The Role of States and Religious Organizations in Web-Based Teachings
(In order to Promote Religious Education)

Authors: Dr. Haroon Aziz[1]

Abstract

The paper identifies the major spiritual problem created by imperialism and the opportunities it has unintentionally created for religious education through its own aerial platform, viz big-data cyberspace.

Imperialism in its greed for materialistic power rapidly expanded globalization to the extent that the global migration of skills, expertise, cultures, languages, and religions defy their control by imperialism.

In its western centres, imperialism has neglected the mental and spiritual health of its populations and has replaced spirituality with hedonism, egotism, and consumer culture, which it exports even to its periphery as cultural imperialism.

In pursuit of rabid capital accumulation it has placed hardware devices in civilian hands to sell software applications as social media, which has become the social power of people, beyond its control.

This newfound social power of the people presents opportunities for the promotion of religious education to people who are starving for spiritual fulfilment in the midst of the oversupply of worldly goods. The technological devices, with possibilities of real-time and simultaneous communications across international boundaries, compel the development of new methodologies, new quality assurances, and new contents, which are unique and original.

---

1. Proff in University of KwaZula, Republic of South Africa, Johannesburg, *Haroon.aziz@icloud.com*

As knowledge is the social property of all of humanity and not the private property of individuals, states and religious organizations have to collaborate in the transfer of beneficial knowledge, skills, expertise, cultures, languages, and religions – with tolerance and understanding. It is a world where the walls of universities are metaphorically falling down and the world has become a global campus. This demands the creation of new adaptive education models in which the distinction between learners and educators is blurred.

In spite of the intimidating edifice of globalization, education needs to maintain the basics of cognition, viz., language, learning, memory, intelligence, and thinking as well as the positive emoting abilities of learners/educators.

Spirituality needs to be redefined, in modern scientific terms, as the natural realm of ideas, cognition, sensory inputs, emotions, perceptions, and beliefs. It is culture-specific and interpenetrated in the cortico-thalamic processes of the brain.

Key Words: Religious Education, States and Religious Organizations, Web-Based Teachings

Introduction

Cybernetics- as the science of communications and automatic control systems in both machines and living things- provides for the human interface with machines that produce a systematic environment for interaction as the basis of cyberspace-time (CST) for immersive and memorable experiential activities for the learner/ parent/ teacher circle.

It creates a strong desire in them to return the following year to further their education.

It reinforces engagement and strengthens learning outcomes. It stimulates experiential learning that transcends old-style science laboratory experiments.

Software applications are transforming traditional ways of learning/ teaching into meaningful real-world experiences. In the CST universe learners/ parents/ teachers can land on the moon, penetrate the dense equatorial rainforests, interact with remote indigenous populations, go back in time to the dinosaur age, or explore the depths of the oceans.

New contents are not only learnt but also 'felt'. Learning is experienced.

Tutoring systems provide for one-to-one tutoring platforms to leverage Mega Data and learning analytics for the provision of real-time feedback about actual performance, exact learning needs, skills gap, and supplemental guidance.

It compels the ongoing professional development of teachers, in terms of substance, methodology, techniques, and technology-use.

Technology helps teachers to transform from vault-keepers of knowledge to coaches, mentors, and facilitators.

The strategic challenge for education in the 21st century is to produce and deliver, safely and securely, improved content in less time, at a fraction of the cost, for the massification and democratization of education in order to help people to liberate themselves from not only physical but also mental and spiritual poverty.

The Philosophy of Cyberspace-Time (CST)

There is a need for a philosophy of CST.

The five characteristic elements of abstract CST are space, time, distance, size of information, and navigation route.

They exist in a universal energy-field.

Space requires locating target destinations for correct delivery, Distance requires speed of time for cost-effective and time-efficient delivery.

Size requires large storage capacity for knowledge. Navigational route requires algorithm to follow specified and secure routes to reach the intended destinations.

CST requires appropriate ratios of distance: speed, time, storage capacity, cost. The ratios optimise the use of CST, The quantitative relations of these ratios ensure the quality of CST.

CST gives reference to the five characteristic elements just as space-time coordinates give reference to 'motion relative to a practically rigid body of reference' (Einstein).

CST is characterised by the interactiveness of all the users who populate it.

There is co-responsibility for content development, availability of information, optimisation of technology, navigability, simultaneity of responses to enquiries, creation of new adaptive methodologies, and the creation and distribution of knowledge.

CST revolutionises teaching and learning where the distinction between them is blurred.

This demands responsiveness by the educational and state institutions, teachers, learners, and parents in real time.

CST transcends geographical regions, aerial space, time zones, and international boundaries.

The diffusion of computer-mediated communication (CMC) and computer-supported collaborative work (CSCW) through the medium of information technology (IT) constantly expands CST capacities.

Social discontent with political authorities, big business, and mainstream media have intensified the use of CST and made social media the new mainstream media with power in the hands of ordinary people.

This diffused environment is a single social, political, economic, cultural, religious, educational, informative, and psychological space, which has little regard for the real-world space known for 5000 years of written human history.

It is where people develop person-to-person interactive relationships and find emotional support.

Einsteinian space-time with its four dimensions of length, breadth, height, and time is a natural phenomenon and its existence is independent of the human will.

CST is a creation of the human will and is alterable by it. Human creation exists within a natural creation.

It is an instance of the human will optimising the use of a natural creation for the benefit of humanity.

The philosophy of CST transcends the earlier philosophies of space and spacetime as posited by Newton, Leibniz, Kant, Marx, Einstein, and others.

Defining CST

The properties of CST, i.e., its character and behaviour make the defining of it an elusive exercise as shown by its philosophy.

Its inherent dynamism as a worldwide virtual reality makes it prone to use, misuse, and abuse, which demand of it the capacity and ability to change on a second-by-second basis, ethically.

An abusive code can harm and disable large parts of the network in seconds.

This needs a constant readiness to upgrade defences in seconds with new firewall rules, alternative routing, and new hosting; patrolling and reconnaissance; regular defensive monitoring and entrapment operations and regular offensive probing- all in real time.

As Al-Mustafa Open University (MOU) is approaching this First International Conference on Cyberspace from behind the advances already made by powerful institutions such as the USA Defence Department, the European Commission, and major governments MOU can overtake them in the re-conceptualisation of cyberspace. They, generally, define cyberspace to exclude its human and time components and treat it as a technological phenomenon only. Others define it in metaphorical terms.

MOU can add time to cyberspace and go even beyond Einsteinian spacetime to be in line with the discoveries made by quantum physics in energy and energy-field, the knowledge of which makes the defining of cyberspace even more difficult.

Hypothetically, if the whole of humanity were to vanish out of existence CST will also vanish due to its disuse by human beings but the natural phenomena of energy, energy-field, and space-time would remain intact.

Defining cyberspace results in an incomplete range of notions of what it is and is not.

A philosophy of CST somewhat mitigates for this pitfall, which gets deeper as its use expands exponentially.

The definitions are made difficult by the numerous notions of it in different languages and by different governments having different notions of it.

The electron, with its indeterminate properties and the applications of it by the human mind, is the basis of CST.

The Need for New Ways of Socio-Cognitive Reinforcement

CST as a virtual domain is an enabling environment for interactive CMC and CSCW between and amongst its electronic populace who embody diverse subjectivities,

which transcend national norms, laws, cultures, languages, religions, value-systems, and identities.

The new choices offered by CST may be unselective, uncritical, indiscriminate, and casual that result in a promiscuous array of values, particularly, when the desire to enter it becomes obsessive and compulsive.

CST generates novel mediated experiences, which could be mistaken as valid alternative source to real-world source, which influence new sense of self-identity and community constructions.

The networked reality, conversations with aerial friends, real self-conversations, new identity construction, and rejection or denial of living reality result in the planting of psychosocial roots in CST and gives the real person in front of the computer a false sense of uncontrolled freedom.

CST as psychological space gives freedom to its populace to discard the mental fetters of geographical regions, aerial space, time zones, and international boundaries and to liberate the mind into the unfettered CST domain.

To prevent the tectonic shift from culture-defining education to tradition-free mass of noisy information demands the skilling of real people on how to identify, access, and use beneficial education or create and disseminate new knowledge.

CST education needs to demonstrate its contextual role, link between cognition and interaction, and use of interlocutory models as paradigms of communicative interaction.

The Universal Basics of Cognition
In spite of the strong, speedy, and exhilarating development of CST, the universal basics of cognition remain constant in the fundamentals of education.

The five elements of cognition are language, learning, memory, intelligence, and thinking.

CST merely compels the purveyors of education to factor in hardware and software developments into the teaching and learning of knowledge, methodologically.

It also compels the massification of education as democratic practice, which increasingly absorbs the poor into the world of systematised mainstream education.

By extension, the massification of Islam is democratic practice.

Evidence from neuroscience has made it known that:

1. Social language makes the external environment intelligible to the human mind through sensory inputs.
2. Neural language makes sensory inputs intelligible to the human brain.
3. Social language interprets and labels all sensory inputs.
4. Neural language does not interpret and label any sensory inputs. It treats all sensory inputs as mere electrochemical energy and initiates the release of appropriate doses of neurochemicals and neuro-enzymes.
5. Language is a complex of its general properties and acquisition, semantics, syntax, pragmatics, sociolinguistics, and thought.
6. Learning is a complex of reflexes, instincts, intuitions, conditioning, and individual and social learning.
7. Memory is a complex of short- and long-term memory and neurophysiology.
8. Intelligence is a complex of acuity and conceptualisation.

9. Thinking is a complex of problem solving, forming judgment, making decision, and reasoning creatively.

CST cannot change these neuro-scientific truths though it changes, grows, and develops constantly.

Only the human will can adapt and manage them for delivery through CST.

The cognitive content cannot be affected by the continuous changes in CST.

There is a false expectation of artificial intelligence (AI) that when matter is sufficiently developed to critical mass AI would evolve to exist independent of the human will.

This is based on the out-dated theory that the mind is the ultimate product of matter. AI is not interpenetrated in the other four elements of natural cognition, viz., language, learning, memory, and thinking with a genetic basis spread across 100-billion brain cells with a potential for making a few trillion neuronal connections in different arrays, which give the human brain its characteristic plasticity.

It is this false theory that allows for the exclusion of the human component from definitions of CST.

The correct theory, as demonstrated by the Higgs Boson experiment in the Large Hadron Collider, is that matter is the product of energy in an energy-field.

MOU needs to show the role of contextual education, the connection between cognition and human interaction, and the use of interlocutory models as paradigms of communicative interaction.

Contrasts in Socio-Cognition

Interactive conversation in the real world is an ordinary everyday activity that reinforces cognitive skills.

In this activity there is also a communication of sight, sound, smell, touch, and maybe taste.

A similar activity takes place in CST that mainly involves sight and sound.

Touch is restricted to the screen to enhance conversation techniques.

There is no use of smell, touch, and taste. The conversation appeals to the intellect and emotions.

There is reduced usage of the senses, which is compensated by the increased appeal to the intellect and emotions.

Cognition in the real world is conditioned by the use of five senses while in CST it is conditioned by two senses.

This means that cognitive skills in the two worlds develop differently but the appeal to the intellect and emotions remain intact.

CST users commute to the virtual world the perceptions of smell, touch, and taste, which are supposed to enhance their cognition of the real world.

Should the 'perceptions' be misperceptions they would retard their cognition.

In the real world interactive conversations take place within a social system of cultural, linguistic, and religious diversity.

This world is space for cognitive elaboration, in which networks of relationship are built and reinforced through repetition.

There is wider semiotic space for the internalisation of signs and symbols for use and interpretation to generate tolerance and understanding.

In contrast, CST lacks a social system and provides reduced space for cognitive elaboration and weaker networks for human relationships.

There is narrow semiotic space, which reduces tolerance and understanding. This opens CST to abuse and misuse such as cyber-attack, crime, bullying, balkanisation, war and terrorism.

These anti-social activities manipulate the human intellect and emotions.

They violate the very principle of democratic practice and societal norms and make parts of CST violent.

These evil activities demand of states that they provide international cybersecurity and of the institutions that they provide cybersecurity for their own websites.

In CST there is no physical interlocution but higher levels of simulation of the physical world, which influence the development of cognitive performance as communicative exchange.

This necessitates state and institutional regulation of communication to guarantee communication within the framework of basic human decency.

Cognition as a function of social and political activities connotes shared activities and accessibility, with a psychosocial approach, in the context of networked relationships.

By the limitations of web-based technology CST utilises only a small part of space, which is reachable through satellite technology.

The small part networks interlinked and intermediate computers, which store knowledge and make it accessible.

CST has the expansive capacity to transmit beneficial knowledge, which is encapsulated in epistemology and guided by new methodology.

It has the potential for maximum impact on a worldwide basis.

The new philosophy of CST will guide the development of a strategy, which is responsive to the daily evolution of CST, with appropriate cybersecurity to firewall the integrity of knowledge.

The Fusion of Virtual Reality (VR) and Artificial Intelligence (AI)

There is an educational need to harness this fused reality and intelligence as a technological tool of natural cognition and emoting, which is as integral as white chalkboards are to classrooms.

Coding and the use of tablets are now parts of many national curricula. This necessitates the technological reskilling of subject experts of the old classrooms.

The maximisation of the impact of institutional learning platforms offers new opportunities in lifelong learning, renewal of expertise, and constant reskilling beyond the classroom – with learning/teaching support.

There will be a need for new forms of assessment to measure learning as it happens and it will shape the learning experience in real time.

Learning to learn is a new constant. This opens up new arrays of neurons and expands the plasticity of the brain. This aids teachers in their primary function of stimulating in learners the opening of more and more arrays of neurons with new knowledge.

Human beings since pre-historic times have been characterised by their ability and capacity to invent new tools to conquer, tame, and shape the environment to fulfil human needs and wants.

The new technological tools to master control of the abstract CST are the most advanced abstract tools.

The initial investments in the tools are high because of their high cost of research and development but with increased consumption of the tools their prices fall rapidly and return on investment is determined by rapid volumes of consumption.

A stark evidence of this is the cost-effective accessibility of smartphones, laptops, and desktops where the smartphone is becoming the primary device of highly mobile persons.

Real time responses are instant. This makes the spread of knowledge and information an exciting venture.

The disseminators of knowledge can add worthwhile value to it.

Education has to become increasingly personalised if educational institutions were to remain relevant in the 21st century through the increased use of digital tools.

Learners use the services of an institution only if they can help them to make progress in life through learning.

Digital tools are compelling institutions to deconstruct their vertical structures and reconstruct them as horizontal structures spread across the globe through the medium of CST.

CST is the energy-field that electrifies and animates the learning/teaching communities.

Knowledge is increasingly revealing its inherent democratic nature.

Institutions retain their walls only to re-functionalise their respective global communities otherwise they risk becoming archaic architecture with obsolete content as antique furniture.

Independent big thinkers as well as researchers and developers of technology and software are generating fresh new ideas and insights to enhance education as a

truly democratic practice and human right in response to the increasing demands of ever-widening communities.

Old questions are being asked in new ways with new answers, prised open by CST.

- How to learn?
- How to teach?
- What new knowledge and skills are needed in the CST, which is exploding with blinding starry showers of information?
- How can education systems be improved to optimise qualitative learning/ teaching?

The answers to such questions need to be discovered, debated, discoursed, and spread and shared, democratically.

Lectures and books have to be delivered through the e-mechanism. There are demands for the development of customised books, as a shift from the old-fashioned textbooks, into smart learning guides to make study time-efficient and effective.

New educational courseware and assessment tools have to be developed to deliver services powered by technology.

As education is an escape from poverty-trap for the world's poor majority CST offers many opportunities for such escape.

The sheer volumes of knowledge consumption make delivery of knowledge cheaper.

The volumes of consumption keep the return on investment high and the cost of consumption low.

An example of this was the high cost of SMS when it was newly innovated but the high volumes of its consumption has reduced its current cost to virtually zero.

CST holds out myriad possibilities for fulfilling careers and callings in order to better human, animal, and plant life.

The escape is not only from physical but also from mental and spiritual poverty.

Religious institutions are well-positioned to meet this triple challenge and change from old to new ways of learning/ teaching, close the achievement gap, be responsive to ongoing professional development, enhance collaborative study and communication, develop new pedagogies, participate in the innovation of digital systems, develop new areas of knowledge, and influence governmental policy-makers.

Educational democracy compels a partnership of institutions, governments, stakeholders, and civil society.

Central to this partnership is the learner/ parent/ teacher circle around which pedagogy revolves, interactively, with system change and technology.

AI technology reduces the noise pollution that pervades the CST environment with the exponential growth of information and disinformation.

AI has the ability and capacity to read thousands of articles and summarize them for focused attention, in their distilled essence.

AI can prevent disruption of knowledge, ease adaptation of the circle to the environment, help internalize insights in order to navigate the environment, and decrease the barriers to learning/ teaching.

This makes possible higher *achievement* in lesser time. It also makes possible to customize lecture series and to simplify curriculum and textbooks in the same way that musical playlists are customised.

By highlighting the textbook useless information is "consciously" ignored and attention is focused on the specifics of a test, critical information, and information retention.

This boosts self-confidence, self-reliance, and self-assurance. These non-cognitive skills enhance cognitive skills. It makes learning/teaching a positive and enjoyable stress. New ways of flashcards, chapter summaries, and practice exams are used.

The partnership relies on powerful search engines and social networks for optimum interactivity over quality content, which compels engagement through multiple stimuli.

Skeleton of Learner Interaction with Cyber-University

1. A cyber-university or Online University is, literally, a University Online.
2. A new learner misses human interaction and has to adapt interaction with a cold computer.
3. There is a Writing Center on another website, from which to download templates for assignment, letter, thesis, etc.
4. At the Writing Center tutorial videos for everything and anything related to academic writing can be watched.
5. At the Writing Center appointments for any personal questions or queries or clarifications can be scheduled.
6. There is a library on another website for required reading assigned by teachers.
7. There are archives of journal writings by former students as required readings.
8. Other features include academic advisory, technical support, online café for socializing, etc.

9. Classes are structured in a similar manner and may be tweaked a little as per teacher recommendation:

10. There are required readings, media resources, purchased books, shared links, and shared videos.

11. Discussion consists of initial post and responses to colleagues and teacher.

12. Assignment 1 depends on the class and the teacher and follows similar process of discussion.

13. Assignment 2 is usually a build up of a final project by the end of class and each week has its own milestones.

14. There is one discussion, two assignments, and lots of reading each week.

15. The length of class is of six-week duration.

16. Outline of discussions are usually posts in a group.

17. Assignments are essays.

18. A certain amount of reading for the week is recommended.

19. Questions are given for reflection on the reading.

20. Reflection is used to answer another set of questions, which are marked.

21. Writings are according to academic and scholarly standards.

22. The reading : writing ratio is 80 : 20.

23. The workload is spaced out in such a way that there is something to do every night.

24. If a break is required then the learner will have to push extra work to have a break in the week.

25. Alternatively, the only other break to have is before the beginning of a new class, which is a week after the previous class has finished.

26. The required amount of time to be spent on studies each night is 3-5 hours (depending on the student's competence).

27. From the beginning values and the responsibility of social change are promoted.
28. The social change network platform influences learners positively.
29. All the assigned readings, discussions, and assignments revolve around promoting social change.
30. There are incentives for implementing social change, for which a learner is invited to apply.
31. Ethical interactions are promoted between different cultures and religions.
32. They are able to implement what they have learned immediately.

Necessary Conditions for Achievement in any Society in the World

Dr Ashley Montagu has identified three conditions, which are necessary for achievement in any society in the world:

1. "A cultural background of respect for achievement in the family in which the child has been raised."
2. "Encouragements and rewards within the family and the culture, which make it possible for the individual to acquire whatever is necessary in order for him to achieve in an achieving society."
3. "A society in which the conditions of individual development have not physically affected his ability to learn." (Emphases added)

As all societies are supposed to hold out the hope of equal opportunity, the principle of it can be easily lost if we move away from the basics.

He has also identified the five necessary ingredients of basic opportunity:

1. Enjoyment of a certain amount of leisure.

2. Relative freedom from disease.
3. Freedom from effects of malnutrition.
4. Growth and development made possible in a cultural background, which makes the world intelligible and meaningful to the child and the person one will become.
5. High aspirations level, incentives, and rewards.

A simple home computer can bring the whole family around the learner's learning experience or one in a slum can bring a part of the community together to share the excitement of learning. Imagine the family or community accompanying the learner to the moon, rainforests, remote indigenous people, dinosaur age, or the deep ocean.

Confucius said, "Happy people make happy couples, happy couples make happy families, happy families make happy communities, and happy communities make happy nations."

CST can help people to realise the Confucian wisdom.

Challenge of Mental Ill Health

The last report of the World Health Organization in 2003 on *Investing in Mental Health* reported that 450- million people had suffered from a mental or behavioural disorder and that one in four families has at least one member with a mental disorder.

Mental ill health places emotional and financial burden on individuals, their families and on society as a whole.

It costs the developed countries 3%-4% of GNP plus loss of productivity.

There 44%-70% of sufferers do not receive treatment while in the developing countries the percentage is about 90%. The report predicted that mental disorders were expected to rise over the next 20 years (2023).

Mental health should be the concern of all, particularly, governments and educational institutions because ill health affects individuals, families, communities, and society.

The care of physical health, generally, is at the cost of mental ill health, which at 13% has the largest share of the burden of worldwide diseases/syndromes.

Of the 450-million sufferers, 150-million alone suffer from depression. Mental, physical, and social functioning is interconnected just as mental disorders and medical illness are interrelated.

The prevalence of major depression in patients with TB is 46%, HIV/AIDS 44%, and hypertension 29%.

Family members are the primary caregivers and they provide emotional, physical, and financial support. Governments, generally, give little or no support to sufferers, who become victims of human rights violations, stigma, and discrimination.

In Britain (1996) the cost burden of psychosis, neurosis, and hypertension outweighed all other ill health cost burden. In many developed countries 35%-45% of absenteeism from work was due to mental health problems.

Mental illness affects access to the job market and job retention. Poverty and mental ill health are mutual in their cause and effect.

Patel and Kleinman (2003) have shown significant relationship between the prevalence of common mental disorders and low educational levels and that low educational level prevents access to most professional jobs, increases vulnerability and insecurity, and contributes to persistently low social capital. Illiteracy and illness therefore lock in poverty, violence and substance abuse.

This prevents poverty alleviation and development and perpetuates poverty and mental disorders.

States and educational institutions, explicitly and implicitly, can play preventative and curative roles. Coordinated health/ educational strategies, which are preventative and promotional can be used by clinicians and teachers to target individual learners/ patients and the public health programme planners can target large population groups.

CST can be used to message mental health, explicitly and implicitly. Mental ill health is a global issue, which all governments and educational institutions can promote. There is a growing body of knowledge from the fields of pyschpathology, psychobiology, prevention, and health promotion sciences.

Prevention and promotion programmes have also shown to result in considerable economic savings to society.

Trained teachers and parents can help to improve detection of problems and facilitate appropriate interventions. Psychosocial interventions, such as cognitive-behavioural therapy and family-based group intervention for learners can prevent the development of anxiety disorders and reduce depressive symptoms and social conduct problems.

The Militarization of CST

In as much as CST can be used beneficially it may also be misused and abused, against which reputable educational institutions need to guard, proactively, with state assistance.

The misuse and abuse are by individuals, narrow groups, big business, and states.

Some states, particularly, the hegemonic ones have permitted the militarization of CST.

They abuse CST to control surveillance, deny access to adversaries, and wage propaganda campaigns through platforms such as Facebook and Twitter, without any state insignia.

The civilian intelligence, which Facebook has been gathering in a few years, no intelligence service in the world has been able to do in a century.

Its technological and software methodology produces verifiable intelligence to the accuracy of spacetime coordinates.

Although the networks may be privately owned and publicly used such states have hybridized the surveillance, access deniability, and propaganda campaigns into conflicts with civil societies, private companies, and other states.

Individuals, narrow groups, businesses, and states generate fake news, camouflaged commercial advertisements, and disinformation, systematically, to make them appear as being organic, democratic, and user-generated.

Regime change is one of the major aims of this hybrid conflict.

In 1995 John J Arquilla and David F Ronfeldt of the Rand Corporation, as consultants to the military-industrial-media complex, developed a thesis on "Cyberwar and Netwar", in which they stated, inter alia:

> "Netwar refers to information-related conflict at a grand level between nations or societies.
> It means trying to disrupt or damage what a target population knows or thinks it knows about itself and the world around it.
> A netwar may focus on public or elite opinion or both.

It may involve diplomacy, propaganda and psychological campaigns, political and cultural subversion, deception of or interference with local media, infiltration of computer networks and databases, and efforts to promote dissident or opposition movements across computer networks."

They had also written, "Cyberwar refers to conducting military operations according to information-related principles. It means disrupting or destroying information and communications systems. It means trying to know everything about an adversary while keeping the adversary from knowing much about oneself."

CST is now suffused with state/ military involvement and exploitation, which compels anti-imperialist states to develop cyberstrategies to counter the exploitation and to advance the national interests of their citizens and institutions.

Only states can have the capacities and human and material resources for the development and implementation of cyberstrategies.

The imperialist intrusion includes shutting down connectivity, interception of emails and e-messages, invasion of personal files, subverting social media for propaganda campaigns, and transforming freedom to anarchy of CST.

States use civilian surveillance to know the detailed habits and preferences of perceived adversaries.

In 2008-10 the USA Defence Department formally recognised 'cyber' as a domain of war in addition to air, land, sea, and space war. In 2016 NATO followed suit.

The Role of States in Defence of their Citizens

States are obliged to defend and to protect the rights of their citizens to privacy, both individual and institutional citizens, as well as their own international sovereignty.

In ordinary civilian life citizens transact online-banking, tax computation, and health care and education matters- to mention only a few. The responsibility rests, primarily, on the states to provide cybersecurity at the macro-level and on citizens, at the micro-level.

Cyberattacks are not only technical but also social because they attack citizens' private and confidential information.

The attacks take on various forms-virus, unauthorised access, theft of proprietary information, denial of service, insider net abuse, laptop theft, financial fraud, misuse of public web application, system penetration, abuse of wireless network, sabotage, telecom fraud, and website defacement.

One of the major forms of attack is the "Denial of Service" (DoS), which is aimed at governments, large institutions, and big businesses because their computers are equipped with a lot of bandwidth and can be subjected to multi-pronged attacks by many computers.

The protection against DoS attacks is not really possible.

Social engineering is an efficient form of attack, the most common one being 'phishing' aimed at bank accounts.

There are well-established rules to counter social engineering attacks, related mainly to protection of information.

States and institutions should use technology, approved by the International Standards Organization (ISO) for the protection of confidentiality and authenticity, which is seamless and simultaneous as well as for the enhancement of the security and privacy of all forms of cloud computing.

The University of North Carolina in USA developed one such technology, the use of which could be extended to smartphones, Personal Digital Assistants, 3G and 4G mobile communications, and wireless sensor networks.

Unlike countries, CST has no international borders, no legislations, and no cooperation agreements.

States are faced with the challenge of countering cyber-terrorism and real world terrorism.

A few nations are attacking other countries, corporations, and organizations in CST.

Arash Barfar of the University of Florida and Kiyana Zolfaghar and her colleague at the KN Toosi University of Technology in Tehran have suggested that "the first step that must be taken to surmount the barriers of failed cooperation and legislation is to organize national efforts to use "web mining" techniques and "honeypots" to wheedle out cyber-terrorists before they attack."

The victim states now have not only to catch up with but also to overtake hegemonic states that maraud CST, the features and limits of which were defined, without much reference to what would harm the interests of disadvantaged governments.

In this cyberwar the hegemonic states and their militaries have a 20-year lead.

CST appears as a domain of freedom but its lack of legislation makes it one of anarchy, which by default permits unauthorised distribution of copyrighted materials.

Hegemonic governments use their international sovereignty as a pretext to coerce platform owners within their jurisdiction to force changes to software and hardware.

As their mainstream media is part of their military-industrial-media complex they use existing social media to change perceptions and views of world citizenry.

Victim states have the responsibility to counter hegemonic cyberstrategies.

While brutal militaries that promote regional wars for the sake of private profits organise their competing commands of CST the victim states should lead the resistance to the application of "martial laws" to CST.

This is no easy task when the marauders have a 20-year lead in an abstract space where perimeter-defence cannot be applied.

Their commands of CST have allowed the intrusion of criminal activities, which use complex malware to infect private computers to send money-earning spam and ransomware encrypting personal files with a demand for payment of ransom.

Autopilot is activated to accept payments in cryptocurrency. In mid-2017 a ransomware attack known as "Petya" crippled many large businesses in the USA and Europe. Their computers and data were locked up and held to ransom.

Earlier the British National Health Service was attacked by a ransomware known as "WannaCry", which affected about 230000 computers in 150 countries, Both attacked through Microsoft Windows.

The criminals demanded $300 in Bitcoin for release, States should train their police forces to handle such crimes.

"Petya" also affected the radiation monitoring system in Chernobyl, Russian steel and oil companies, and a French construction materials company.

As there is no 100% cybersecurity it is necessary to have a layered approach to security with focus on how they set up their networks with the ability to recover quickly after the attack, This is the responsibility of both states and institutions.

Although major platforms that aggregate content and manage discourse have invested heavy resources to secure their platforms their servers get compromised and emails are intercepted and released into the open public domain to fight political battles.

Victim states need to defend servers and networks. Not only platforms but also the users security need to be protected as a whole in order to ease the threats. New techniques of security need to be introduced.

Civilian intelligence can be easily converted to military intelligence, The coordinates of a mobile phone of a perceived enemy can be used to launch a lethal drone attack.

The Ethics of CST

The militarization of CST compels its citizenry to demand ethical standards of conduct because its development has permeated every aspect of civilian life and its algorithm is intended "to replace human judgment of social functions" (Nick Bostrum).

The freedom of using CST is accompanied by "responsibility, transparency, auditability, incorruptibility, predictability" (Bostrum).

AI as a component of CST can and do go wrong such as the 2010 financial "flash crash", downward manipulation of carbon emissions by motor vehicle manufacturers, autonomous vehicles being involved in a traffic accident, and modification for the purpose of cybercrime, cyberwar, and cyberterrorism.

When the human mind uses algorithms to achieve end-results the blame cannot be placed on the algorithms; human beings need to take responsibility.

There are acute ethical questions about data sharing through integrated use of CST.

The questions are related to anonymous sharing of data, how to avoid wasteful duplicative efforts, individual privacy and intellectual proprietary rights.

- What happens to education data?
- What about methods and technologies?
- What about ideologies, which underpin education?
- Are intended behavioural changes on the users ethical?

One of the best guarantees of ethical conduct is the spread of CST literacy, which is the logical growth and development of CST itself.

The Role of Religious Organisations

As religious organizations are based on spiritual values, morals, and ethics they find themselves in a situation where they have to disseminate education through CST, which has been militarized by hegemonic powers.

The education itself is conceived in humane values and peace for the betterment of human beings.

Islamic religious organizations are, particularly, vulnerable to targeted cyberattacks by the hegemonic powers or their proxies as part of their "war on terror", which is tool of the marketing strategy of the military-industrial-media complex for the sake of obscene accumulation of private capital.

The attacks could compromise the Islamic content of education, as there are fake Qurans and fake "Islamic" websites.

It is in the interests of such organisations to work cooperatively with their respective governments to defend their national interests against the marauders and protect the integrity of their curriculums.

This includes their responsibility to enforce their own cybersecurities in order to spread world peace through education as a democratic practice.

This is a particularly difficult challenge because one of the key advantages of CST is that it has allowed all kinds of people to publicize their views and reach out to others with similar interests.

As a result, however, it also has the same power to bring together those with outlying and often discriminatory-viewpoints.

The ability to communicate allows such communities to flourish more than they would if these people were unable to communicate as a result of geographical separation.

As a result, CST also has served to promote and incite hatred against minority groups, as well as promote political or social agendas that do not find much footing in popular media.

The Daeesh as armed proxy forces of the military-industrial-media complex abuse CST to promote their brand of "pure Islam" as a basis to recruit soldiers to spread terror not only in Muslim lands but also in Western lands.

The Daeesh have given rise to the new phenomenon of cyberbalkanization, which is the segregation of CST into smaller groups with similar interests, to a degree that they show a narrow-minded approach to outsiders or those with contradictory views.

While CST has largely been credited for broadening discussion, it also can serve as a means of bringing together fringe groups with intolerant viewpoints.

So, while CST has contributed to globalization and information exchange, it also may be used to foster unfair or harmful discrimination.

Such military threats to world peace place a heavy responsibility on Islamic religious organizations to spread an education that is conceived in peace.

In the immense CST there is a vast space for education, filled with competition by numerous epistemologies, which share methodologies influenced by technological developments.

All epistemologies commute the preexisting unsolved issues in education to CST.

The religious organizations with the most credible curriculums that focus on the old unsolved issues in education are better positioned to command large support bases and win the attention of policy makers.

There are many such issues but the priority ones are:

- Achievement gaps between learners
- Ongoing professional development of teachers.

Achievement Gaps between Learners

Rose Luckin *et al.,* state, "The gap between those who achieve the most and those who achieve the least is a challenge that teachers, school leaders, administrators, and government officials face every day, in every country."

Globally, this translates into gaps between rich and poor countries.

The gaps adversely impact, to lesser or greater degree, on national economies and on the social well-being of their populations.

The least common denominator to all countries-rich, poor, and middle- is that "not all learners are achieving their potential at school."

The under-achievements compound social problems, which are already complex but seemingly averse to intervention strategies.

- How can religious institutions optimize the social and economic return on their governments edu-spend, supplemented by parental and corporate spending?

Across the world- rich, poor and middle- there are vast arrays of people with low literacy and numeracy skills.

Illiteracy and innumeracy in the former colonized countries still rank high.

There is a huge need for adult and youth literacy and numeracy.

The imparting of higher education can be aimed only at those whose literacy and numeracy are at a high level.

It is in the interests of governments and their populations to invest in basic and higher education so that the religious institutions have wider catchments of learners.

Islamic educational institutions are uniquely positioned to appeal to the iman or faith of people and involve them in lifelong learning as a means to overcome the challenges of under-achievement.

Islamic education aims at the development of the whole being of learners.

The technologies available in CST allow for one-to-one tutoring 24/7.

CST is compelling a trans-disciplinary approach to learning/ teaching, in which neuroscience plays a key role.

Technological aids are better produced through collaborative efforts for the provision of better information and support to overcome learning difficulties. The mass supply of technology reduces its costs and makes education more affordable.

Affordable technology can also help in school readiness before formal education so that they enter school not at any disadvantage.

This is where governments should invest and let the higher religious institutions reap the reward for the mental and spiritual health of their populations.

This will help to break the spiral of mental and spiritual poverty.

Ongoing Professional Development of Teachers

The ongoing professional development of teachers has always been a necessity but more so now than in the past in terms of substance and form.

Technology can now help with this challenge on a one-to-one basis, addressing the specific challenges of individual teachers.

It is often the experience that even when teachers reach retirement age they should not be easily retired because of the decades of expertise, which they embody and the high cost of their replication.

Technology can somewhat mitigate the gaps left by retiring teachers.

One of the major problems is the one of 'burnout' of teachers mainly because of negative stress and workload.

Technology caters for self-organised groups not only for learners but also for teachers even in slums and rural areas around a single computer.

This can be extended globally through Cloud computing around a particular subject.

Open learner models can be developed for learners and teachers.

The ongoing professional development entails teacher expertise and retention and respite for acute teacher shortages.

Conclusion

In the primary interests of learners there needs to be an interpenetration of:

- The scientific development of how teaching and learning are transmitted – pedagogy.
- Intelligent technologies, which embody knowledge of world-class teaching and learning.
- The delivery of system change for positive impact on all learners.
- The safety and security of the CST universe by both states and religious organizations.

Religious organisations should fulfil the primary purpose of religions, i.e., to shift human minds optimally from the physical to the spiritual realm in a world in which materialism holds sway.

Spirituality is the natural realm of ideas, cognition, sensory inputs, emotions, perceptions, and beliefs.

It is culture-specific and interpenetrated in the cortico-thalamic processes of the brain.

It embraces diversity of cultures, religions, and languages.

References

1. Aziz, Haroon., (1992), **Power of Revolution**, Durban: Raisa Books.
2. Brignall, Miles., **TNT Parcels "Backed up to Ceiling" in Wake of Massive Cyberattack**, UK: The Guardian, 25 July 2017.
3. Dehaene, Stanislas., (2014), **Consciousness and the Brain**, New York: Viking.
4. Einstein, Albert., (1995), **Relativity**, Translated by Robert W. Lawson, New York: Prometheus Books.
5. Gazzaniga, Michael S., Ivry, Richard B., Mangun George R., (1998), **Cognitive Neuroscience- The Biology of the Mind**, New York: W.W. Norton and Company.
6. Luckin, Rose., Holmes, Wayne., (2016), **Intelligence Unleashed- An argument for AI in Education**, London: Pearson.
7. Montagu, Ashley., (1971), **Man's Most Dangerous Myth- The Fallacy of Race,** New York: World Publishing.
8. Ottis, Rain., Lorents, Peeter., (2010), **Cyberspace: Definitions and Implications**, Tallinn Estonia: Cooperative Cyber Defence Centre of Excellence.
9. Ramachandran, V. S., Blakeslee, Sandra., (1998), **Phantoms In The Brain**, New York: William Morrow and Company, Inc.
10. Randall, Lisa., (2012), **Higgs Discovery- The Power of Empty Space**, London: The Bodley Head.
11. Riva, Giuseppe., Galimberti, Carlo., **The Psychology of Cyberspace: A Socio-Cognitive Framework to Computer-Mediated Communication**, Vol. 15, No. 2 (1997): 141-158, Elsvier Science Ltd., Great Britain.
12. Samuel, David., (1999), **Memory- How we use it, Lose it and can Improve it**, London: Weidenfeld and Nicolson.

13. ScienceDaily., **How do we Fight the War Against Cyber Terrorism?** Inderscience Publishers: 11 April 2011.
14. Seung, Sebastian., (2012), **Connectome- How the Brain's Wiring Makes us who we are**, New York: Houghton Mifflin Harcourt.
15. Solon, Olivia., Hern, Alex., **"Petya" Ransomware Attack: What is it and how can it be Stopped?**, UK: The Guardian, 28 June 2017.
16. Sternberg, Robert J., (1998), **In Search of the Human Mind**, New York: Harcourt Brace.
17. Turbot, Sebastian., **Artificial Intelligence In Education: Don't Ignore It, Harness It!**, USA: Linkedin, 11 September 2017.
18. Wade, Nicholas., (2009), **The Faith Instinct**, New York: The Penguin Press.
19. World Health Organization., (2003), **Investing in Mental Health**, Geneva: WHO.
20. Zittrain, Jonathan., **"Netwar": The Unwelcome Militarization of the Internet has Arrived**, London: Bulletin of the Atomic Scientists, Vol 73, Issue 5, 21 August 2017.