learning. Powering the Digital Classroom. eSchool News. http://www.eschoolnews.com/.

• WINKLER, KIRSTEN (2014). VERIFIED CERTIFICATES – MOOC'S MONEY MAKER OR ANACHRONISM? edcetera – straight talk on edtech. April, 2014. http://www.edukwest.com/

• Wikipedia (2014). Eric Schmidt. http://en.wikipedia.org/.

باب أهم الآراء والردود

أثر استخدام برامج الحاسب الآلي في الصيدلية على الأخطاء الطبية الدوائية – دراسة ميدانية رقمية في مدينة الرياض – السعودية، ٢٠١٤

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المستخلص

تعد الأخطاء الطبية بصفة عامة و الدوائية منها بصفة خاصة أحد أسباب الوفيات ذات النسب العالية عالميا . وسواء أكان المتسبب بهذا الخطأ الطبيب أو الصيدلاني أو حتى المريض نفسه فإن البحث عن طرق و تقنيات فعالة لمنع أو تقليل حدوث هذه الأخطاء يبقى الشغل الشاغل للدارسين و الباحثين.