BLENDED ACHIEVEMENT AT TRANSNATIONAL SCHOOLS AS COLLABORATIVE LEARNING COMMUNITIES- TOWARD A SYSTEMIC ASSESSMENT METHODOLOGY

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ABSTRACT: Education in public and private schools and higher education institutions is experiencing by beginning of the 21st century accelerating methodical changes from massive residential to online, blended, and wireless schooling. Assessment on another hand, while is seen the backbone of educational systems and the steering mechanism of classroom education, is generally lacking the practice of diagnostic needs and formative assessments. Blended schooling (BS) needs generally a compatible systemic approach for delivering curricula, instruction and learning in more rational focusing manners to mentor students towards achievement ends. The systemic assessment methodology in this article for measuring blended achievement in transnational schools as collaborative learning communities is aimed to serve above ultimate reforming purposes.

Key words: Blended assessment; collaborative learning communities; transnational schools.

INTRODUCTION

Assessment is the grit of education that steers and develops learning and instructional tasks to their required goals. Schooling without well systemized and thoughtfully designed approach coupled with enabled assessment will turn into personal corrupted and aimless business, lacking the basic standards of validity and reliability to which any human endeavor including education should comply.

Ronan (2015) confirmed that "assessments are the key component of education systems and play a critical role in a student's learning journey. By measuring student achievement and skill mastery, assessments help students learn, teachers improve instruction, administrators decide how to allocate resources, and policymakers evaluate the efficacy of education programs". For needs and formative assessments, as observed, are rarely practiced in the education of Developing Countries. In addition, they are randomly applied in western education, and links between both and summative evaluation are missing (Maddalena 2009).

The biggest challenges facing the success of emerging assessment approaches of schooling whether blended, online or wireless are in building the culture of inter-related systemic diagnostic, formative and summative assessments. In fact, more educators and school leaders are calling for abandoning state summative massive unified exams for the sake of more practice of diagnostic and formative assessments (Williams2014) and for applying assessment as "an integral part of the learning and teaching cycle" (University of Tasmania 2011).

Blended Assessment Terminologies

Blended Learning Achievement

Blended learning occurs when face-to-face class activities "integrate with online alternatives in a planned, pedagogically valuable manner"(Teach Thought Staff 2015) by means of in-class learning stations, flipped / connected classrooms, online study carrels, school blended library and connected computer or resource centers.

Blended Assessment

Blended assessment (BA) is a "combination of a variety of direct and online assessment modes, such as paper and pencil tasks, online tasks, peer-assessment, and self-assessment" (O'Loughlin 2007). However, BA is conducted usually in individual and small group settings. But when final assessments deem necessary, assessment could be held in proctored exam halls, as providing online facilities at this stage seems impractical.

Transnational Schools

Transnational Schools (American Heritage® Dictionary 2011) are institutions which extend educational missions and practices beyond their national boundaries, thus involving several nations and nationalities in achieving stated goals.

Collaborative School Learning Communities (CSLCs)

CSLCs "are comprised of people who sense themselves connected to each other and to the world of education, where they are continually learning how to learn together". The working culture of CSLCs reduces human isolation, increases staff capacity, provides a caring productive environment, and promotes increased quality of learning achievement (SEDLs 1994).

CSLCs could operate in blended local homogeneous and foreign groups as: students with students, teachers with students, administrators with teachers, families with teachers, support services with teachers, experts with students. transnational students with local students and so forth. The means by which these CSLCs could professionally communicate are: online groups, blended groups, video conferencing, texting, online chatting, emailing, mobile and tablet interactions and meetings, laptop conferencing, Skype, classroom blended discussions, social media, school closed circuits and school sites.

Systemic Assessment Methodology (SAM)

SAM is a product of art and science of developing a measure and evaluation scheme for blended or online learning in accord with the principles of rational, valid and reliable criteria and mechanisms of the system approach. This SAM, when properly applied, will generate efficacy and effectiveness data for judging the quality of investigated learning achievement tasks.

Structure and Use of the Systemic Assessment Methodology (SAM)

New schooling and learning require new methodologies of educational assessment. SAM is a contribution in this direction (Figure1).

Operational Structure of (SAM)
The working components of SAM are organized into three interrelated elements which compose any educational system: inputs, processes and outputs (Figure 1).
SAM inputs
The main mandatory inputs considered in blended SAF are (Figure1):
Students who are self-learners of all ages and the backbone of Learner- Centered Paradigm
The curriculum. it is simply the academic message (content) of blended and online learnings
Schooling services. They are briefly of the following categories.
Human Services e.g.: Resource teachers, Educational aides, Psychologists, Student Counselors, Technicians, Assessment personnel, Maintenance Services, Managing Services and Financial staff
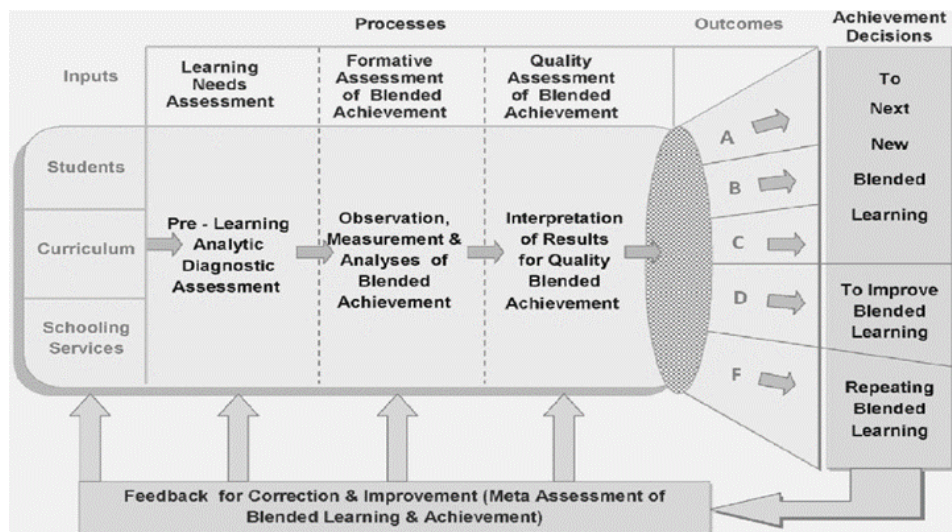

Figure 1. A Systemic Methodology for Assessment of Blended Learning Achievement

Blended Schooling Facilities: e.g.: Connected classrooms, computer stations, tutorial centers or areas, study carrels, learning clinics or learning diagnosing laboratory, seminar and discussion classrooms, learning resource

centers or rooms, and blended library. Blended Schooling Equipment, e.g.: Internet lines, Laptops, mobiles, Tablets, school audio and video circuits, and more others.

SAM Blended Assessment Processes

Assessment processes within SAM are operational tasks that are sequentially maintained by any psychometric specialist to reach the required appraising decisions concerning the quality of blended learning achievements. The ultimate assessment principle of SAM is the organic interweaving relationship among the three major components of blended assessment: diagnostic needs, formative and summative assessments. This principle specifically means that needs assessment will be inputs for the formative which in turn will be the inputs for summative assessments. Brief words concerning processes assessment follow (Figure1):

Learning Needs Assessment

This element concerns itself with diagnosing and analyzing students pre-learning backgrounds including previous knowledge. It is the most crucial mechanism within SAM for specifying the intended achievements that will result from blended learning contexts.

Conducting well planned needs assessments can help learners and teachers develop more engaging learning programs, adapt to change for more quality of learners' experience (knowledge transfer company. 2013). Debra Gordon (2015) added that the worst thing you can do is to develop a needs assessment based on your own thoughts and speculations without taking a critical look at the realities of students and schooling.

This Writer commends above Gordon's statement by assuring that without quality needs assessment, there will be no possibility to pinpoint the pure achievement gains in lieu of past acquisitions and plagiarism, commercially bought assignments or other illegal procedures. Any evaluative decision concerning learning achievements without firstly performing needs assessment will be totally subjective, misleading and worthless hunch.

Formative Assessment (FA)

This is an on-going task aims at steering and building learning toward achievement ends. FA provides constant performance feedback for students and teachers to improve learning and teaching.
FA however is embedded in SAM in three types:
- Formative Statistical Assessment by observation of learning and teaching, and the treatment of blended achievement data by appropriate measurement, analysis techniques and feedbacks.
- Formative quality assessment of blended achievement by Interpretation of achievement results.
- Meta formative feedback assessment) MFFA) which traces back the efficiency of all factors and processes embedded in SAM for correction and improvement.

SAM Blended Assessment of Outcomes
SAM outcomes are embodied in students' final achieved scores, values, and skills of studied courses. These outcomes are acquired by "summative assessment (SA)". Thus, the specific function of SA is to measure the final achievement of students at the end of an instruction, a course, a midterm, or at the end of school year. The SA decisions are made against specific norm or criterion-referenced- standards or benchmarks.

Presage Procedures for SAF Successful Integration in Schools and Higher Education Institutions

Successful integration of SAM in schools and higher education institutions is based upon the use of a **variety** of procedures, most important of them are:

Mobile and Internet Technologies (MITs)

Promising trends in mobile and internet blended learning (Fuhrman. 2015) range from 3D touch and electronic reality to wearables and the Internet of Things (IoT).

With Internet of Things (IoT), huge data is transmitted "from us, and to us" in real time. For education, that data stream will change the classroom and how we teach and learn. Using mobile devices and classroom applications, the IoT can provide instant records of students' readings, attendance and even the location of students who are supposed to be in class."

Techniques for Assessing Blended Learning Achievement in SAM

There are several techniques available for the assessment of blended and online learning. Examples of these are: self-tests, timed exams and quizzes, literature reviews, blended portfolios, online discussions, synchronous chatting, asynchronous threaded discussion groups, one-minute papers, e-mailing, course summary reports, individual and collaborative projects / simulations / case studies (Lorna 2012; Nari Kim 2008). However, brief illustrations of three basic techniques follow.

Micro Blended Learning Achievement Units in SAM

When segmenting learning assignments are into finite intakes, micro learning achievement units are materialized. This technique, in the era of digital information, self- learning approaches and student-centered paradigm, enables least ability students to achieve the required learning and self-assess their achievements. The learning and assessment merits of the micro educational or behavioral units and the high percentages of successful learners had motivated Fred Keller to coin the term: 'Good-bye, teacher' (Grovo HQ 2014; Keller 1968).

Clinical Prescriptive Method in Blended Learning Achievement and Assessment (CPM)

The CPM (Hamdan 2015) is a general operational methodology presented for blended schooling. It combines the principles and procedures of both the clinical practice of medicine and psychology and educational sciences of planning, learning, teaching, counseling, guiding, supervising, management, evaluating, curriculum, media technologies, and support services. The CPM is a diagnostic, scientific and problem solving mechanism for fulfilling students' needs through blended learning and assessment.

Differentiated Students' Grade Contracts for Blended Achievement in SAM

Time has come for school systems living the Global Digital Age and Learner- Centered- Paradigm where individual students are looked upon the "center of educational universe", to abandon the obsolete "whole sale schooling" massive / large group myth which caused societal huge losses in forms of student dropouts, failed courses, underachievers, wasted gifted and superiors' talents, wide spread plagiarism, low quality professionals and mediocre institutional and state leaderships.

This Author proposes accordingly advising individual students to progress learning through three flexible successive achievement levels:
- *literate learners* in the subject matter with C grade and marks 50-70/ 100.
- *Professional learners* of the subject matter with B grade and mark 71-90 / 100. The graduates of this category will be specialists in their fields such as teachers, engineers, pharmacists, technicians and so forth.
- *Future pioneers- scientists*, thinkers, inventors or gifted in the subject matter area usually with "A " grade and marks 91/100. Students of this category are required to study at least 50% more of required subject and assignments.

Individual students can advance throughout this trio-learning achievement methodology individually and /or small groups according to their self- paced and study topics. Students can start at any achievement level they feel confident to pursue, or simply begin with stream C and advance to B and A, as their personal, social and environmental conditions could help. And if one student fails at specific achievement assessment level, he or she will be assigned working on the lower grade.

Assessment Grading Formulas for Quality Blended Achievement

Normative Assessment formulas:
- **At schools** (formatives[1]: formatives first term; **n**: number of assessment)

* Annual system: $\sum$ (term1formatives[1]/ n + summative midterm1) + $\sum$ (term 2 formatives / n + summative at second term) = average = Grade

* Credit System: $\sum$ (formatives/ n + summative exam) / 2 = The Grade
- **At Higher Education**:

* ($\sum$ (formatives/n + summative) /2) = The Grade

Quality assessment formulas:

- **At School**

* $\sum$ (term1formatives / n + summative mid term1) + $\sum$ (term2formatives/ n + summative of 2nd term) - ($\sum$Average of Pre-blended achievements + $\sum$ Average of plagiarisms) = net value average = quality grade

* Credit System: ($\sum$formatives/ n + summative exam/ 2) - ($\sum$Pre-blended achievements/ n + $\sum$ Average of plagiarisms) = net value average = The quality score = The Grade

- **At Higher Education**:

($\sum$ (formatives/ n + summative exam)/ 2) - ($\sum$Average of Pre-blended achievements + $\sum$ Average of plagiarisms) = net value average = quality grade

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