

# CARE

The Coalition for Authentic Reform of Education in Lebanon

## *Toward authentic reform of education in Lebanon: A synopsis of major systemic changes*

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The Lebanese educational system is long due for a major reform under clearly defined vision and broad national policy for education and development that optimally meet local and global realities of the 21<sup>st</sup> century. The reformed system should equitably empower all students to develop fully their potentials for self-fulfillment and for running decent and successful lives with and for a strong national identity. Furthermore, it should efficiently contribute to the nation's power and sovereignty, and to significant and sustainable development at the local and national levels.

The envisioned reform should be insightful and incisive, thorough and comprehensive, in both pedagogical and organizational respects, in order to come about as authentically as it should, and it would require substantial and substantiated measures in all respects and at all levels. It would especially require and bring about new concepts of education, system, governance, pedagogy, school, curriculum, student, teacher, and every other organ<sup>Ω</sup>, medium, and setting involved in the educational system<sup>Ω</sup>.

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<sup>Ω</sup> The educational system consists of students and all *organs*, i.e., agents and agencies, involved in *formal* education, i.e., education offered face-to-face or remotely, in or through formal settings and, often, dedicated facilities like school or university classrooms, to cohorts of learners so that each cohort completes a well-defined program of study, normally as part of a specific curriculum.

An *agent* is any person other than students involved in formal education, be it a teacher, a school administrator, or else, and an *agency* is a coherent body of such persons, be it public or private, local or national, along with physical resources and facilities at their disposal. Agencies include:

- Preschool / nurseries and K-12 schools of general or vocational education.
- Universities and other tertiary education institutions.
- Pre-service and in-service teacher education institutions that are or not part of the above.
- Adult and continuous education institutions.
- National (central) and local authorities like the Ministry of Education and school or educational districts.
- Educational research and development institutions, including those involved in curriculum design, textbook publishing, educational technology, and development of various other educational resources and media.

This document offers a synopsis of major systemic<sup>◇</sup> changes that we, in CARE, believe the reform should bring about. Changes and their foundations are discussed at length elsewhere<sup>✧</sup>. They are outlined here in five tables pertaining respectively to: reform context, foundations of education, educational system, school curricula, and professionalism in the educational sector.

Tables are neither exclusive nor exhaustive, whether in themes or content. They offer a quick overview of the most crucial and critical issues which the envisioned reform is supposed to attend to in the immediate and near future. Unless otherwise specified, table items pertain to all grade levels, from preschool through graduate education. Special attention is given though to K-12 education. Due mention is made when an item applies exclusively to one level (or more) but not others. Similarly, explicit differentiation is made when one item applies quite differently at different levels, especially in tertiary education (universities or any other higher education institution) as opposed to prior K-12 education.

Proper actions need to be carefully coordinated among all stakeholders in order to achieve changes mentioned in the five tables in efficient, coherent, systemic, systematic, and sustainable ways. Bringing such actions into effect harmoniously makes the object of a separate CARE white paper that will be released in due time.

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<sup>◇</sup> For details about *systemism*, see, for example:

Halloun, I. A. (2019). *Cognition and Education: A Bungean Systemic Perspective*. In: M. R. Matthews (Ed.), *Mario Bunge: A Centenary Festschrift*. Boston, MA: Springer.

Halloun, I. A. (2018). *Scientific models and modeling in the framework of Systemic Cognition and Education*. Jounieh, LB: H Institute.

Halloun, I. A. (2016). *Mind, brain, and education: A systemic perspective*. Jounieh, LB: H Institute.

These papers and more are available at: [www.halloun.net/sce/](http://www.halloun.net/sce/).

<sup>✧</sup> See, for example:

Halloun, I. A. (2018). *Toward authentic reform of education in Lebanon (and references cited therein)*. Jounieh, LB: H Institute.

Halloun, I. A. (2016). *Premises for authentic diplomas in the context of reformed curricula and educational systems*. Jounieh, LB: H Institute.

Halloun, I. A. (2016). *Upholding our conventional exit exams is a crime against students and society*. Jounieh, LB: H Institute.

These papers and more are available, in English and Arabic, at:

[www.halloun.net/educational-policy/](http://www.halloun.net/educational-policy/)

[www.hinstitute.org/Site/blogs](http://www.hinstitute.org/Site/blogs)

**Table 1**  
Major changes required for authentic reform of education in the  
Overall reform context

Aspect		Current state	Prospective state
Reform context	1. Nature	Hodge-podge imitation or blind adduction of foreign curricula and diploma that do not necessarily meet Lebanese realities and national aspirations.	Authentically tied to current and prospective realities (cultural included) so as to significantly contribute to individuals' self-fulfillment and the nation's power and sustainable development.
	2. Owners	Governmental agencies <sup>Ω</sup> .	The entire country.
	3. Authors / Agents <sup>Ω</sup> of change	Often non-resourceful and/or inexperienced people and traditional educators and educationists unwilling and/or incapable to break with their inertia.	Visionary, audacious, competent policy and decision makers, experienced teachers, principals, local administrators, university professors, and other concerned experts and professionals, working all together in a propitious context.
	4. Support agents	Special interest people and groups who prefer to preserve the status quo.	Parents/guardians, educational institutions, media, civic action groups, and all other stakeholders gamed for authentic reform.
	5. Scope	Limited to a hodge-podge of erratic specific / modus operandi policies and unsubstantiated changes in outdated programs of study.	Comprehensive at all structural and pedagogical levels of the educational system, and in all forms of formal education, including distant and continuing learning, with new concepts of system, student, teacher, school, university, curriculum, etc.
	6. Processes	Rules of thumb improvisations mandated by central authorities but not systematically carried out.	Research-based, insightful and incisive, meeting local and global realities, and gradually but resolutely carried out.
	7. Implementation	Hastily comprehensive, with little training of teachers and other concerned people, and erratic, in the absence of systematic processes and clearly defined output at the level of student profiles and all concerned agents and agencies.	Gradual, following piloting, with continuous monitoring and regulation, and intensive training and enablement of all concerned agents and agencies.

<sup>Ω</sup> See footnote on page 1.

Aspect	Current state	Prospective state
8. Output	Mostly restricted to students who come out with vague identity and vision, and loose, inefficient, and unsustainable learning outcomes, thus turned into knowledge consumers with shallow profiles not fit for the 21 <sup>st</sup> century; other stakeholders in the educational system and society completely left out.	Well-rounded, self-confident graduates turned into global citizens with strong commitment to national identity and pride, and empowered with systemic profiles for knowledge generation and excellence in the 21 <sup>st</sup> century; professional educators and world-class educational institutions; prosperous culture and economy, solidified nation, and bolstered sovereignty; informed society committed to and engaged in providing quality education to all school* age youngsters.
9. Impact and sustainability	Hardly effective and noticeable, if any, almost exclusively on students and virtually none on educational agents and agencies and on society, not sustained and often not even worth sustaining.	Long-term impact on, and sustained by, all sectors of society, and on individual graduates empowered as mentioned in item 8 above and supported for lifelong learning, knowledge generation, and insightful and critical appreciation, accommodation, and support of significant and aesthetic accomplishments in arts, science, and all fields directly related to profile development and personal and collective welfare.
10. Evaluation and regulation	No systematic evaluation and regulation norms and processes in place.	Systematic and periodic evaluation of all processes, output, and impact, in accordance with well-defined modalities and indicators for students, agents, and agencies, leading to continuous regulation / improvement of the entire educational system.
11. Galvanization	Little awareness, if any and if not misguided, of what it takes to carry out reform especially among directly implied groups (students, parents, legislators, etc.).	Aggressive campaign to raise the awareness of, and galvanize the general public, with the help of all sorts of media and civic and lobbying groups.

\* Unless otherwise specified, “school” is used hereafter as a generic term to refer to any teaching establishment of any delivery form and any level, universities and other tertiary education institutions included.

**Table 2**  
Major changes required for authentic reform of education in the  
Foundations of education

Aspect	Current state	Prospective state	
<i>Foundations</i>	1. Value of Education	Parents appreciated and paid for as a family obligation while regarded by most in the government as unprofitable expenditure and in private schools as marketable commodity.	High-esteemed public good that the entire country treats as a secure national investment for significant sustainable development of individuals, local communities, and nation.
	2. Function of education (vision and mission / purpose)	Constrained to transfer of existing and often outdated academic knowledge in K-12 general education, and of a mix of academic and routine prescriptive knowledge in vocational and tertiary education, mostly for the sake of consuming knowledge and passing exit or high-stakes exams.	Serving long-term national aspirations that accommodate current and prospective local and global realities, especially for individuals' self-fulfillment, strong national identity and pride, and sustainable development of local community and nation.
	3. Right to Education	K-9 mandated but not enforced, with disproportionate chance of success across and within all grade levels, often favoring a minority of self-educated or so-called "gifted" or "privileged" students.	PreK-16 quality education for all strictly enforced with equal chance of success – even excellence – to all students irrespective of any factor.
	4. Quality of education	Supposedly, but ineffectively, mandated by exit and high-stakes exams in the absence of quality standards and controls, and of comprehensive school* monitoring.	High quality standards set and strictly enforced for all students, agents <sup>Ω</sup> (and their work terms and conditions), agencies <sup>Ω</sup> , resources, and physical settings involved in education.
	5. Cost	Right, equity, and quality constrained by existing schooling conditions and demographic status, especially where tuition in the private sector is unaffordable.	All people and sectors for high quality education subsidized with public funds from public-private partnership to ensure equitable access and chance of success for all students.
	6. Educational system <sup>Ω</sup>	Outdated and dysfunctional structure of extremely low efficiency, with polarized organs <sup>Ω</sup> often working in isolation from each other in the absence of clear vision and national policy for education and development.	Various organs <sup>Ω</sup> working efficiently with each other under a truly systemic governance with coherent qualifications and operational policies in order to serve clearly defined national vision and broad policy for education and development fit for the 21 <sup>st</sup> century.

<sup>Ω</sup> / \* See respective footnotes on pages 1 and 4.

Aspect		Current state	Prospective state
Foundations	7. System administration	State and private agencies controlled to different extent by the government and run respectively by governmental authorities and special interest (often sectarian) groups or individuals, with little engagement, if any, of various sectors of society, all in the absence of clear national policy and strategies.	Various organs of the educational system engaged, along with social and professional communities (business and industry included), under a systemic governance and following coherent and efficient policies and strategies, and monitored systematically for quality and continuous regulation.
	8. Continuity	Lack of continuity across terms of successive authorities mainly because of disconnected, makeshift policies discretely set by sitting authorities and often abdicated by succeeding ones.	Continuity ensured by a broad long-term policy that adequately serve the national vision for education and development, and from which derive coherent, well-grounded and well-informed specific, modus operandi policies and deployment strategies with reasonable agendas for various organs of the system.
	9. Pedagogy	Mostly dominated by myths and unsubstantiated and outdated premises of a 2-4-6 didactic model <sup>♦</sup> , with ill-defined pedagogical framework(s).	Coherent framework(s) authentically suited to serve the function of education and conforming the workings and development of human mind and brain as revealed by reliable research in cognitive science and neuroscience.
	10. Study effort	Effectively done mostly at home, for long hours after school, with parents/guardians and/or home tutors making up for inefficiency of class instruction.	Meaningful learning taking place mostly at school, not at home where reasonable assignments are done for reinforcement and extrapolation to daily life tasks, which requires change of school hours and proper delineation of learning ecologies.
	11. Technology	Students and agents consuming tech fads with no substantiated and substantial value, under no clear vision and policy, and local R&D initiatives in educational technology limited to unsupported zealous individuals.	Critical choice of, R&D policies for, cognitively substantiated and substantial technological means and methods fit for adopted pedagogy, with a keen eye on, and readiness to adapt to, automation and artificial intelligence, their potentials for all organs of the educational system, and their prospective impact on system governance and human resources.

♦ According to such model, true knowledge can be canned between the *two* covers of a textbook, and then unpacked and delivered through lecture and demonstration to students sitting still and quiet between the *four* walls of a classroom (traditional laboratories included) during *six* packed periods (or more) a day under one-size fits all curricula.

**Table 3**  
Major changes required for authentic reform of education in the  
Educational system

Aspect	Current state	Prospective state	
<i>Educational system</i>	1. Main function	Completing preset syllabi and preparing students for high-stakes exams, especially state (official) exams at the pre-college level.	Student empowerment with systemic 4P profiles* for global citizenship with strong national identity, lifelong learning, and success and excellence in our rapidly changing world.
	2. Broad national policy for education and development	Not explicitly spelled out, if ever existing.	Coherent corpus of constitution tenets, laws, and guiding principles for education and development (of individuals, communities, and nation) in the 21 <sup>st</sup> century.
	3. Specific / modus operandi policies	Hodge-podge of incoherent and inconsistent policies, often improvised ad-hoc by sitting authorities and abdicated by successive ones.	Coherent sets of regulations, rules, and guidelines that govern qualifications, relations, and operations of various organs of the system individually and consistently with each other and with national vision, broad policy, and quality standards.
	4. Impact on students and sustainability	Measured almost exclusively by student achievement on exams, the potential of which declines significantly and exponentially after taking those exams.	Measured by permanent sustainability of learning outcomes, competencies♥, and profiles, creativity in fields of interest, and productivity in the workplace and other sectors of society.
	5. Governance	Central, top-down governmental authority in K-12 with a private sector left with relative leeway in administrative, financial, and sectarian matters, and tertiary education left alone practically unmonitored in all respects.	Systemic governance with shared power and distributed responsibility among all agents to coherently develop and systematically implement common efficient policies, with systemic monitoring at all levels and in all respects.
	6. Leadership	Conceived mostly as command-and-control and confined to administrators appointed based often more on sectarian and political affiliation than on professional and ethical merits, and thus often for the purpose of serving the special interests of those behind the appointment.	Inspiring moderation of teamwork and guidance for excellence by dedicated systemic agents at all levels, not only administrators, identified, trained, monitored, and supported through reliable mechanisms to serve the system, and especially the main function above, in accordance with clear policies.

\* These are the profiles of systemic citizens with **P**rogressive mind, **P**roductive habits, **P**rofound knowledge, and **P**ricipled conduct, in all aspects of life.

♥ A competency consists of content knowledge, reasoning and sensorimotor skills, and dispositions and attitudes necessary for achieving one type of tasks (specific competency) or numerous tasks in distinct contexts (generic competency).

<b>Aspect</b>		<b>Current state</b>	<b>Prospective state</b>
<b>Educational system</b>	7. Public-Private sectors relationship	Polarization, friction, and conniving competition within and between sectors with a spirit of mutual distrust and lack of respect.	Systemic partnership with a positive spirit of collaboration for student, community, and nation welfare and development.
	8. General education – Vocational education relationship	Dichotomous split between the two types of education, with general education almost entirely disconnected from students’ interests, everyday life, and the job market.	Dichotomy transcended toward “universal” education whereby all students get blended (academic and technical) education that is more skills and dispositions than content oriented and that involves practical field training (apprenticeship like) in cross-disciplinary contexts.
	9. Progression across grade levels	Discrete transition across pre-college / university cycles, and especially from secondary school to college, mostly due to the lack of clear vision and policy, and well-defined and coherent pedagogical frameworks.	Smooth progression across all grades (Pre-K through graduate education) ensured via practical policies and pedagogical framework(s) devised coherently with each other and consistently with the system foundations.
	10. Pre-K / early childhood education	Governed by special policies disconnected from the rest of the educational system.	Coherently integrated in the educational system (day care included) in all pedagogical and organizational respects so that children be ready to learn in kindergarten and beyond.
	11. School*	Textbooks conservatory with archaic, stressful, and rigid structure and settings.	Autonomous, continuously evolving, relaxed, experiential, and boundless eco-system that extends beyond the school walls to various sectors in the neighboring community.
	12. Learning experiences	Authoritarian, often dull, lecture and demonstration about mostly disenchanting material.	Hands-on, minds-on, inspiring experiential activities related to everyday life and the job market.
	13. Student role	Low asset, obedient subject compelled to surrender blindly to external authority, be it teacher or textbook.	Prime national asset whose locus of control is chiefly intrinsic and whose voice is considerably heard and wisely managed.
	14. Student profiles	Reproductive of loose bundles of subject matters mostly learned by rote.	Systemic 4P profiles with focus on patterns of excellence, creativity and innovation in various professions, aesthetics, and hobbies.

\* “Pre-K” and “K-12” are indicated explicitly where a given item applies strictly to any of the two levels. All other items apply, though to different degrees, to all “school” levels, from preschool to graduate education.



Aspect	Current state	Prospective state	
Educational system	15. Students with difficulties (Mostly K-12)	Often discriminated against, dropped out of school, or left out, along with parents/guardians, on their own without proper assistance and resources.	Cared for properly by qualified educators equipped with needed resources and supported with wrap-around services (community support for family strengthening and student success) so that they succeed and excel at school and in life.
	16. Teacher role	Conveyor belt / transmission channel of canned / pre-scripted information, with blind / submissive compliance to school and governmental authorities.	Critical, continuously evolving professional mediator of student profiles development, and leader committed to continuous improvement and sustainable development of school, educational system, and community.
	17. Teacher and school support	Teachers and schools alike often working in isolation from each other and lacking essential support, and condemned / further isolated when disadvantaged or under-performing.	Collective responsibility to sustain high performance of teachers and schools, and timely, insightful, substantiated, and substantial interventions for continuous capacity building, especially when at a disadvantage.
	18. Parents/ Guardians (Mostly K-12)	Passive school followers or, conversely, teacher substitutes left out on their own to struggle with problems their children face following school setbacks.	Critical learning agents to the extent they can and should afford it, supported, under clear policies, in all respects related to their children education and welfare.
	19. Parents Teachers Associations (K-12)	Often stripped of any practical function and dominated by school principals to serve the latter special interests.	Efficient and systemic players and contributors to decision making in all school matters, especially those directly related to student and teacher welfare.
	20. Community engagement	Disorderly, erratic engagement of out of school individuals and organisms, and little engagement with the job market, including in most universities.	Systematic and systemic engagement of various neighboring sectors of society, especially with universities majors and programs of which are closely linked to, and mandated for apprenticeship in, the job market.
	21. Student certification	Sanctioning achievement on one-time, common national exit exams at the pre-college level, and often on similar norm-referenced exams in tertiary education, leading many competent students to dead ends.	Reliable documentation of student profile evolution across all schooling years, opening doors for adequate career choice and education.

<b>Aspect</b>		<b>Current state</b>	<b>Prospective state</b>
	22. Research and development	Erratic and with unsustainable impact.	Systematically carried out by dedicated organs under specific policies to validate all pedagogical means and methods and help continuously improve the educational system.
	23. International outreach and world class agencies	Mostly confined to certain universities for idiosyncratic agendas, and often improvised for particular and short-term purposes, with little cooperation among different universities/agencies, and no national norms and standards for outreach beyond our borders.	Across the board international, long-term and broad range relationships, especially in tertiary education for the purpose of exchanging best practices and instituting partnerships that lead locally to world class practices and products that the outside world would value and look up for.

**Table 4**  
Major changes required for authentic reform of education in  
K-12 curricula\*

Aspect	Current state	Prospective state	
K-12 Curricula*	1. Nature and function	Hodge-podge, static, rigid, one-size-fits-all curricula focused on the transfer of academic knowledge (often outdated) and the formation of knowledge consumers capable of only passing high-stakes and norm-referenced exams.	Systemic, dynamic, flexible (common core and accommodation of students' differences), and continuously evolving curricula that empower students with systemic profiles to serve authentic individual, community, national, and global purposes.
	2. Structure	Rules of thumb pedagogical frameworks, instruction means and methods with premises dating back to the 19 <sup>th</sup> and early 20 <sup>th</sup> century, and programs of study focused on unappealing subject matter often disconnected from contemporary job market and everyday life.	Authentic, mind and brain based systemic pedagogical framework(s) in the context of which learning and instruction are systematically carried out, and so are programs of study focused more on "how to" develop one's own profile than "what" subject matter to learn.
	3. Terms	Prescribed input to students of assumed but often non-existing qualifications at the kickoff of every school year / course.	Guidelines for leading students along realistic profile evolution paths derived from reliable research in cognitive science and neuroscience.
	4. Discipline provision	Focus on content and prescriptive routines, spreading thin across a wide range of compartmentalized subject matters belonging to disconnected disciplines.	Traditional disciplines brought together in a systemic cross-disciplinary mold for meaningful and productive development of essential conceptions, reasoning and practical skills, values, and dispositions that coherently make up systemic competencies for achieving meaningful tasks and bringing about systemic 4P profiles.
	5. Field and discipline merits	Traditional academic fields over-emphasized to the detriments of arts, social integration, physical education, and other cognitively relevant and daily life significant fields that are marginalized as extra-curricular.	The merits of any field and discipline determined by their significance to cross-disciplinarity and systemic profiles development, and thus incorporated in systemic curricula accordingly.
	6. Theory-practice connection	Didactic (prescriptive) classroom practice disconnected from claimed framework and underlying theoretical / pedagogical premises.	Practice consistent with theory underlying framework, and theory and framework constantly regulated as a consequence of research based and oriented practice.

Aspect	Current state	Prospective state	
K-12 Curricula*	7. Learning	Passive, rote and reproductive, with loose and transient learning outcomes held in short-term memory only for as long as needed to pass exams.	Experiential, insightful, meaningful, and productive (creative and innovative), with systemic outcomes and competencies sustained in long-term memory.
	8. Teaching	Blind transmission of rigid content and prescriptive routines in traditional adverse classroom settings, leaving students to struggle on their own in the learning process, often with the burden of excessive assignments.	Helping students learn how to learn and develop their systemic profiles in conducive settings, mostly during school hours.
	9. Assessment	Norm-referenced testing (often not even assessment ‘of’ learning) as an end by itself, used to the detriment of justice and equity to sanction students based on what they can reproduce of subject matter, thus driving them into competitive and elitist race/feud with dead ends.	Means of meaningful learning (assessment “as” learning) and insightful teaching (assessment “for” learning) that are integral parts of curriculum and deployed to move students steadily and collaboratively along realistic and efficient evolution tracks.
	10. Learning ecology	Restricted to classrooms with traditional settings and traditional laboratories, if any, that are not conducive of experiential learning.	Settings that favor experiential learning with hands-on, minds-on, collaborative experiences directly related to everyday life and the job market.
	11. Resources	Mainly textbooks with canned and often outdated academic information that does not appeal to student interests and does not incite them to learn things meaningfully and productively.	Diversified rich and authentic resources that relate to everyday life and foster experiential learning of systemic conceptions, skills, values, and dispositions that explicitly contribute to the development of 4P profiles.
	12. Technology	Add-ons under conventional frameworks often with no significant pedagogical added-value.	Pedagogy-twinning, mind and brain based, validated for the curricula in place under their framework(s) for significant added-value.
	13. Learning outcomes	Excessive, transient, mostly content-focused learning outcomes, disconnected from each other and from present-day realities, along with prescriptive routines mostly learned by rote for passing norm-referenced exams.	Essential (less is more) learning outcomes focused more on process than content knowledge, sustained in long-term memory in the form of 21 <sup>st</sup> century competencies that are crucial for systemic 4P profiles development.

\* This table is dedicated exclusively to K-12 education. However, many issues raised here apply to tertiary education as well.

**Table 5**

Major changes required for authentic reform of education in the  
Professionalism of teachers and other educators

<b>Aspect</b>		<b>Current state</b>	<b>Prospective state</b>
<b>Professionalism</b>	1. Status of teachers/professors and other educators	Little valued, non-appealing “job”, especially in K-12 and some universities, with not enough autonomy, backbone, and willpower to properly serve all students and community.	High esteemed, prestigious “profession” with sufficient autonomy, authority, support, and commitment to serve all students and community properly.
	2. Values and ethics	Absence of formal value system and code of professional ethics leaving it to individual teachers (university professors included hereafter), administrators, and other agents to go by their own book of values and ethics.	Institutionalized systemic values and code of professional ethics with the prevalence of a culture of excellence throughout the educational system that involves creativity and innovation at all levels of the system, especially in tertiary education.
	3. Incomers	Often last choice for college and career dropouts.	First-rate, dedicated college students recruited following rigorous and selective criteria.
	4. Pre-service education	Incoherent medley of overloaded, traditional, and often outdated courses not necessarily related to prospectively deployed curricula, with insufficient and ineffective clinical training.	Blended (academic and pedagogical-educational), rigorous, at a research-based graduate institution, to serve curricula to deploy in-service, under neuroscience (mind and brain) based pedagogy, with 21 <sup>st</sup> century academic essentials and well-structured and efficient clinical practice at dedicated schools.
	5. Licensure and Induction	Absence of national licensure/certification, induction, and tenure norms, with induction in K-12 schools (and some universities) based on an academic undergraduate college degree (not necessarily related to assigned courses, in private schools), and tenure in public secondary schools with no professional criteria and no in-service capacity building and performance requirements.	Graduate degree (doctoral degree for university professors) under syndicate enforced universal, clinical licensure/certification norms for K-12 teachers, apprenticeship-based induction and mentoring by dedicated master teachers, continuous professional development (CPD) and rigorous performance record for upholding the license/certification.

Aspect	Current state	Prospective state	
Professionalism	6. In-service education	Hodge-podge, rules of thumb improvisation of erratic training.	Formal CPD in all schools and levels that follows coherently from pre-service education and meets actual student and school needs.
	7. Career terms and work conditions	Career policies and regulations often unfair and discriminating in fact and practice between gender and grade levels in K-12, especially in the private sector, and ladder and pay-scale often discouraging from continuous capacity building, especially in the public sector where promotion is due periodically irrespective of performance and productivity.	Fair, just, appealing, and non-discriminating policies and regulations that come with enticing career ladder, pay scale, workload, incentives, and responsibilities especially for leading professional development and improvement of curriculum and the entire learning eco-system, all along with accountability for school and community performance.
	8. Administration	Often conceived as top-down, authoritarian management of daily business and routines.	Management of learning ecologies for student experiential cognition and systemic profile development, and of conducive systemic work environment for teachers and all other learning agents.
	9. Community spirit	Individual teachers and other agents seldom caring about each other and common welfare and progress of school community.	Systemic caring about each other and the entire school community with an outreach mentality, and within a favorable and supportive environment.
	10. Support	Teachers and other agents often left isolated on their own, once in-service.	Viable local and national exchange, monitoring, feedback, and support systems.
	11. Exchange platforms	Limited to erratic and informal gatherings and ad hoc groups in social media.	Formal periodic gatherings (PLCs, conferences, etc.), electronic discussion platforms (social media included) integrated in the culture of capacity building and CPD.
	12. Academic / Educational associations	Membership and active engagement left to individuals' initiative without being a part of the culture.	System and school-mandated, significant source of capacity and status building.
	13. Syndicates	Focused on letting education "jobs" make ends meet.	Professional "order"-like organizations for sustaining high quality and highly valued "profession".

<b>Aspect</b>		<b>Current state</b>	<b>Prospective state</b>
<b>Professionalism</b>	14. Research	Left, in K12 and most universities, to individual initiative without being part of the culture, and where formally mandated, different standards and practice norms in place in different universities.	Closely tied to practice, whether by taking advantage of others' research, or by getting involved into action-research and other types of educational research (in addition to traditional academic research at the university level under common norms and standards).
	15. Publications	Rarely valued in PreK-12 where often limited to textbook authoring there, and unsystematically integrated in the culture of tertiary education where, and, except for a few exceptions, left for individual professors' initiative to carry out on their own with insignificant sponsorship and no reward of any sort.	Highly valued and mandated by the system for professional development and promotion, and envisioned as collaboratively as possible to foster productive communication and development of the profession.
	16. Partnership	Informal collaboration among organs, even individual teachers/agents within the same school/agency, predominantly confined to the educational community.	Systemically and systematically effected, open to all agents within the same agency and among local and distant agencies, especially between neighboring schools and universities, and between those institutions and non-educational agencies in the community.

## About the authors

Ibrahim A. Halloun is Founding President of H Institute and CARE. His career in physics and education spans over 40 years at Lebanese University, Arizona State University, American University of Beirut, UNESCO-Paris, and other institutions.



Prof. Halloun has been devoted particularly to the development of:

- *Systemic Cognition and Education.*
- *Modeling Theory in Science Education.*
- *Viable means for characterizing and revamping student worldviews and conceptions.*

His R&D work and interests also include:

- Educational policy and systemic reform.
- Curriculum design with a focus on cross-disciplinarity.
- Assessment and evaluation.
- Professional development of pre-service and in-service teachers.
- Cognitive science and neuroscience.
- Philosophy, history, and sociology of science.

Details at: [www.halloun.net](http://www.halloun.net).

Georges N. Nahas is former University of Balamand VP for Planning and Educational Relations (1995-2018), and former Dean, there, of the faculties of Arts and Social Sciences, Theology, and Library Science and Communication. His educational career spans over 50 years and involves administration, teaching, and research at UOB, Lebanese University, St Joseph University, and other institutions.



Prof. Nahas has served on many governmental and non-governmental committees dealing with:

- National education strategy.
- Systemic reform.
- Higher education policy.
- K-12 curricula.

His R&D work and interests include:

- Cognitive psychology with a focus on conceptualization and conceptual fields theory.
- Curriculum design.
- Teachers' education.
- School administration.
- Quality issues in education (University and pre-university).

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