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Получено: 26.09.2023 *Received: 26.09.2023*
Рассмотрено: 10.04.2023 *Reviewed: 10.04.2023*
Принято: 13.04.2023 *Accepted: 13.04.2023*

Journal ''Education in the 21st Century'', Vol1-10/2/, 2023

371.26 *https://orcid.org/0000-0003-0090-6075* DOI: 10.46991/educ-21st-century.v5.i2.143

ФОРМИРУЮЩОЕ ОБУЧЕНИЕ: СДВИГ ПАРАДИГМЫ, ВОЗНИКАЮЩИЙ ИЗ «МОДЕЛИ ОЦЕНКИ»

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Аннотация

В 1989 г. автор стал соучредителем в британском Манчестерском университете первого Исследовательского центра исследований формативного оценивания (CFAS). Целью первого CFAS было исследование и утверждение доступных личностно-ориентированных моделей и методологий формативного преподавания и обучения, которые сделали бы оба этих процесса более эффективными для всех учащихся. Стимулом к написанию данной статьи и обзору соответствующей литературы послужила предыдущая работа исследователей по формирующим педагогическим моделям и разработке соответствующих учебных программ, наблюдения и анализ реализации и эффекта от нынешнего всплеска интереса к «трансформационной педагогике».

При беглом обзоре литературы, спустя 34 года после начала работы первого CFAS, показывает, с точки зрения глобальных исследований, насколько трудно было за прошедшие годы интегрировать данную формирующую модель транзакционного преподавания и обучения в общее пользование.

Одной из основных проблем было доминирование на международном политическом уровне модели суммативного тестирования «с высокими ставками» или накопления («фермерство») низкоуровневых данных целых когорт в качестве «быстрого и грязного» показателя успеваемости учащихся, эффективности работы учителей и институциональной успеваемости. Литература об ошибочности этой модели обширна, но оборонительная, отступающая позиция, занимаемая международными министерствами образования, обычно такова: «Родители ожидают увидеть оценки и были бы разочарованы, если бы мы не сохранили эту модель».

Ключевые слова: *формативное обучение, модель оценивания, суммативное тестирование, трансформационное образование, трансформационная педагогика, формирующее оценивание.*

ՁԵՎԱՎՈՐՈՂ ՈՒՍՈՒՑՈՒՄ. ՀԱՐԱՑՈՒՑԻ ԲԱՐԵՓՈԽՈՒՄ՝ ԳՆԱՀԱՏՄԱՆ ՄՈԴԵԼԻ ՀԻՄԱՆ ՎՐԱ

Բոյլ Բիլ
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Ամփոփում

1989 թվականին Բիլ Բոյլը համահիմնել է Մեծ Բրիտանիայի Մանչեսթերի համալսարանի ձևավորող գնահատման ուսումնասիրությունների առաջին հետազոտական կենտրոնը (CFAS): Հետազոտական կենտրոնի նպատակն է ուսումնասիրել և հաստատել ուսանողակենտրոն մոդելներն ու մեթոդաբանությունները, որոնք ավելի արդյունավետ կդարձնեն ուսուցման գործընթացը ուսանողների համար: Գրականության այս վերլուծությանը նպաստել են ձևավորող ուսուցման մանկավարժական մոդելների և համապատասխան ուսումնական ծրագրերի մշակման վերաբերյալ հետազոտողների նախորդ աշխատանքները: Այս գրականության վերլուծությունը Հետազոտական կենտրոնի մեկնարկից 34 տարի անց ցույց է տալիս, թե ամբողջ աշխարհում որքան դժվար է եղել տարիների ընթացքում ինտեգրել և գործարկել դասավանդման և ուսուցման այս ձևավորող մոդելը:

Հիմնական խնդիրներից մեկը եղել է ամփոփիչ թեստավորման մոդելի գերակայությունը՝ որպես «արագ և ոչ մաքուր» ցուցանիշ:

Բանալի բառեր՝ ձևավորող ուսուցում, գնահատման մոդել, ամփոփիչ թեստավորում, տրանսֆորմացիոն կրթություն, տրանսֆորմացիոն մանկավարժություն, ձևավորող գնահատում:

FORMATIVE TEACHING: A PARADIGM SHIFT EMERGING FROM AN ‘ASSESSMENT MODEL’

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Abstract

In 1989, the author co-founded, at the UK’s University of Manchester, the first Research Centre for Formative Assessment Studies (CFAS). The aim of the original Research Centre was to investigate and evidence accessible learner-centred models and methodologies of formative teaching and learning that would make both those processes more effective for all learners. The impetus for this current Literature Review is based on the researchers’ previous work on formative pedagogical models and related curriculum development observations and analysis of the implementation and effect of the current surge in interest in ‘transformative pedagogy’.

At a cursory reading, this Literature Review, 34 years after the commencement of the original Research Centre’s work, indicates, in global research terms, how difficult the intervening years have been in integrating that formative model of transactional teaching and learning into common usage.

A major issue has been the dominance at international policy-level of the model of ‘high stakes’ summative testing or the accretion (‘farming’) of low-level, whole cohort data as a ‘quick and dirty’ measure of student performance, teacher effectiveness and institutional performance. The literature on the fallacy of that model is voluminous but the defensive, fall-back position taken by international Education Ministries is usually ‘parents expect to see Grades and would be disappointed if we did not maintain that model’.

Keywords: *formative teaching, assessment model, summative testing, transformative education, transformative pedagogy, formative assessment.*

Brief introduction:

This paper is being written in the aftermath of the Covid 19 pandemic which [at date of writing] is still creating concerns about future health, social, cultural, economic, and educational damage globally. Within that macro context, education and the subject of school closures/openings have had their own share of political, scientific, practitioner and media discussion and publicity. At this stage, there is no evidence, through either political pronouncement, research, publication nor observation of global systems, that the pause provided by the pandemic will result in any systemic, transformative education re-thinking – to be blunt, superficial phrases such as 'loss of learning time' have captured the media imagination, albeit briefly and insubstantially. The institutionalized inequity of the schooling system, its theory of social engineering that says that there is one 'right way' to proceed with growing up, its ethnic and cultural 'privileging' and 'school as exam factory, student as data-point' model reigns unchallenged by any desire for or understanding of the necessity of a transformational debate. There is the need for "a ferocious national debate that doesn't quit, day after day, year after year, the kind of continuous debate that journalism finds boring' (Gatto, 2017 p. 27)[1] and therefore,cannot be allowed to be reduced to bland or sensational, poorly researched, politicized 'soundbites' to defuse, deter and delay the need and the potential for change. Within that delaying category, the familiar political tune of 'the parents need Grades' carries no weight anymore. On the contrary, the parents/stakeholders need to be allowed inside 'the code' and thus informed about 'how' or 'how not' and 'why not' their children are being supported to develop as formative learners.

Purpose of the research:

This focus of this Literature review is to identify a standardised definition of formative assessment and its successful operation through international research literature in the contexts of a selected sample of countries.

Topicality and scientific novelty of the article:

A positive starting point is the increasing number of countries that have followed the example of Finland, Sweden, Italy, Spain, and Australia in espousing [as a minimum in policy and to some extent in practice] a formative pedagogy, reducing or abolishing summative testing in the primary phase at least. Other countries to join this initial group which has been termed: "(CHC) Confucian-heritage culture which was heavily influenced by exam-orientation. Teachers from CHC are often burdened with high-stake test pressure" ([2]Xuan et al, 2022, p.5) and the study is of relevance to Bangladesh's current reform situation as it covers K-G12 [see footnotes 1 and 50].

The main text of the article material:

One of the central aims of any teaching and learning process, whether it involves very young children or adults, is the understanding of the learner as a unique, developing, ever-changing and complex individual. "Formative assessment was initially conceived in the [3]Bloom (1968; Bloom et al., 1971) mastery learning model, as a procedure planned and implemented by teachers who define learning objectives, construct formative tests, interpret results in a criterion referenced framework, provide feedback to students, and propose appropriate types of remediation for any objectives not initially attained. Student participation, in this perspective, consists primarily in the execution of the proposed assessment tasks and the remediation activities. Questions have been raised for some time about the benefits of encouraging *more active student involvement* in formative assessments as a way of increasing learners' cognitive engagement and motivation and thereby enhancing learning outcomes. Among the publications that initiated concern with this issue figure an article by [4]Sadler (1989), who argued that instructional systems need to be designed

[1] Gato. J.T. (2017) *Dumbing Us Down: The Hidden Curriculum of Compulsory Schooling*. New Society Publishers: Canada

[2] Xuan. Q. Cheung. A. & Sun. D. (2022) *The effectiveness of formative assessment for enhancing in K-12classrooms: A meta-analysis*. Frontiers in Psychology, 13, pp. 1-17.

[3] Bloom, B. S. (1968). *Learning for mastery*. Evaluation Comment (UCLA/CSEIP), 1(2), 1–12.
Bloom, B. S., Hastings, J. T., &Madaus, G. F. (1971). *Handbook on formative and summative evaluation of student learning*. McGraw Hill.

[4] Sadler, D. R. (1989). *Formative assessment and the design of instructional systems*. Instructional Science, 18(2), 119–144.

to develop students' self-monitoring while carrying out a learning activity" ([1]Allal, 2021, p.584). The student is conceived as being centrally located within formative assessment processes for example [2]Coffey et al (2011) suggest that "formative assessment should be understood and presented as nothing other than genuine engagement with ideas, which includes being responsive to them and using them to inform next moves" (p.1129). While US researcher James [3]Popham's (2008) definition states clearly "formative assessment is not a test but a process that produces not so much a score but a qualitative insight into student understanding" (p.6).

In a recent article by [4]Stanja et al (2023) in the British Journal of Educational Technology, these authors identify formative assessment as ''assessments for learning-aim at support of learning and teaching by assessing a learner's state and inferring next steps. According to the work of Alonzo (2018) and von Aufschnaiter& Alonzo (2018), formative assessment is seen as a process consisting of the following three practices:

1). eliciting,
2) interpreting,
3) responding.

Eliciting is about the collection of evidence for student's learning using tasks and questions (e.g., in classroom discussions or with the use of tasks or instruments). Alonzo argues for interpretable evidence to gain more precise and actionable information than the number of correct answers or a norm-referenced score" (in Stanja et al, 2023, p.61). In addition, these authors identify that the three practices outlined above, can be problematic for teachers or practitioners: "The practice of interpreting is particularly challenging…often characteristics of students' understanding are simplified and dichotomous (right/wrong; 'gets it'/doesn't get it). Dichotomous characteristics of students' understanding are problematic since they do not uncover students' learning resources and learning needs and therefore have negative effects for all three practices (limited focus on vocabulary or facts, holistic judgements as 'right/wrong' instead of *nuanced information*, difficulties in/no orientation for responding" (ibid, p.61, emphasis added).

[5]Boyle & Charles (2013) have identified the importance of *nuanced information* or the learning behaviours of the individuals that the teacher is working alongside. "The core of formative assessment lies not [only] in what teachers do but in what they see. *Do the teachers neglect the disciplinary substance of student thinking*? *Do they presume only traditional targets of {subject) as the body of information (to be taught and then assessed), selected in advance? Do they treat assessment as strategies and techniques for teachers?* It is imperative that teachers consider student thinking not only with respect to its 'linear curriculum' but also with respect to the nature of the student's participation. Students' acceptance that 8 squared equals 64 could be seen as alignment with the taught curriculum. However, if students accept the calculation on the teacher's authority, rather than because they experience the problem, design the calculation, and see the result supported by evidence and reasoning they become *passive recipients of the transmission model"* (p.10, emphasis added).Teacher-control and dominance is a hall mark of the transmission model, and this has been identified by [6]Berisha et al, (2023) as one of the challenges in implementing a formative assessment program "as the shifting of learning responsibility from student to student" (p.1).

[1] Allal. L. (2021). *Involving primary school students in the co-construction of formative assessment in support of writing.* Assessment in Education: Principles, Policy & Practice, vol 28, (5-6), pp. 584-601.
[2] Coffey. J. Hammer, D. levin, D. M. & Grant, T. (2011). *The missing disciplinary substance of formative assessment*. Journal of Research in Science Teaching, 48 (10), pp. 1109-36.
[3] Popham. J. (2008) *Transformative assessment*. Alexandria, VA: Association of Supervision & Curriculum Development.
[4] Stanja. J. Gritz. W. Krugel. J. Hoppe. A. &Dannerman. S. (2023) *Formative assessment strategies for students' conceptions. The potential of learning analytics*. British Journal of Educational Technology, 54, pp. 58-75.
[5] Boyle. B. & Charles. M. (2013) *Formative Assessment for Teaching & Learning*. SAGE, London.
[6] Berisha. F. Vula. E. Gisewhite. R. & McDuffie. H. (2023) *The effectiveness and challenges implementing a formative assessment professional development program*. Teacher Development: https://doi.org/10/1080/13664530.2023.2210533

Many teachers are encouraged to utilize 'feedback' as a leading strategy within formative practices, [1]Yin & Chiu (2023) have identified the limitations: "providing feedback alone has no significant impact…and was not linked to student reading achievement. Teacher clarifying goals and monitoring progress throughout a school and adjusting instruction both by the teacher and throughout the school were positively linked to reading development" (pp. 186 & 203). Many teachers perpetuate the misconception of linking summative assessments within formative feedback as noted by [2]Hidayat&Irdiyansyah (2023), "Feedback from summative assessments does not serve students achievements of learning objectives but only provides information about the score, who passed and who did not. The summative assessment information is product-oriented, so it cannot be used to evaluate students' learning and progress during the process" (p.71). Effective feedback can be measured against three questions:

1: Where am I going? (*feed up*& what are the goals?)

2: How am I doing? (*feed back*& what progress is being made towards the goals?)

3: Where do I go next? (*feed forward*& what learning support is needed for me to make progress to achieve the goals?) ([3]Hattie & Timperley, 2007, p.86)

Mastery in relation to a Competence-Based Curriculum

Mastery learning emerged from the educational psychologist Benjamin Bloom who coined the term 'learning for mastery'. [4]Pabla (2022) has noted that "[5]Bloom (1968) believed that nearly all learners, when provided with the more favourable learning conditions of mastery learning such as breaking down learning into smaller steps, could truly master academic content" (p.1). Note how Pabla states that Bloom believed that "*nearly all learners*" will master academic content, inferring that some learners will not and therefore, will be left behind. [6]Cornell & Drew (2023) have identified this issue: "Some teachers administer frequent quizzes and may end up identifying the same students repeatedly as needing additional instruction. Being singled out in this manner can create other problems as it can make students feel ashamed, embarrassed and lose self-confidence as well as motivation to learn" (p.7). Many teachers identify the constraints of time within Mastery Based Learning (Cornel & Drew, 2023). In line with this complication is the process of pedagogy, as the "principles of mastery circulate around whole-class teaching, deep and greater depth learning and a process of broken-down steps through concrete, pictorial and abstract representations to scaffold and challenge learners" (Pablo, 2022, p.1). But how can a teacher successfully manage, navigate, adjust, and respond to 33 discrete learner needs centred around whole-class teaching?

Differentiation, although the key strategy of formative teaching, learning and assessment, ''is as much misunderstood as is formative assessment" (Boyle & Charles, 2014, p.53). Students, consequently, then, often find themselves 'locked' into ability settings from primary to secondary level based on the concept of fixed rather than a growth mindset ([7]Dweck, 2015). For example, in Mathematics, Pabla (2022) observes: "Although being applied in schools for nearly seven years, mastery mathematics practice is still not fully understood. With varied understanding…anecdotal evidence from primary mathematics teachers and leaders from region primary schools suggest that the use of textbooks and schemes of work add to the confusion of whether mastery practice in mathematics is more effective with a structured format or through planning lessons around the daily progress that pupils make. With mixed views on textbooks and its ability to meet a range of learning needs while compromising the awe and wonder in the classroom, it is not surprising that

[1] Yin. Z. & Chiu. M.M. (2022) *The relationship between formative assessment and reading achievement: A multilevel analysis of students in 19 countries/regions*. BERJ Educational Research Journal, 49, pp. 186-208.

[2] Hidayat. N. &Irdiyansyah. I. (2023) *Optimizing academic achievement through comprehensive integration of formative assessment into teaching*. European Journal of Educational Research, vol 12, (1), pp. 71-85.

[3] Hattie. J. & Timperley. H. (2007) *The power of feedback.* Review of Educational Research, 77 (1), pp. 81-112.

[4] Pablo. A. (2022) *Mastery mathematics: pedagogically powerful or massively misunderstood*? https://www.bera.ac.uk/

[5] Bloom. B. (1968) *Learning for mastery*. Evaluation Comment, 1 (2).

[6] Cornell. D. & Drew. C. (2023) Mastery Learning: Ten examples, strengths and Limitations. https://helpfulprofessor.com/mastery-learning/

[7] Dweck. C. (2015) *Carol Dweck revisits the Growth mindset*. Education Week, (2), pp. 1-4.

primary practitioners often lack the confidence to determine the best course of action for implementing mastery learning" (p.1). Inevitably, this forces the central question of why teachers are consistently taken down a dichotomous path and forced to choose as *either/or* instead of *and/both* in their judicious pedagogical decision-making processes. Furthermore, Dweck (2015) reminds us that in propagating a fixed mindset, in the example of mathematics teaching, with statements such as: "*Not everybody is good at math. Just do your best"*. "*That's ok, maybe math is not one of your strengths*" *"Don't worry, you'll get it if you keep trying*'' (what if the students are using the wrong strategies, their efforts might not work. Plus they may feel particularly inept if their efforts are fruitless). "*Great Effort! You tried your best*" (accepting less than optimal performance from your students should be avoided).

Compounding the issue of competencies is specific delineation. [1]Gulled (2023) observes "One of the significant challenges in implementing a competency-based curriculum is defining the competencies that students need to acquire. Competencies must be relevant, meaningful, and measurable to ensure that students can demonstrate their mastery. It is also important that the stakeholders come up with the translated term for 'competency' in their language" (p.473).[2]Erausquin et al (2008) state: "A competence is something you know how to do, a skill, but more than that, it is a strategic ability, necessary to face complex situations. It's not a procedure, a rule, a recipe, although it may include them if necessary" (p.2). Philippe [3]Perrenoud (2001) provides a window into the complex nature of a competence. "A competence is a capacity of effective action toward a family of situations, that people can construct because they have the necessary knowledge and the ability to mobilize that resource in an appropriate way and in an opportune time, to identify and solve the problems" (p.9)."Competence involves explicit reasoning, conscious decisions, inference and hesitations, trials, and errors. This competence's functioning can be gradually automated and, in turn, constitute an elaborate scheme…Thus, an elementary scheme, such as 'drinking from a glass', fits cups of different shapes, weights, volumes, and contents" ([4]Perrenoud, 1999, pp. 23-24).

Within the complex process of a competency-based curriculum is the importance of reflection by both the teacher and the student. "A cornerstone of effective teaching is the capacity of an educator to reflect on their practice, and to use their reflections for professional growth and development. Reflection is not the mere recalling of events and the clarifying of assertions, but rather the *questioning* and *troubling of events* and assertions in relation to other experiences, leading to *new meanings* and *forms of practice*" ([5]DeLuca et al, 2023, pp.5-6, emphasis added). Furthermore, Perrenoud (2014) states: "It is considered that there is competence when the subject finds the means to face the problem through reflection, exploration, and response from the positive and negative experiences (in [6]Gozzi et al, 2020, p.42922). DeLuca (2023) and his colleagues ask a central question: "*What assessment-driven pedagogies support the development of reflective practitioners*?'' Self- assessment and reflection are closely related because they both evoke the personal process of deepening one's understanding to discover and learn for the purpose of improving an aspect of life (e.g., education, health, relationships). Reflection focuses on the learner's recognition of the emotions and cognitive connections gained through experience.

[1] Gulled. Y.M. (2023) *Paradigms for contextualizing competency-based curriculum in Africa: Inferences from the OECD countries.* Education Quarterly Reviews, 6 (1), pp. 464-475.

[2] Erausquin. C. Basualdo. M. E. Garcia. L. Ortega. G. Y. &Meschman. C. (2008) *Mental models and activity systems for developing psychologists competencies to teach psychology: Experiences and cognitions of tutors and students at university apprenticeship.* XXIX International Congress of Psychology. International Union of Psychological Science (IUPYS), Berlin.

[3] Perrenoud Philippe (2001) *Développer la pratique réflexive dans le métier d´enseignant. Professionalisation et raison pédagogique*

[4] Perrenoud. P. (1999) *Construir as competênciasdesdeaescola*. Porto Alegre: Artmed.

[5] DeLuca. C. Willis. J. Dorji. K. & Sherman. A. (2023) *Cultivating reflective teachers: Challenging power and promoting pedagogy of self-assessment in Australian, Bhutanese, and Canadian teacher education programs*. Power and Education, vol 15, (1), pp.5-22.

[6] Gozzi. F. AlicandroBordin. R. Urpia. A. (2020). *Philippe Perrenoud and the discourse of competence in education.* International Journal of Development in Research, vol 10 (1), pp.42918-42924.

However, researchers have explored the issue of power and how this aspect imparts a particular imbalance "such as self-assessment does not necessarily empower students or disrupt power. Tan (2009) stated that self-assessment can be teacher-driven, program-driven, or future-driven, each of which localizes and allocates power very differently" (in DeLuca, 2023, p.7). Indeed, the ultimate symbiosis of self-assessment and reflection is to gradually become a self-regulated learner. A process which may take many, many iterations over a long period of time. "Self-regulation involves interplay between student commitment, control, and confidence. It addresses the way in which students monitor, direct, and regulate actions towards the learning goal. It implies autonomy, self-control, self-direction, and self-discipline" (Boyle & Charles, 2014, p.172).

A recent review of international curricular framework innovations demonstrates both a mixture of positive and less positive assessment conceptual understandings. For example, the [1]National Curriculum Framework (NCF) for *Bharat* in India states in the opening sections of the 628-page document:

"This NCF is designed with the Teacher as the primary focus - the reason being that the Teacher is at the heart of the practice of education. It is the Teacher who is ultimately the torchbearer for the changes we seek. As such, it is the perspective of the Teacher that must be carried by all, including syllabus and content developers, textbook writers, administrators, and others. (p.12).

"It confronts and address real challenges facing our countries' education system. Notably that of literacy and numeracy, rote memorization, narrow goals, and inadequate resources" (p.11 ibid).

"The DNEP 2019, recognizes the limitation of the current educational practice in the Indian context. It attempts to shift the focus of the vision of schooling from an excessive emphasis on remembering facts, to developing capacities and skills for thinking and acting" (p.32 ibid).

How can a truly formative assessment process styled as a genuine commitment to the development of each learner, flourish where the *Teacher is the primary focus"*? If the intention of the NCF is to raise the status of teachers then it should explicitly state so, otherwise, this statement is highly problematic. Perrenoud (2002) reminds us:"…teachers need to become actors in a system and contribute to active transformation, mobilizing as many skills as possible and building new skills in a short or medium-term process" (in Gozzi et al, 2020, p.42922).

From the same NCF for *Bharat* in "Grades 3,4 and 5assessments in this stage are a combination of observation of students' activity, correcting their worksheets and short formal written evaluations. *Periodic summative assessments should supplement the more formative assessments"* (p.51 ibid). "In Grades 6, 7 and 8 Assessments can become more formal and explicit. The focus of assessments should be on the specific ways of reasoning within each form of understanding and not merely the recall of facts. Formal tests and examinations play a role with the expectation that students can process larger chunks of information together for analysis and synthesis" (p.52 ibid). Clearly, from the document's statements, the teacher maintains a dominant role in both phases within whole-school assessment processes, which are in-keeping with the transmission style of pedagogy. It is noteworthy, that this aspect of reform was signalled as a major component of 'reform' and 'revamping'.

"Competencies are learning achievements that are observable and can be assessed systematically. These Competencies are derived from the Curricular Goals and are expected to be attained by the end of a Stage. Competencies are articulated in Curriculum Frameworks. However, curriculum developers can adapt and modify the competencies to address specific contexts for which the curriculum is being developed" (p.59). How does this definition capture the complexity of competencies as proposed by Perrenoud (1999)?

The NCF (2023) must be commended for its recognition and commitment for educational change in assessment practices and pedagogical methods. Furthermore,[2]Hanefar et al (2022) state that "Bangladesh is also ibid experiencing a shift from summative to formative assessment for

[1] https://dsel.education.gov.in/sites/default/files/NCF2023.pdf

[2] Hanefar. S. B. M. Anny. N. Z. & Rahman. M. S. (2022) *Enhancing teaching and learning in higher education through formative assessment: Teachers' perceptions.* International Journal of Assessment Tools in Education, vol 9 (1), pp. 61-79.

more than a decade, and formative assessment is gradually becoming more important in this context" (p.62). However, following on from a random sample of 100 participants, the authors' qualitative results on teachers' perceptions of the role of formative assessment to enhance teaching and learning: "results indicate that the teachers put less emphasis on the importance of formative assessment and practice" (p.66). The authors continue: "In Bangladesh most teachers do not differentiate between formative and summative for grading purpose, they occasionally use summative assessments for formative purposes. This supports Williams' (2008) findings, which claim that in most countries, few teachers are able or willing to use parallel assessment systems…as a result, teachers often replicate and duplicate the assessment process" (p.62).

In the small country of Bhutan, situated between Tibet and India, formative assessment practices are slowly being recognized as an effective pre-condition for student-centred teaching and learning. According to [1]Karma (2015) "Formative assessment is officially explained as an ongoing assessment designed to make students' thinking visible to both teachers and students. Credit: (Karma, 2015, p.12)

Table 4: Assessment practice and weighting

Class	Continuous Assessment		Summative assessment	
	Weighting (%)	Responsibility	Weighting (%)	Responsibility
Primary	50	Subject teacher	50	Subject teacher
Lower Secondary	20	Subject teacher	80	Subject teacher
Middle Secondary	20	Subject teacher	80	Subject teacher for IX and BSCEA[5] for X
Higher Secondary	0	Not applicable	100	Subject teacher for XI and BCSEA for XII

"From Table 4, it is clear that lots of emphasis is being placed on summative assessment especially in higher secondary classes…In the Bhutanese school system, formative assessment is officially explained as an ongoing assessment…however, when it came to the practice of formative assessment called as CFA in Bhutan, it remained a challenging task for the teachers as they are left to their own discretion, and to make use of their own creativity and ingenuity in carrying it out. The conceptual misunderstanding of formative assessment as identical to continuous assessment, the underdeveloped practice of peer and self-assessment and the limited attention paid to the feedback process have prevented any full-fledged practice of formative assessment that could radically improve students' learning" (pp. 16 & 135).What is the picture now seven years on from Karma's (2015) research? In another study carried out by [2]Dorji (2022) involving semi-structured interviews with Bhutanese primary teachers: "The findings indicate that the proper implementation of formative assessment in Bhutan is not feasible as the education system in Bhutan is associated with disproportionate students to teacher ration (1:40; 1:63). The results also reveal that while teachers practice formative assessment in the classroom, summative assessment is still predominant in Bhutanese schools. Results reveal that formative assessment

[1] Karma. U. (2015) *Formative assessment practices in Bhutanese secondary schools and its impact on quality of education.* https://www.researchgate.net/publication/323986356_Formative_Assessment_practices_in_Bhutanese_Secondary_Schools_and_its_impact_on_Quality_of_Education

[2] Dorji. S. (2022) *Teachers' perception on the feasibility of formative assessment in Bhutan.* Bhutan Journal of Management, vol 2 (1), pp. 104-120.

does not motivate students to do tasks that are not graded as they are accustomed to graded tasks" (p.115).

One of the key strategies of formative teaching is guided group teaching ([1]Boyle & Charles, 2013, [2]Charles & Boyle, 2014),*which serves to identify, support, and develop individual learners as complex apprentices. The current practice of whole-class teaching within formative assessment practices, is a contradiction and is at odds with the philosophy of learner-centredness.*Dorji (2022) states: "While formative Assessment is not a new concept to the teachers, the results reveal that Training of Trainers on Formative Assessment and the implementation of Formative Assessment in classes Pre-Primary to III starting in 2020 has provided them more information about formative assessment" (p.116). However, the Trainers of the Training must understand that "*If you are teaching children as a whole class group, rather than planning your teaching and learning around individual learning needs, then you cannot be teaching formatively. If you teach without differentiation, then how can you be matching learning to each child's developmental needs*? ([3]Boyle & Charles, 2008, p.22). Many teachers perhaps, would argue that this change in methodology is practically impossible with class sizes over 40, however, teachers can be trained in classroom management strategies through a distributed practice model (Charles & Boyle, 2014).

Many studies have demonstrated that "distributed practice (i.e., spacing learning sessions over time) leads to better retention than massed practice (i.e. cramming learning sessions in immediate succession" ([4]Goossens, 2016, p.1). The importance of *spacing learning over time* is one of the key benefits of guided group strategies which allows for specific differentiation within the learning needs of whole class planning. For [5]Mcadamis (2001) the importance of instructional process as differentiation naturally incorporates "the pace and rate towards understanding these concepts varies" (p.3). Significantly, spacing learning over time as distributed practice within a guided group methodology according to [6]Boyle & Charles (2012) "as always operating within a whole-class teaching structure, that is *movement* from homogeneity to heterogeneity"(p.118).

Distributed practice utilizes guided group methods and was recognized by the [7]Williams Report (2008): "Guided group work offers an organisational approach where attention can be given to particular children who may need require additional support or challenge to ensure they continue to progress in their learning. However, Charles & Boyle (2014) propose a caveat to Williams' definition: "The guided group should not be misconstrued as a group requiring special needs support-the opposite in fact. A guided group is the optimal teaching, learning and assessment situation in which the lead professional in the classroom is focused on providing learning support to individual(s)" (p.66).

In Singapore formative assessment has been introduced into a country with a long-standing tradition of summative testing. [8]Wong et al, (2020) have identified a "triple functionality of *accountability*, *performativity* and *credentialism* that led to examinations becoming increasingly high stakes because outcomes are used to make important decisions, or have serious consequences, that affect students, parents, teachers, administrators, schools and communities" (p.436). However, in 2008, the Primary Education Review and Implementation (PERI) Committee was appointed by

[1] Boyle. B. & Charles. M. (2013) *Formative Assessment for Teaching & Learning*. SAGE: London.
[2] Charles. M. & Boyle. B. (2014) *Using Multiliteracies and Multimodalities to support young children's learning*. SAGE: London.
[3] Boyle. B. & Charles. M. (2008) *Are we doing it right? A review of the assessment for learning strategy*. Primary Leadership Today, 2 (14), pp. 20-24.
[4] Goossens. N. A. M. C. Camp. G. Verkoeijen. P. P. J. L. Tabbers. H. K. Bouwmeester. S. & Zwaan. R. A. (2016) *Distributed practice and retrieval practice in primary school vocabulary learning: A multi-classroom study.* Applied Cognitive Psychology, pp. 1-24.
[5] Mcadamis. S. (2001) *Teachers tailor their instruction to meet a variety of students' needs*. Journal of Staff Development, 22 (1), pp. 1-5.
[6] Boyle. B. & Charles. M. (2012) *David, Mr Bear and Bernstein: searching for an equitable pedagogy through guided group work.* The Curriculum Journal, 23 (1), pp. 117-133.
[7] Williams. P. (2008) Independent review of mathematics teaching in early years settings and primary schools. Final Report. DCSF: Nottingham.
[8]Wong. H. W. Kwek. D. & Tan. K. (2020) *Changing assessments and the examination culture in Singapore: A review and analysis of Singapore's assessment policies.* Asia Pacific Journal of Education, vol 40, (4), pp. 433-457.

MOE to examine the priorities, initiatives and resources needed to improve primary education. "The PERI Report (MOE, 2009) outlined proposed changes to primary education in several areas such as assessment and teacher education to balance attaining knowledge with the development of skills and values:

'' Moving away from an overly strong emphasis on examinations, especially in Primary 1 and 2 (ages 7 and 8 respectively) and exploring the use of 'bite-sized forms of assessment with the emphasis on building students' confidence and desire to learn. Findings indicate that assessment practices remained focused on drill and practice of basic factual and procedural knowledge, with assessment tasks found to be of low authentic intellectual quality across Primary 5 and Secondary 3, English, Mathematics, Science and Mother Tongue. Teaching was largely teacher-centred and focused on preparing students for national high-stakes examinations. The assessment system was inhibiting or constraining with the unwillingness of teachers to change their instructional practices in line with learner-centred pedagogy" (pp. 440 & 446).

[1]Kaur & Lim-Ratnam's (2022) study of three primary schools in Singapore focused on the implementation of formative assessment based on Hayward's (2004) model of curriculum change: "based on the premise that teachers play an active role in reform enactment and that context can affect change reform" (p.6) [2]Hayward et al (2004) argue that insufficient attention has been given to the "power that teachers have to mediate change" (p.400). However, Kaur & Lim-Ratnam (2022) report: "All the teachers in the study were found to subscribe to an exam-centric ideology despite acknowledging the need to conform to this new reform advocating a more balanced approach to assessments. For the teachers from APS and VPS (Acacia & Violet Primary Schools), the element of assessment as a form of measurement of scores was still present in their minds even when attempting formative assessment. The teachers also acknowledged the need to provide parents with grades reflecting student performance even within the mandated Holistic Assessment Plan (HAP), context" (p.19). Similarly, [3]Ratman-Lim & Tan (2015) found that "While teachers and parents welcomed the HA Policy as 'timely and necessary…to relive stress in a high-stakes examination culture' they continue by stating how the 'culture of achievement in high-stakes examinations is so deeply entrenched in Singapore's cultural context that it 'colours teachers and parents' perceptions and conception of assessment" (p.64).

In Europe, the Swedish curriculum that was implemented in 2011, grades were introduced from Year 6 (12-year-olds) and twice a year for the three final years of compulsory school ([4]Swedish National Agency for Education, 20111/2018, 2022). A report from the Ministry of Education in 2020 regarding the Swedish grading system stated that students found the grading system demotivating ([5]SOU, 2020:43). However, in the new curriculum that was launched in the autumn of 2022, new directives for grading were introduced, which enabled teachers to make more comprehensive evaluations of students' knowledge because now the dividing line between the grades is less distinctive. However, the boundary between [6]F and E remains as sharp as in the past ([1]Swedish National Agency for Education).

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[4] Swedish National Agency for Education. (2011/2018). *Läroplan för grundskolan, förskoleklassenochfritidshemmet*: reviderad 2018 (Fifth edition, ed.) [Curriculum for the Compulsory School, Preschool Class, and School-age Educare]. Skolverket.

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[5]SOU 2020:43. *Betygsutredningen* 2018. Retrieved from https://www.regeringen.se/remisser/2020/09/ remiss-sou-202043-betygsutredningen-2018/

[6]"Since 2011, students with grade F in the core subjects have not been eligible for the national programmes at the upper secondary school level. In the last decade, between 13-14% of the students in the final year of compulsory school (year 9, aged 15) have not been admitted to the national upper secondary programmes due to having obtained grade F in the core

In Ronn&Pettersson's (2023) ethnographic research with students from Years 8 and 9 at a municipal Swedish lower secondary school, was guided by the following research questions:

1) What kind of informal social peer strategies do students use when ameliorating written assignments to be assessed by their teachers?

2) How do students reflect on these informal social peer strategies? (p.41)

These authors comment on "a gap between how students are expected to interact in collaborative learning processes and the assessment of their individual performances" (p.40). In the Swedish context, this can be seen in recommendations to turn to peers for assistance in creating and revising texts and giving feedback ([2]Swedish National Agency for Education, 2017, 2018). Therefore, "giving feedback to peers is to be interspersed with self-regulated learning, where students take responsibility for their own learning…" (Ronn&Pettersson (2023, p.40). However, the pressure of a summative system on individual learners was captured in the semi-structured interviews: "Even students who considered themselves to behardworking thought it was difficult to get good grades. Zineb worried about keeping her grades: "*I often worry about being able to keep the grades I have fought for and its very sad when something you've fought for decreases*". Zineb's emotive use of 'fighting for' grades clearly signals the negative effects of summative testing. Surely, Zineb's 'fight' should be focused on formative principles according to [3]Popham (2001), such as reflecting on "How do we teach Tracy the things she needs to know? Is forced aside by this far less important one, 'How do we improve Tracy's score on the high-stakes test she will be taking?" (p.30). Similarly, in Ronn&Pettersson's (2023) study: "The fear of getting a lower grade was widespread and it was clear that there were numerous ways of enhancing or keeping a grade. One strategy was to forward images of a higher achieving classmate's assignment. Beatrice explained that you: '*Probably can […] affect your grades a lot if someone else helps you. You get better grades than you normally would'*. This implies that the sharing of images could lead to the receiving student getting a higher grade than they would otherwise have had been able to receive on their own" (p.55).

Peer-assisted assessment strategies also incorporates the importance of collaboration and modelling for learners. The case studies of [4]Charles & Boyle (2014) positively investigated the integration of major aspects of writing development. Such as collaboration (co-construction), the importance of peer interactions through social learning and the fusion of illustrations and writing to assist children's communication and understanding- all essential elements of formative teaching and learning.

In a recent study by [5]Bostrom & Palm (2023) on formative assessment practices with Year 4 and Year 7 (13-year- old) students in mathematics involving 14 teachers in a mid-sized Swedish Municipality. The following five key strategies were used as [6]Wiliam& Thompson's (2008) formative assessment 'big idea':

KS 1. Clarifying, sharing, and understanding learning intentions and criteria for success.

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subjects (Swedish National Agency for Education. *a*. Statistics 2011–2021. Retrieved from https://www.skolverket.se/skolutveckling/statistik/sok-statistik-om-forskola-skola-och-vuxenutbildning?sok=SokC&omrade=Betyg%20%C3%A5rskurs%209&lasar=2020%2F21&run=1

[1] Swedish National Agency for Education. (2022). *Läroplan för grundskolan, förskoleklassenochfritidshemmet* (Fifth edition, ed.) [Curriculum for the Compulsory School, Preschool Class, and SchoolageEducare]. Skolverket. Retrieved from https://www.skolverket.se/getFile?fle=9718.

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KS 2. Engineering effective classroom discussions, questions and tasks that elicit evidence of learning.

KS 3. Providing feedback that moves learners forward.

KS 4. Activating students as instructional resources for one another. KS 5. Activating students as the owners of their own learning.(KS= Key strategy. p. 2).

The authors noted differences between the practices of these two teacher groups, "for example, all year 4 teachers began to often let all students respond to daily whole-class questions on their mini whiteboards, and those responses were followed by immediate modifications to instructional activities and feedback. In contrast, only half of the year7 teachers did so. Consequently, the year 4 teachers were more able to provide a practice that continuously adapted to their students' learning needs" (p.11). This study supports the dominant grading summative practice in Sweden as the student moves chronologically through the system.

[1]Canfarotta&Lojacono's (2022) action-research project carried out with Italian teachers of primary, lower, and upper secondary schools, demonstrate that the involvement of teachers in the creation of metacognitive tools promotes the use of formative assessment at school. A high number of students ("83%") commented on the positive outcomes: "*By personally correcting [2]mistakes I can better understand what I need to study more. I don't just focus on the grade, but I learn from mistakes. It helps me to improve human qualities in my studies. It also helps me in everyday life. It enhances my strengths and those I still have to work on"* (p.6).

The fourteen teachers also reported positively on the use of formative assessment tools: "The teachers stressed that with the tool it was possible to personalise the teaching more, because they were able to 'meet' each student by correcting their personal forms and thus were able to better understand their learning process" (p.7).

In a sample of ten primary schools located in different provinces of Spain the Learning to Be Project carried out by [3]Resurreccion et al (2021) study "the main objective was to design a formative assessment method and the tools necessary for the development and evaluation of social and emotional competencies at primary and secondary schools" (p.3). The results indicate that those participants in the "experimental group showed higher self-esteem, better responsible decisions, and higher self-awareness than those in control group" (p. 1).

The beneficial results of the use of differentiation by teachers was observed in a study by [4]Xuan et al, (2022) "One of the key findings in our review was the positive effects of differentiated instruction during or after formative assessment on reading achievement for K-Grade12 students''. This significant result is in accord with the findings from an influential U.S. data-driven reform model on state assessment programs ([5]Slavin et al, 2013) found that, for fifth grade reading, those schools and teachers *adjusting* reading instruction produced educationally important gains in achievement. Formative assessment was analogous to taking a patient's temperature, while differentiated instruction was analogous to providing a treatment" (p.12, emphasis added). Similar findings by [6]Boyle & Charles (2007; 2008; 2012; 2013) echo this outcome.

[1] Canfarotta. D. &Lojacono. C. (2022) *Formative assessment and key competences for a conscious recovery after COVID-19: An action-research at a school in Italy to enhance reflection starting from mistakes*. The Journal of Classics Teaching, pp. 1-9.

[2] In formative pedagogical language 'mistake' is actually a miscue. Teacher then uses 'miscue analysis' to plan specific next steps.

[3] Resurreccion. D. M. Jimenez. O. Menor. E. & Ruiz-Aranda. D. (2021) *The Learning To Be Project: An intervention for Spanish students in primary Education.* Frontiers in Psychology, 12, pp. 1-16.

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In a study by [1]Kyttala et al (2022) of the assessment conceptions of 287 Finnish pre-service teachers, these authors set out to investigate three different groups (classroom teachers, subject teachers, and special needs teachers). In accord with the U. S study and the positive effects of differentiationinterestingly, the Finnish study reported: "Our results show that pre-service *special needs* teachers place more emphasis on both assessment of learning and assessment for learning than pre-service and subject teachers and were thus more assessment-oriented" (p.13). This begs the question or rather caveat raised by Boyle & Charles (2013) on p. 8 (in this review), '*why would special needs teachers be more assessment oriented?* Perhaps, in part answer, the key formative assessment methods of differentiation and guided grouping are mistakenly viewed, through low-level training modelling, as 'special needs' intervention strategies.

The auto-ethnographic findings from a study in Australia by [2]Alonzo et al, (2021) reports on an assessment literacy program in one public primary school. "The school is part of a wider Learning Community with four other schools within the area, all together comprising 283 teachers and 4,521 students" (p.4).

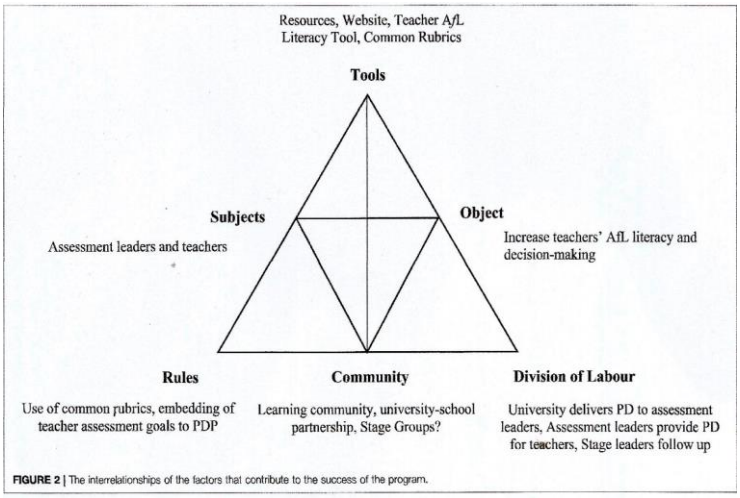

FIGURE 2 | The interrelationships of the factors that contribute to the success of the program.

In this process, teachers are constantly reflecting on how assessment can be best implemented in different contexts. This adheres to the context-drive nature of assessment. All these factors are illustrated in Figure 2 (p.10).

The positive outcomes include "After two years of implementation, data about the students learning has begun to shift the learning and teaching within classrooms. My observation as an Instructional Leader is that *the more the teachers learn about individual students in terms of their background, learning development and needs, then they are able to provide specific feedback that further scaffolds students learning. The students themselves become teachers of their own learning. They become better at self-assessment and self-directed learners"* (p.8, original emphasis).

Summary. As hybrid or blended learning, generally defined as a considered integration of face-to-face and online learning, has increased as an optimal or at least temporarily a necessary means of facilitating learning in global educational systems throughout the pandemic period, and subsequently beyond, its wholesale application renders reflection on its relationship with learner engagement as urgent and critical. However, any discussion of the efficacy or otherwise of a system based on blending learning or not, requires the investigation of the model's conceptual framework and the integration and implementation of core elements, in terms of education for

[1] Kyttala. M. Bjorn. P. M. Rantamaki. M. Lehesvuori. S. Narhi. V. Aro. M. &Lerkkanen. M. K. (2022) *Assessment conceptions of Finnish pre-service teachers*. European Journal of Teacher Education, pp. 2-20.
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critical consciousness (Freire 2021)[1], enabling pedagogy and learner accessibility (Boyle & Charles 2013; Dziubian et al 2018)[2]. *How is multimodal teaching incorporated into stilted, task-listed teacher-dominated programmes? How does a learning programme address the affective and conative domain issues of the student? How long does it take to train a teacher into the importance of those two factors in children's/students' learning development? How is differentiated learning defined and accommodated within that learning programme which supports learner engagement as the route to effective learning*? (Boyle & Charles 2013; Charles & Boyle 2014, 2020[3]; Haberman 1991[4], 2010[5]). Small positive steps have been taken. In Armenia, on a World Bank project, a team lead by Professor Boyle developed a pre-service course for teachers to ensure that new entrants to the profession have a sound understanding of formative assessment principles and practices. The project supported 'the implementation of this initiative by providing technical assistance to the seven Higher Education Institutions that prepare teachers in developing an appropriate and comprehensive course was developed. The course placed an emphasis on modern approaches to formative assessment and its use in the classroom' [Boyle 2014][6].

Conclusions: This leads to the major issue of upscaling: how can the micro multitudes of classroom teachers be enabled to revisit their pedagogical training to reflect, revise and re-plan their teaching within an evidenced conceptual framework of a truly transformative, transactional, learner-centred curriculum? This encapsulates the concerns shared by this author that the prevailing, 'transmission and measurement of knowledge' system model [most likely stagnant and enduring because of the lack of an informed 'transformative system' policy-level debate] that it is better to 'leave school with a tool kit of superficial jargon' (Gatto, 2017 p.3) rather than as a self-motivated, engaged learner on her/his journey to automaticity, with empowered enthusiasms to continue learning in depth. In summary, this failure by policy makers [and a rump of summatively-inclined and empowered educationists] to engage with parents on the developmental rather than the judgmental basis of their child's learning journey, is reflected in the ambivalence and paucity of the formative experiments in the above Literature Review.

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Получено: 03.10.2023 *Received: 03.10.2023*
Рассмотрено: 01.11.2023 *Reviewed: 01.11.2023*
Принято: 04.11.2023 *Accepted: 04.11.2023*

Journal ''Education in the 21st Century'', Vol1-10/2/, 2023