

**Dr. C. W. W. Kannangara
Memorial Lecture - 32**

**“For a Country with a Future; Educational Reform
Sri Lanka Demands Today”**

Prof. Athula Sumathipala
Director, Institute for Research and Development,
Sri Lanka
Chairman, National Institute of
Fundamental Studies, Hanthana, Sri Lanka

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Department of Research and Development
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“For a Country with a Future; Educational Reform Sri Lanka Demands Today”

As a Sri Lankan who benefitted from free education, I feel honoured and privileged to deliver this Dr. C.W.W. Kannangara Memorial Oration, the 32nd in the lecture series inaugurated in 1988 on the twentieth anniversary of his demise.

I am well aware of the gravity of this task, particularly when considering the impressive stature of previous orators, often beneficiaries of free education themselves. The current economic, political and social crisis adds a further layer of complexity to the context in which this oration is delivered today. Within that backdrop, and with a keen awareness of the responsibility placed on my shoulders, I shall humbly endeavour to do justice to this task.

I am a medical practitioner by profession; however, I have spent most of my life sharing knowledge with friends, colleagues and students, as a teacher. This student-teacher reincarnation has been the focus and foundation of my entire life. Taking on the task of teaching arithmetic to my elder sister at the age of fifteen was my first venture into teaching. While waiting for entrance to the Medical Faculty, during the five years of university and well after that, I spent a considerable proportion of my time as a teacher. I had supported a number of students to pass their examinations for free, and as word spread of my skill in getting students through examinations, so many requests came in that I ended up establishing and running a private education institute named 'Vidya Nadi'. This was more because I could not avoid the responsibility than for economic reasons. Most of those students are very prominent members of society today. The life lessons I obtained from being a teacher were significant and serve me to this day. Since then, I spent most of my life teaching and carrying out research in local and foreign universities, so much so that I would like to note that I have spent more time as a teacher and a researcher than as a doctor.

Within that same time frame, as a socially sensitive and politically informed person, as well as a medical student, I was also an activist who fought to defend free education, which gave me a different perspective on education. The complex and challenging context of today forces me to revisit this past and to re-examine the path we took in our younger days.

Within this complex background, my approach to this lecture today, is based on two contrasting viewpoints Sri Lankan society holds on free education and the Kannangara legacy. Professor Narada Warnasuriya, who is a dear and well-respected teacher to me, during his Kannangara Memorial Lecture delivered in 2008, explained these two viewpoints as follows:

One group sees the Kannangara legacy in a single dimension, as a valuable basis for further expanding access to education, which also helps preserve fairness and social justice. They see it as a keystone of a just and conflict-free sustainable society.

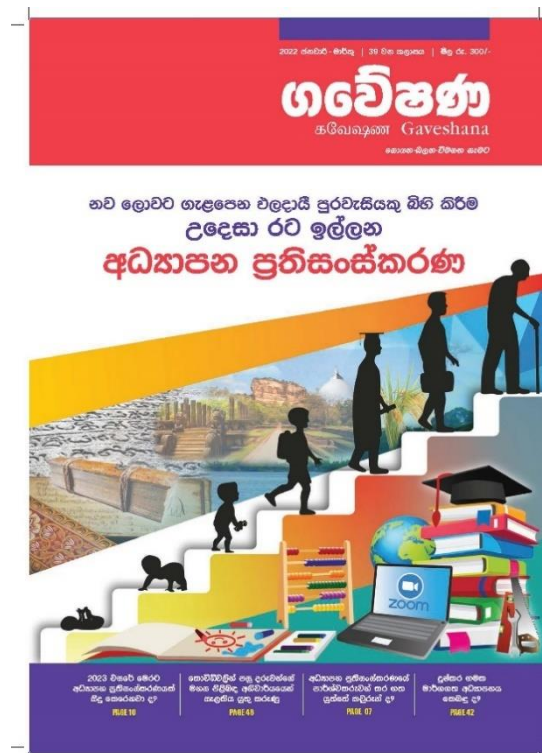
The second group acknowledges that the Kannangara reforms had a major impact on bringing about a positive societal, and social transformation, but considers such changes irrelevant in the present context of a globalized free market economy. Professor Warnasuriya states that this group sees the Kannangara reforms as 'a sacred cow, an archaic barrier to development, which stands in the way of building a successful knowledge-based economy'.

As an individual examining the status of education with an analytical mind, I do not wish to align myself with either of these groups exclusively, and decided to deliver this lecture from a neutral position,

considering the positive and negative aspects of both viewpoints. This oration is therefore entitled 'Educational reforms Sri Lanka demands today for a brighter tomorrow' and I plan to expand the discussion on Kannangara Legacy.'

I should also like to clarify that I prefer to refer to this as 'our lecture' rather than 'my lecture', because this lecture necessarily contains the views of a large group of like-minded people who work together with me as a team, on educational reforms.

Most of the facts forming the basis of this lecture are extracted from the recently published thirty-ninth (one-hundred page) special issue of the trilingual journal 'Gaveshana', entitled: 'Educational reforms the country demands to create a productive citizen adaptable to the modern world'. This edition of Gaveshana is particularly significant in that it was published in the form of a research publication based on original data, and secondly, since a cross-section of educationists and officials from the Education sector who are directly involved with Sri Lankan educational reforms contributed to this publication, as did external experts who brought in a broader, societal viewpoint.



As someone who strongly believes that 'a person alone cannot win a battle against the deep seas', I would like to note that we are in an era in which not one but thousands of Dr. C.W.W Kannanagaras are needed. Furthermore, it is important to note that educational reforms should not take a top-down approach but aim to incorporate the requirements and viewpoints of the beneficiaries of such reforms as honoured stakeholders: the knowledgeable student community, teachers and the general public. Such reforms should be informed by a regular feed-back loop, follow-up and grass-roots research. Educational reforms must be a dynamic process, not a static one, and follow-up research should be used to change not only the direction, but also the content of the reforms, if and when necessary.

This is the responsibility history vests on our shoulders, and in order to do justice to this obligation, I am deeply grateful to the Director General of the National Institute of Education and the staff of its Research and Planning Department for giving me this opportunity.

I was influenced early in life to believe the Stalinist concept of 'It is not heroes that make history, but history that makes heroes'. But today, I am of the firm opinion that there are individuals who make constructive (or destructive) contributions to history. Dr. C.W.W. Kannangara is undoubtedly such a person who has left a lasting and positive contribution – a hero that did change history, and it is therefore necessary to study not only the history he bequeathed but the person himself.

Who is Dr C. W. W Kannangara?

Dr. Christopher William Wijekoon Kannangara was born on October 13, 1884, at Randonbe village, Ambalangoda. The third child in his family, he lost his mother early in life when his mother died giving birth to a younger brother. His father had five children from his first marriage and four from his second marriage. Although he was well looked after by his stepmother, he had faced the sad fate of losing his mother early in life. His father was a Buddhist, but his mother was a devotee of the Church of England. Christopher William Wijekoon was therefore baptized as a Christian although he formally converted to Buddhism as an adult in 1917. It was, as many of his closest Christian friends said, an act of wisdom and not a political act. Moreover, he learned Sinhala and Pali languages as well as Buddhism from his locality and environment.

He was a bright student, initially at Ambalangoda Wesleyan College. At its triennial prize-giving ceremony, he received the attention of accomplished mathematics teacher and the then Headmaster of Richmond College, Galle, Father D.H. Darrell. Father Darrell had graduated from the Cambridge University, England with a first-class degree in mathematics. It is documented that Father Darrell had said to young Kannangara 'you will have to bring a heavy cart to take home the prizes you have won'. Father Darrell had then asked the Principal of Wesleyan College to prepare young Kannangara for the open scholarship examination at Richmond College. It is evident that it was this meeting with Father Darrell, the Headmaster of Richmond College at the age of 14 years, that turned out to be the pivotal point of Dr. Kannangara's life.

Young student Kannangara subsequently won this scholarship, enabling him to attend Richmond College with free tuition, room and board. My belief is that this full scholarship established the foundation for the gift of free education that he later bequeathed to the nation.

He had to face further adversity in his life when his father lost his job and his pension after thirty years of service, leading to significant financial difficulty for his family. I would like to emphasise on, particularly to the young generation of today, the importance of recognising how his life was not cushioned in comfort, but was one of achieving greatness despite hardship and difficulty.

He was a bright student who excelled not only in studies but also in sports. He passed the Cambridge Junior Examination with honours and came first in the country and in the British Empire in Arithmetic. He was the captain of the cricket team, played in the football team and was a member of the debating team. He was also the lead actor in the school's production of The Merchant of Venice. He was not a 'bookworm', but also excelled in extracurricular activities. Sadly, it is necessary to note the significant difference between the life of Dr. Kannangara as a student and the lives of the majority of children today.

At the time, the only option available for studying abroad was a government scholarship. Twelve Richmondites sat this examination, but he was unable to secure a scholarship, thus losing the opportunity to study at a foreign university. He chose instead to study law at the Sri Lanka Law College. Father Darrell, his mentor, however, requested young Kannangara to stay on at the school as the mathematics teacher and senior housemaster of the student hostel. He accepted and fulfilled this responsibility until the untimely death of Father Darrell, after which he moved to Colombo and embarked on his legal education. During this period, he also worked as a part-time teacher at Prince of Wales' College, Wesley College and Methodist College.

By 1910, he had qualified as a lawyer and returned to Galle to start his legal career. He focused on civil law, carried on social service activities simultaneously and entered formal politics in 1911, supporting Mr. Ponnambalam Ramanathan. He actively campaigned for Mr. Ramanathan when he successfully contested in the 1917 elections for the Legislative Assembly, and the two ended up establishing a close friendship thereafter. He was an eloquent speaker at the establishment of the Ceylon National Council in 1919, expounding on its objectives to 'direct the country and the people towards a life of political freedom with equal rights and independence'.

The pivotal moment of his political life came about when he was elected to the Legislative Assembly in 1923, representing the Southern Province. He was then elected as the President of the Ceylon National Congress in 1930 and in 1931, he became Sri Lanka's first Minister of Education, after being elected to the State Council of Ceylon from the Galle district. He was elected the first chairman of the Executive Committee for Education with an overwhelming majority. He was re-elected to the same position in 1936 and held that position for 16 years.

The extent of the struggles and sacrifices Dr. Kannangara underwent to achieve free education should also be evaluated in the context of the political environment of the time. He entered politics at the time of Sri Lanka achieving universal franchise. The State Council at the time had 46 members and seven ministerial portfolios were available for elected members, one of these was the education portfolio.

He was conferred an honorary doctorate in law at the first convocation of the University of Ceylon under the auspices of the Vice-Chancellor Sir Ivor Jennings in 1942. **It was in 1945 that he managed to finally achieve the passage of parliamentary bill to establish free education in the country.** And yet, Dr. Kannangara, who was venerated as the 'Father of Free Education', was defeated at the first national parliamentary elections held in 1947. It is time to question if this defeat was a personal one or if it was a defeat of the entire Sri Lankan nation. He lost the election to Mr. Wilmot. A. Perera, who was backed by wealthy individuals in the United National Party and with the support of the socialist camp as well. Even the Communist Party of Sri Lanka worked against Dr. Kannangara's election campaign.

Time does not permit an in-depth discussion of the factors leading to the election defeat of a person who achieved societal change at such a significant scale, however, I do consider this one of the greatest ironies in Sri Lankan political history.

He was re-elected as a member of parliament in 1952, and was offered the Local Government portfolio. He was however denied the education portfolio, likely due to the influence of powers that be who wished to prevent further educational reforms by Dr. Kannangara. He retired from politics in 1956 when he turned seventy-two, but served as a member of the National Education Commission, indicating his commitment towards the education of the nation, which was beyond politics.

At the time of his entry into politics, Dr. Kannangara was quite prosperous economically, having started his career as a lawyer in 1923. Twenty years of holding a ministerial role, and forty years of public service, which is indeed the basis of politics, had led to a loss of financial stability by the time he retired. He showed by example that politics should not be a money-making mechanism. The Sri Lankan government offered him a one-time stipend of Rs. Ten Thousand in 1963, a substantial amount of money at the time. Considering his health needs, he was offered a monthly living allowance of Rs. 500/- in 1965, and this was subsequently increased to Rs. 1000/- per month.

This great son of Sri Lanka, considered the Father of Free Education, passed away on 29th September 1969 without receiving much attention from the nation.

I think it is important to highlight a factor pointed out by Senior Professor Sujeewa Amarasena when he delivered the 28th Kannangara Memorial Oration. Professor Amarasena is a proponent of the second viewpoint Professor Warnasuriya mentions, i.e., those who acknowledge that the Kannangara reforms had a major impact on bringing about a positive societal, and social transformation, but consider such changes irrelevant in the present context of a globalized free market economy.

Senior Professor Sujeewa Amarasena said, “Today every political party, every organization connected to education, every trade union in the government or private sector and every individual who has had some education would come forward to protect free education as a social welfare intervention. The entire country and political parties with allied student movements are in a vociferous dialogue always talking about free education without really giving the legend Dr. CWW Kannangara his due place in this dialogue. I have not seen or heard a single University or a student organization in this country commemorating Dr. CWW Kannangara on his birthday though all of them are vociferous fighters to protect free education. Hence today late Dr. CWW Kannangara is a forgotten person as stated by Mr. KHM Sumathipala in his book titled “History of Education in Sri Lanka 1796 to 1965”. I would like to add to that and say that not only he is a forgotten person today, but even his vision has been misinterpreted, misdirected, distorted and partly destroyed by some people who benefitted from free education.

The irony of history extends further: at a time when school education was unavailable to the entire generation of children in Sri Lanka during the Covid-19 pandemic, many teachers were committed to providing an education to children via distance / online education, as it was the only viable option, albeit flawed in some ways. Some union leaders, in the guise of so-called trade union action, worked to obstruct such teachers from providing online education. Given that all trade union leaders are beneficiaries of free education, it has to be questioned if it is not the worst mockery in the history of free education that teachers’ rights were considered a priority, over the right of students to obtain an education. This tragedy raises multiple questions: has the expectation that widening access to education would create selfless citizens who think beyond personal gain and fulfil their responsibilities to the nation not been realised? Did the generation who benefited from the Kannangara reforms shirk their responsibilities in the post-Kannangara era? Or is it simply that the agenda for national benefit has been rendered secondary to narrow political gains?

Defining the Kannangara legacy of free education to the Sri Lankan nation

It is an unfair comparison to analyse the central approach of the Kannangara educational reforms apart from the context of socio-economic, political conditions, literacy levels and educational opportunities that existed at the time and to consider these reforms under the current context. The primary strategic

approach of the reforms was to increase access to education. At that time, in the 1930's, over half of school-aged children and around three-quarters of school-aged girls did not attend school.

A large proportion of school-aged children being deprived of access to education can be traced back to multiple factors linked to the socio-economic and political situation in that era. Professor Swarna Jayaweera in the second Kannangara Memorial Lecture delivered on 13 October 1989 entitled 'Expansion of educational opportunity—an unfinished task', stated that many of the policies presented by Dr. Kannangara were a reaction to colonial education policies that had upset the regional socio-economic, ethnic and religious balance during their rule that extended for over a century. The dual system of education consisting of elite English schools and vernacular schools providing a minimum level education for the masses in either Sinhala or Tamil, the dominance of Christianity within the educational system, favoured status for the South-Western and Northern regions, anomalous economic growth within the country and the focus of education to meet the needs of the colonial economy, were all issues that Lankan policy makers were obliged to deal with in 1931. The aim of establishing 54 Central Colleges (Madhya Maha Vidyalayas) in rural areas throughout the island during 1940-47 was to pave the way for a more equitable distribution of secondary education facilities, which had been limited to urban English schools until then. His aim was 'to provide free education from childhood to university'.

The executive committee report Dr. Kannangara presented to the State Council of Ceylon gives a clear indication of the core concept of Kannangara reforms. He said "If this esteemed council is able to state that we were able to transform education from something that was considered a birth right of the elite and the wealthy, to a right available at low cost to every child born in this country in the future, if we are able to transform the view on education as a closed book within a sealed box to an open letter that everyone, without regard to their religion, race, caste, can read, then this council can be prouder than Emperor Augustus who claimed that he found Rome a city of bricks and left it a city of marble."

Dr. Kannangara's biographer, Mr. K.H.M.Sumathipala, who was a former Secretary of the Department of Education, considers the Kannangara reforms as separable into two distinct eras: the first from 1931 to 1939 and the second from 1939 to 1946. The executive committee had limited powers during the first era and it can be termed a period of minor reforms. The conceptually most important of the reforms during this era is the rural education system, known as the Handessa Scheme, which incorporated practical training and work experience useful to rural societies and economies alongside formal education. This era marks the initial stages of the concept of 'education for development' mentioned in Professor Warnasuriya's lecture. The long-term vision Dr. Kannangara had, clearly displays his concern for the welfare of the rural population of the country.

The years 1939 – 1946 mark the second era, during which the rural school development scheme extended to 250 schools. However, Dr. Kannangara was unable to further expand the scheme as initially planned due to the constraints brought about by drought, a malaria epidemic and the second world war.

The Kannangara reforms themselves are well-documented. In brief, as presented by Dr. Upali Sedere in the 27th Memorial lecture in 2016, they are as follows:

- Free education from kindergarten to university
- Establishing three types of schools - secondary, senior, and vocational schools
- Mother tongue as the medium of instruction at Primary level, bilingual or English medium schools for Junior Secondary level and English schools for Senior Secondary and higher education

- Establishing Central Schools with boarding facilities and scholarships to expand access to higher secondary education
- Introducing religious education
- Facilitating adult education for illiterate adults via Night Schools;
- Institutionalizing regular monthly salaries for teachers;
- Adapting curricula and examinations to suit Sri Lankan conditions
- Establishing an autonomous university

These reforms were approved by the State Council and introduced in October 1944. The increase in the number of schools and the number of teachers as well as the processes introduced to facilitate education led to a significant increase in the number of students completing primary and secondary education – four hundred new schools were constructed during 1944-1948 and 1.2 million students enrolled.

The limited time I have is not at all adequate for an in-depth analysis of the broad vision Dr. Kannangara held. I would like to quote and re-emphasise a few facts stated by Mr. R.S.Medagama in the 25th Memorial Lecture. He states that “The Report of the Special Committee on Education in Ceylon (Sessional Paper XX1V- 1943) contains many ideas on education which the subsequent educational reformers have attempted to accomplish.” Unfortunately, soon after the publication of the report, Dr. Kannangara lost the opportunity to spearhead the implementation of the proposed reforms. Dr. Kannangara also points out the important role education has in promoting unity among different races in the report. In the context of a country divided along multiple lines, it is useful to reiterate some facts he pointed out in the report:

“Our fundamental need is to weld the heterogeneous elements of the population into a nation. The existence of peoples of different racial origins, religions and languages is not peculiar to Ceylon, and history shows that it is by no means impossible to develop a national consciousness even among a population as diverse as ours. There is, indeed, a large common element in our cultures already, and under the stimulation of educational development, the notion of national unity has been growing among us. In planning the future of education in Ceylon we should strive to increase the common element and foster the idea of nationhood.”

“The nationalism that we hope to see established depends for its being on tolerance and understanding. Among a people so varied as ours, any other kind would produce not national unity but national disruption. And the tolerance that we ask our own people to apply to each other we would also wish to see applied to other nations. This tolerance is in fact a characteristic of our citizens. The communities of the island have for many years lived in peace and amity. We are anxious that the teaching in the new educational structure may be inspired by the same tolerance and the same desire for peace among men of all nations” (P10 S.P XX1V, 1943).

Mr. Medagama cited another valuable excerpt from this report: “The most useful citizen is he who can face a new problem and find his own solution. The spark of genius is nothing more than the spark of originality”(p.12 S.P XX1V, 1943).

It is almost unbelievable how a country that initiated a free education system with such a great vision ended up with a toxic culture that is the polar opposite of the original vision. We need to find the root causes of the entrenched problems that we currently face, and find sustainable solutions to these issues.

Before I enter into a discussion of these matters I would like to summarise the key reforms undertaken and the landmarks in education since the time of Dr. Kannangara. This summary section is only up to 2007 needs to be updated from 2007 to 2022, but the limited time did not permit the task.

Some of the landmarks and key reforms in education from the Kannangara era

Year	Reform	Result
1931	Handessa Scheme	An attempt to give a nationalistic bent to the curriculum. Successful introduction of life skills, health education, environmental studies and aesthetic studies to Grade 6,7,8 students led to the expansion of the program to 253 schools. These subjects were then introduced to the curricula of the Central Schools.
1942	Ceylon University Ordinance	Established the University of Ceylon by amalgamating the Ceylon Medical College and the Ceylon University College.
1947	Ordinance No. 26	Established free education
1950	White Paper on Education	Emphasised the importance of physical development during primary education, the need to develop good habits, and practical work.
1952	University moved to Peradeniya.	
1956	Circulars 43 and 48	To introduce grouping of subjects and practical applications from 1957
1959	Vidyodaya and Vidyalandara universities established	
1960	Assisted School and	Take over of schools by the

	Training Colleges (Special Provisions) Act No. 5 of 1960	government and a common curriculum introduced to all schools
1961	Assisted Schools and Training Colleges (Supplementary Provisions) Act (No. 8 of 1961)	
1961	Established the National Education Commission	Prof. J.E. Jayasuriya as the chairman Implementation of proposed reforms under the 1964 White Paper on Education
1963	Commission Report on Technical Education	Proposals on Technical and Commercial Education
1966	White paper on proposals to reform general and technical education	Established technical institutions at universities
1967	Established Curriculum Development Centre at Bauddhaloka Mawatha	
1971	Higher Education Reforms (Osmond Jayaratne report)	Employment oriented university courses established – teaching, estate management
1972	University Act No.1. of 1972	Establishment of a single university with the introduction of a college system
1972	School reforms based on the New Educational Systems	Age of school entrance set at 6 years Vocational studies introduced as a subject National Certificate Examination introduced
1977	Towards relevance in education (Bogoda Premaratne report)	

1978		<p>Age of school entrance set at 5 years</p> <p>Technical studies as a subject instead of vocational studies</p> <p>Reinstated G.C.E. (Ordinary Level)</p> <p>Examination instead of the National Certificate Examination</p>
1978	University Act No. 16 of 1978	<p>Moved away from the single university concept</p> <p>Established Colombo, Peradeniya, Kelaniya, Sri Jayawardenapura, Moratuwa and Jaffna Universities</p> <p>Established the University Grants Commission</p>
1981	White Paper	<p>Restructuring of education system – general, university and tertiary education</p> <p>Introduced cluster schools</p> <p>National schools concept</p>
		Area Education Director post introduced
1985	National Institute of Education Act No.28 of 1985	Established the National Institute of Education as the institution charged with curriculum development
1987	Introduction of Provincial Councils	All schools other than National Schools managed by the provincial councils
1990	1 st Session Report of the Presidential Commission on Youth submitted	
1991	National Education Commission Act No. 19 of 1991	<p>National Education Commission set up to submit proposals on education to the president</p> <p>Key reports submitted in 1992,</p>

		2003, 2016
1993	Syllabus updates	
1995	Recommendations on general education from the National Education Commission	
1997	Educational reforms	Education made mandatory for ages 6-14
1998	Primary education reforms	Grades 1-5 divided into three stages Skill-based curriculum introduced Three different types of teaching methodologies – play, activities, seated work
1998	Circular No. 98/15 dated 9 April 1998 to change university admission requirements	No. of subjects reduced from four to three All students need to pass the General Skills test
1998	Circular No. 29/98 dated 30 December 1998	Allowances to be paid to government employees proficient in more than one language
2007	Circular No. ED/0/12/06/15/01 DATED 7 March 2007	Amendment of school curricula according to E5 structure

Have these educational reforms from 1947 to date resulted in a sufficient number of citizens who are ready to face the 21st century, citizens who think beyond personal gain, and developed teachers, intellectuals, educationists and politicians, who have the capacity and the will to help develop such persons? The reality, however unpleasant, is that, no, it has not.

Has the Kannagara vision become a reality?

The aim of widening access to education was to help develop citizens, teachers, intellectuals, educationists and politicians, with the capacity and will to think beyond personal gain. Did such increased access achieve

this aim? Or did it unexpectedly result in a process of converting the educated few among the poor into wealthy individuals and members of the elite? And in political power moving into the hands of a significant percentage of people who focus primarily on their rights and not on their duties and social responsibilities?

How did Israel which was established as a country in 1947 end up a developed country whereas Sri Lanka which established free education in 1947 end up a bankrupt nation? How did Sri Lanka which had the second strongest economy in Asia at the time of its independence in 1948, next to Japan alone at the time, fall so far? Can we escape this crisis without examining the factors for this fall? Why did progressive thinking not develop in line with widened access to education?

According to our conclusions based on behavioural science, economics, humanities, sociology, psychology and political science, the factors driving the current social, economic and political crisis are:

- Political leadership without a vision: the primary factor is the political leadership that governed the country post-independence, and particularly after 1977, and the narrow political vision
- Severe failures within political structures: most politicians are not honest representatives who hold themselves responsible to the public
- Corruption: politics has turned into a mechanism where wealth can be earned using the power and benefits available to politicians
- Wrong economic policies and management: failure to protect export income, import costs exceeding export income and unlimited borrowing to cover the discrepancy between dollar earnings and expenditure
- The decline of the quality of the government service: government service becoming inefficient, corrupt and suborned by political power
- Weakened moral fibre of the people: Perpetuating ignorance and poverty for political gain, failure to empower people and inculcating a mentality of dependence founded on a focus of rights alone and a disregard of duties and responsibilities

The common factor tying up all that is stated above is the lack of an education system that can engage and triumph over local and international challenges, that can ensure developing skilled and productive citizens. A key reason for this failure is the lack of a State Education Policy, which resulted in each successive government implementing disparate policies during their times. In the same vein, student organisations and trade unions carried out protests based on political motivation rather than societal needs. The solution to all issues can lie in high quality educational reforms which consider the Sri Lankan nation as a single entity.

Educational reforms Sri Lanka demands today for a brighter tomorrow

Educational reforms necessary today cannot be discussed in isolation from the global situation; they must be viewed within a broad framework of global economic crises as well as the Covid pandemic since the entire world has been turned on its head by the Covid-19 pandemic.

In 1950, Rene Dubois, a French microbiologist, environmentalist and humanitarian, who later became the Professor of Community Medicine and Tropical Medicine at the Harvard University, warned that nature would attack back at an unexpected time, in an unexpected manner. This is what we saw in 2019. The high-risk behaviour of humans, pollution, destruction of forests, use of anti-microbials, changing biomes,

chemical pollution, urbanisation, rapid population increase, ultra-consumerist culture challenging sustainable limits have led to the destruction of the environment. Most people remain unaware that the floods, landslides that we call natural disasters are not in fact natural but are a result of human actions.

Faced with this unpleasant truth, education today should move towards an in-depth analysis of how we should educate ourselves to protect humanity by overcoming these challenges. It is necessary to re-examine our thoughts, feelings and behaviour in the face of the global challenges we need to overcome. Therefore, the aim of Sri Lankan education and educational reforms should be the development of a child, an adult and a citizen who looks at the world from a new perspective and is sensitive to humanity; who aims to leave a future that is better than our past to our unborn children. It is my duty to remind everyone that there is no other alternative left to us.

This country requires citizens, teachers, intellectuals, educationists and politicians who have the skill and the ability to support the development of children and people who can face and manage change, and have a vision beyond personal gain. This is therefore the best time to discuss broad educational reforms which can support the challenges of this generation.

In this context, what is essential are educational reforms which go beyond expanding access to education and changing curricula, or reforms which consider development of dollar-earning, exportable human resources as their only objective. The demand today is for reforms that go beyond these basic aims and aim to enhance morality and human values.

Gaveshana Magazine, of which I am a member of the editorial board, recently published its 39th special edition on the theme of 'Educational reforms the country demands to develop a productive citizen adaptable to the modern world'. Professor Gominda Ponnampereuma, Head of the Department of Medical Education of the Faculty of Medicine, University of Colombo stated as follows in writing an article on 'Student-focused education and traditional education in Sri Lanka' for this edition:

"The education system that exists in Sri Lanka today is not one that has identified the needs specific to Sri Lanka, develops human resources to match those needs, nor one that has been enriched by the positive aspects of global trends in education. What exists today is the education system developed by British colonials. This system is not currently practiced even in Western countries. Those countries too have given priority to student-centred education. The student-centred education system we believe in is closer to the education system we originally had in Sri Lanka rather than to the system that was forced on us by the British, that they themselves reject today, but that we continue to maintain.

What is the student-centred education system we believe in? This concept is based on the definition of the word 'education'. Currently, education is defined as skills to be developed through understanding, experimentation and experience, rather than material that can be transmitted from one person to another.

If education is a resource that flows inertly from a teacher to a student, then, education can be limited to confining a group of students to a room, and a teacher providing a series of lecture notes according to a set timetable. Yet, education is not thus defined. In that case, what defines student-centred education? True education, as previously defined, should be a process where a student, together with other students and a teacher, engages in effective conversation, allied student experiments, experiences and activities,

leading to the acquisition of mental and physical skills as well as conceptual and spiritual change. It is however questionable if this is feasible in a school classroom of today?

For this to be feasible, there needs to be an environment where students can form small groups in a classroom to carry out experiments and discuss experiences under the guidance of a teacher, leading to intellectual, physical and conceptual development in the children. However, the classrooms of today are only suitable for information transmission from the teacher to the student, and not for conceptual and intellectual development through discussion between the student and the teacher. Continuing in this vein will prolong a 'memorising education culture' that dulls critical thinking. For future Sri Lanka to have an intelligent, skilled work force with strong values, the current classroom structure needs to change.

A counterpoint to this claim is that a teacher is weakened in student-centred education. That is completely false. In teacher-centric education, the teacher prepares notes and passes it on to the students. The teacher then explains anything the students do not understand. Students then learn the teacher-provided notes and reproduce such learnings at an exam.

In student-centred education, the teacher develops 'learning stimulants' that need to be discussed and experimented on with students, for example, documents, reports of practical applications, activities to engage in. Students explore the stimulants the teacher developed, in small groups. The teacher directly participates in such discussions and experiments and explains any confusing or difficult points. The teacher consistently assesses if the students have reached the educational targets and objectives."

The explanation above indicates how student-centred learning can further strengthen the role of the teacher rather than weaken it, and how it can lead to greater creativity and enjoyment in the profession of teaching.

Pre-colonial Sri Lanka had an education system which is the polar opposite of teacher-centric education. In this system, the teacher would identify the skill set best aligned with the student and would teach the student either fencing, or archery, or irrigation methods, or agriculture and so on. It is quite student-centric since the teaching content and method is modified to suit the needs of each student, rather than a 'one size fits all' education methodology that assumes a single teaching and learning methodology meets the requirements of all students.

As we pointed out previously, education is well-known in this country as something that should have, but has not, evolved. Last year, this task of educational reforms was assigned to the Educational Reforms and Distance Education State Ministry. Dr. Upali Sedere, Secretary to this Ministry, disclosed in a special article for Gaveshana magazine the proposed reforms, which are due to be enacted under the current Minister as well.

The reforms are based on six key objectives:

- i) active contribution to national development
- ii) effective and efficient work-oriented person
- iii) person with entrepreneurship mind
- iv) patriotic person
- v) good human being
- vi) happy family

The curriculum that is based on these factors consists of four separate parts:

- i) scholarship
- ii) productive citizen and activity-based education
- iii) teamwork
- iv) emotional development

This will be structured on a modular method, on a student-centred basis. The curriculum is divided into three parts:

- i) essential learning
- ii) self-learning
- iii) extra curriculum

Accordingly, the objective is to guide students towards a vocational education based on extra activities. It is mainly intended for years 1-11, or general education, according to Dr. Sedere, however, simultaneous change is necessary in both years 12-13 and in the university education system.

Dr. Sunil Jayantha Nawarathne, Director General of the National Institute of Education, writing in the same magazine, discusses the basis of the proposed amendments as follows:

“Our country has an education system that dates back two thousand five hundred years. This excellent education system was subjugated and lost with the expansion of the education system the British imposed upon us, leaving us with this British system by 1948. We have still been unable to establish a home-grown education system seventy-four years later, leading to multiple issues in the citizens who follow this education system. We need a new generation suited to the 21st century. To achieve this objective, the National Education Institute is introducing these new 2022 educational reforms with a national objective in mind. Creativity, innovation and entrepreneurial mindset are what we aim to achieve with this new education system.”

Let us examine what a productive citizen, fitting the 21st century looks like.

21st Century and 4th IR ready human capital

$$\mathbf{21\ CHC = 3R + 3L + 2C + SDL}$$

21 CHC – 21st Century-ready Human Capital

3R – Reading

wRiting

aRithmetic

3L – Learning skills

Literacy skills

Life skills

2C – Character development

Citizenship

SDL – Self-directed learner

He terms the current education system in Sri Lanka as a 3R system – (Reading, wRiting, aRithmetic). This does not include innovation or questioning the status quo. He accepts that advancement is not possible using the old system, when the reality is that we are now 22 years into the 21st century. “Even an old mobile phone does not meet the requirements of today. A Smart phone is now a necessity – for using the internet, photography, banking and many other activities are now carried out using the smart phone. To change the system to meet today’s needs, the 3R system needs further additions: 3L, 2C and SDL.

3L – Learning skills, Literacy skills, Life skills

2C – Character development, Citizenship

SDL – Self-directed learner

We believe the child who is ready to face the challenges of the 21st century is a child who meets all these requirements.”

They have identified six aims of general education as shown below.

National aims of general education

1. An active contributor to national development
2. An effective and efficient employee or smart self-employee
3. An entrepreneur or person with an entrepreneurial mindset
4. A patriotic citizen
5. A good human
6. A member of a happy family

These six aims are divided into nine parts as follows.

1. Positive
2. Practical
3. Proactive
4. Pragmatic
5. Patriotic
6. Passionate
7. Peace loving
8. Preserving
9. Problem solver

The new educational reforms have identified the skills necessary to the child of the 21st century, as follows.

The twelve 21st century skills

Learning skills

1. Critical thinking and problem solving
2. Creativity
3. Collaborations and teamwork
4. Communication knowledge

Literacy skills

5. Information literacy
6. Media literacy
7. Technology literacy

Life skills

8. Flexibility
9. Leadership
10. Initiative
11. Productivity
12. Social skills

We then discuss social skills under six different criteria.

1. Understanding oneself
2. Managing oneself
3. Understanding others
4. Building and managing positive relationships with others
5. Relationship with the environment
6. Responsible decision making

Main domains of national reforms:



It is evident that these reforms have been proposed after in-depth analysis and that they are conceptually excellent plans. They are also well in line with the vision of Dr. Kannangara. The challenge, however, is how to effect these reforms in this country, given the social, economic and political challenges we are facing.

On the one hand, it is becoming impossible to hold school on all five days due to the fuel crisis. On the other hand, the question is how technical difficulties and shortcomings of on-line teaching can impact these reforms. Furthermore, it is very likely that these reforms will be viewed within a political framework by both union leaders and student unions.

The level of understanding of the key stakeholders of these reforms when they are being introduced will obviously be at different levels. Communicating these reforms to the different stakeholders at a level that they can clearly understand it will be a significant challenge. There appears to be a significant shortfall in employing social and electronic media, as well as influencers, to effectively communicate about these reforms, and we have a social responsibility to warn about this shortfall.

It is human nature to resist change. It is critically important to clearly communicate to the public, why the current education system needs to change, how it should change, how the direction of change and its final objectives are decided, in such a way that it addresses their fears and concerns. No one should be offended if I remind you that failure to carry out effective communication could lead to the same end as that of the proposal to shift to organic fertilisers.

Furthermore, however great the reforms are, it is necessary to remember that opposition against highly sensitive matters such as the Grade 5 scholarship examination, may come from those whose livelihood depends on tuition classes. It is also necessary to keep in mind that even the elements of society who are demanding a 'system change' may well behave in a different way when it is something that will affect them personally. As psychology tells us, this is because that the way we think when it is our personal problem is different to how we think when it is someone else's problem.

Another important challenge is how teachers' mentalities can be aligned with these reforms. This does not mean that we assume opposition from the majority of teachers. However, it is doubtful if we have sufficient research data to determine the reality of this issue.

I would like to reiterate that the authorities, intellectuals and politicians already possess the mechanisms and strategies to win this massive challenge of effectively communicating these changes to all relevant layers of society and to convert them to honoured stakeholders of this change. Such strategic communication needs to be positioned as one of the most important aspects of the implementation of these reforms.

Other segments within the big picture that merit attention apart from the reforms within the school system in years 1-13

- i. Early childhood development and the first 1,000 days
- ii. The role of pre-schools as part of the education system
- iii. Inclusive education and children with special needs
- iv. Contribution of distance learning to educational reforms and challenges
- v. Relationship between education and health
- vi. Private universities and educational institutions
- vii. Students at universities abroad
- viii. Life-long education, adult education, continuous education for education professionals
- ix. Integrating research within the overall scheme of education

Since there isn't sufficient time to discuss all these sections fully, I will discuss some of the sections I believe are the most important.

(i) Early childhood development and the first 1,000 days

The greatest importance and greatest weight when investing in a child should be attached to the first 1,000 days. This is because 80% of a child's brain development is completed within the first three years. Therefore, significant investment in educational reforms should be allocated to early childhood development, i.e., the Golden 1,000 days. A strong foundation laid at this stage will help the child successfully complete his / her education. From a health perspective, the Health Department, particularly the Family Health Bureau, makes a meaningful contribution towards this objective, however, there is a lack of an active mechanism to enrol parents as honoured stakeholders within this process. This is important because responsive care giving, i.e., observing a child's signals in a timely and accurate manner, understanding such signals and responding to them, is an important part of childhood development.

Early childhood protection cannot be achieved through pre-established rules and guidance. Parents need to understand the related scientific concepts and should incorporate these concepts into their day-to-day life. The relationship with children varies according to the parents, therefore parents need to analyse the existing interactions with their children and secondly, adapt these measures and develop them to suit their needs. However, there is no structured mechanism for parents to develop this skill set within the education system, nor within the health system.

I do not intend to discuss this in detail, but wish to point out the critical importance of this concept; to reiterate that the greatest investment is necessary in the first 1,000 days, far more than in the Grade 5 scholarship exam, the Ordinary Level or Advanced Level examinations.

Stimulating brain development is an investment with high returns; the best investment for the Sri Lankan nation. Research data indicates that for every Rs.200/- invested on brain development, the return can be valued at Rs.1 800/-.

(ii) The role of pre-schools as part of the education system

I shall quote from the article Mrs. Mala. N. De Silva, retired deputy head, National Education Faculty, published in the 39th edition of *Gaveshana*, that explained our stance on the role of pre-schools in educational reforms.

A pre-school has been recognised as the 'Golden door that gives a person access to society'. Mrs. De Silva writes quoting Koswatta Ariyawimala Thero that "The role of a preschool is not to give a child a large number of modern toys. Neither is it to teach a child to recite a poem in English. Those are secondary. A pre-school is not a tutoring. It is the place where small children play; where they form social relations. That is what human education is."

Furthermore, the UNESCO report on 'Education for Life' states that pre-school education is a prior necessity for any educational or cultural system, indicating the importance of pre-schools. At the World Children's Summit in 1990 in New York, the world's leaders signed the 'World Declaration on the Survival, Protection and Development of Children', which had as its primary claim that early childhood should be a time of 'joy and peace, of playing, learning and growing'.

The educational reforms of 1997 too had significant focus on early childhood education: it recommends increasing the number of pre-schools so that 3–5-year-olds can receive a better education.

The National Census on early childhood education centres estimated that there are 19,668 pre-schools in Sri Lanka. The majority of these are, however, privately owned, and many parents cannot bear the cost of these schools. These pre-schools are frequently un-monitored and not standardised.

Under these conditions, I would like to reiterate that these pre-schools should be monitored and that the process of providing resource persons at these schools an adequate training needs to be expanded significantly.

(iii) Inclusive education and children with special needs

I would like to present a few points here based on the article written by Ms. Binoli Herath of the Institute for Research and Development on this topic.

'All children have an equal right to education; however, it is not a secret that children with special needs face multiple challenges in accessing and receiving education'.

'These children often are disregarded in society due to disabilities, poverty and the extreme nature of their problems. Most of them are unaware of the opportunities available to them. Similarly, most people are unaware of the abilities such children can possess'.

The Ayati Centre affiliated with the Kelaniya University provides health and education services for children with special needs with the mission to help such children reach their maximum potential through the use of modern scientific interventions and expertise. It also serves as a training centre for resource persons and as a research centre. There is great need to expand such services throughout the country.

I believe it is important to discuss alternative education for children with special needs.

1. Specialised schools: these are pre-schools, primary, junior secondary and senior secondary schools for children with relatively severe disabilities. Children with severe visual, auditory, physical or cognitive disabilities receive education in such specialised schools using specifically adapted curricula.
2. Special education units within mainstream schools: children with special needs can be educated in units specifically established for them.
3. Special resource centres attached to mainstream schools: children with special needs enter regular classes and work within them for the majority of the time whilst seeking special services necessary from the resource centres a few times a week. Such schemes provide necessary support to children with speech difficulties, autism, emotional disorders, auditory or visual difficulties, learning difficulties, attention disorders and ADHD, for example.
4. Inclusive mainstream schools: provide education to children with special needs in the mainstream schools. This is feasible for children with mild disorders who can enter mainstream schools.

These facilities are available to some level within the education system; however, educational reforms should include mechanisms to elevate the entire society to one that acts positively towards children with special needs and does not discriminate against them. Education systems for children with special needs usually follow the curricula in the mainstream schools, however, these systems need to be modernised, along with making modern equipment and trained teachers available.

(iv) Distance learning as a tool for educational reforms and challenges faced

We discussed this issue with Mr. Neil Gunadasa, Additional Secretary, State Ministry for Educational Reforms, Open Universities and Development of Distance Education. He explained that certain sections of distance education functioned to a limited extent within the general education system. Recently, a separate Distance Education Unit was established to make distance education an integral part of general education.

“With the increased use of modern technology such as computers, tablets, internet and smart phones, the stage had already been set for the expansion of distance learning. The advent of Covid 19 and the resultant issues helped further popularise distance learning.

The Information Technology Division of the Ministry of Education initiated ‘e-Thaksalawa’, a structured distance learning system which contained a limited amount of learning media for children. They have developed it further now so that it can be used for educational reforms. This system is similar to a virtual classroom, carrying out the process that usually happens in a classroom on a virtual basis, using technologies such as Microsoft Teams and Zoom.

All 10,165 schools in Sri Lanka have been added to the system and it is expected to facilitate any student pre-booking and accessing the lectures of any teacher.

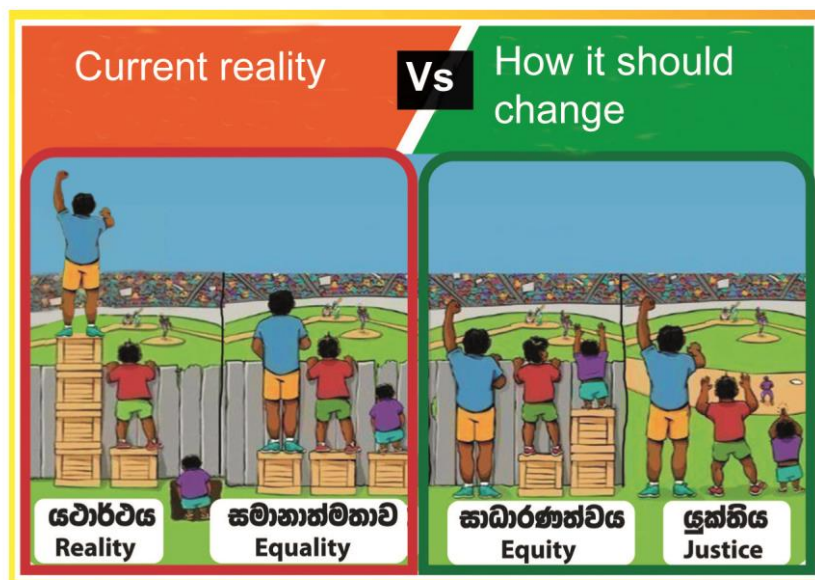
The 'e-Thaksalawa' content is prepared to match the new educational reforms which offer lessons in a module system. For example, a student completing a ten-hour module receives one credit. Learning the module content may well be done at school, but 'e-Thaksalawa' offers the student the possibility of expanding his knowledge of the subject matter further using extension material.

Content creation has been done in all three languages, using both teachers and external subject matter experts. For example, for a topic such as agriculture, experts on agriculture are invited to contribute to content creation. Steps are being taken to provide students knowledge of more subject-related matter using the internet and distance learning methods.

The 107 computer centres covering every educational division in the country are to be developed further to use as local resource centres for the new reforms.

A pilot project is due to start this year in 215 schools. Training the principals and teachers at these schools is also carried out via self-learning methodologies. The contribution from the Distance Learning Centre towards this work is extensive and will extend further in future. This communication currently runs on 'e-Thaksalawa, You Tube and Nanasa, eight educational channels on Dialog TV."

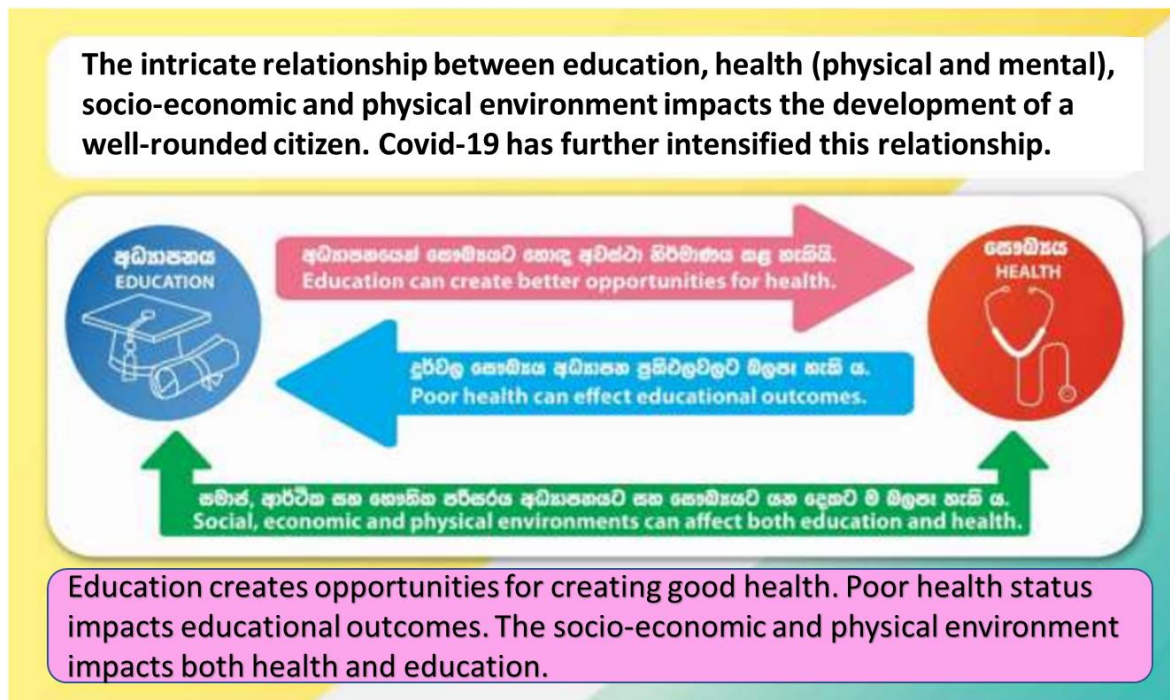
We believe education is a right rather than a privilege, and believe the impact of Covid-19 on the education of under-privileged students and students at risk was greater than on others. Social disparities have steepened both due to Covid-19 and the fuel crisis. Under-privileged children such as those from rural areas, students with disabilities, should be prioritised within the social movement of enhancing access to education. At a time of widening socio-economic disparities, it is important to pay attention to equality, and, extending this further, to equity. It is however necessary to warn that the reality is very different to this ideal, and that a situation is now being created where privileged socio-economic layers of society are at a much greater advantage, similar to the pre-Kannangara era, in the context of the current economic, social and political crisis.



(v) Relationship between education and health

The inseparable connection between education and health is more evident than ever before following the Covid-19 pandemic. I emphasise that I refer to both physical and mental health when I refer to health. I do

not intend to discuss this extensively in this lecture but wish to point out the crucial need for the health sector and the education sector to co-ordinate and work together, much more than it is being done today. I would also like to emphasise that this is a concept closely aligned with the Kannangara vision.



(vi) Continuous professional development of education professionals

Much of the negative influence on the dignity and quality of any profession arises from the actions of a small minority. The serious concern here is the tendency of that minority to override the majority opinion and get them to adopt the minority view. The harm that is caused by suppressing the views of the majority who are usually peace-loving and dislike conflict is significant. It is therefore necessary to empower the majority to subdue the harmful minority. This can be done in two ways: professional empowerment and empowering the individual personality.

The Sri Lankan Education Service was unable to entirely avoid the decline in socio-cultural sensibilities, the move towards materialistic individualism, and the weakening of moral fibre, that was seen in general society after 1977. My personal experience, however, is that the majority of the teaching community are still people who think beyond personal gain and consider their profession to be a public service.

It is this teaching community that help develop all types of professionals and intellectuals for society. The pride teachers have in their profession as well as the respect society accords to teachers should therefore be at least as high as, if not higher than, the respect accorded to professionals such as doctors, engineers, professors and university lecturers. It is therefore critically necessary to instigate well-structured and wide-reaching programs for the continuous professional development of teachers, alongside educational reforms.

Mrs. H.M.R. Kokila Nandani Priyanthi, manager of the Teachers Professional Development Centre in Ampara, wrote an article for the Gaveshana magazine previously mentioned to explain in detail the professional development of teachers in Sri Lanka. She states as follows:

“The continuous professional development of teachers is the responsibility of individual teachers just as much as it is the responsibility of the Department of Education. At the moment, teachers’ trade unions mediate on the rights of teachers; however, the role of professional organisations is different. For example, the GMOA, the Government Medical Officers’ Association is the trade union of doctors. The SLMA, the Sri Lanka Medical Association is the professional organisation of doctors. The SLMA carries out an extensive range of activities throughout the year to enhance the professional knowledge and practice of doctors. This type of activity is essential for the teaching profession as well, in order to update their knowledge and skills”.

Education

It is difficult to provide a clear definition for an abstract term such as education. The concepts of teaching, learning, assessment, appreciation (of music, literature etc), practical skill development and many other concepts are all encompassed within education. The word education was derived from Latin, from the word ‘e-ducere’ which means ‘to lead out’. Every person has the potential energy to carry out certain tasks and the role of education is to divulge this hidden energy. It is said that only 5%-10% of this energy is developed in people, therefore, evidently, education needs to expand further.’

Krishnamurti states that education is not the learning of subject matter from books or memorising facts. Education is the critical analysis of facts given in books to determine if such facts are accurate. Identifying the needs of students and creating a pathway for them to realise their expectations by giving them suitable practical experience is also education. The role of education is to bring about a balanced outcome in a person’s development, incorporating physical, mental, social, cultural, ethical and spiritual development.

It has been emphasised that the primary aim of education is not only the quantitative aspect of training a student to successfully get through examinations, but also to enhance the positive personal qualities of a student. The mark of a high-quality education is therefore that it can support a person and society to meet national objectives, both individual and societal.

Quality improvement in education

The key question when considering the quality of education is – what does quality mean? Quality in a business sense is the ability to meet requirements and suitable for usage.

It is necessary to ascertain how ready education professionals in Sri Lanka are to meet the requirements of the 21st century. In order to do so, first, it is necessary to determine what skills an educator should have, and who falls into the category of education professionals. University professors, lecturers, members of teaching faculties of educational institutions would all be considered educators, however, from the viewpoint of general society, school principals and teachers are usually considered education professionals, and it is they who contribute the most to the Sri Lankan education system.

Teachers’ professional skills

A skill is the ability to carry out a particular task. Skills incorporate something beyond mere knowledge. The teachers’ guides of the National Education Institute state that “a skill is defined as a combination of knowledge, abilities and attitudes. Skills can contain one or more of these three components in varying

ratios. Some skills may incorporate a greater percentage of ability, whereas others may contain a higher proportion of knowledge or attitudes.” Research indicates that skills have been defined in many ways.

The Commonwealth Report of 1974 explains the skill set a teacher needs as follows: “To be a skilled teacher, a person needs knowledge about childhood development, material and strategies for teaching and he should be a person who uses these skills to instruct students/community.”

The 21st century began with unusually rapid development in technology and in communication. A new technology can become obsolete even as it is introduced to the market. In such a rapidly changing world, the skills necessary for learning and employment include creativity, innovation, critical thinking and problem solving, communication, teamwork, information management, effective use of technology, professional and technical life skills, and cultural flexibility.

Sri Lankan teachers enjoy a positive reputation although there are questions about their professional skills. To improve the quality of education, it is necessary that the teacher becomes skilled in his profession, and this is a critical and urgent need today.

Professional development

It is teacher education that gives people with different belief systems, ethics, values and personalities who enter the profession, the knowledge, skills, beliefs and the persona to form the foundation for a high-quality teacher.

Globally, teacher education is therefore provided in two formats: pre-employment teacher education at the time of entering the teaching service, and, continuous education, professional development while being employed. It is necessary to assess if such education is adequately provided to Sri Lankan teachers.

Continuous professional education is important since research has indicated that pre-employment training alone is insufficient to develop an effective teacher since a teacher does not receive a fully adequate practical experience during the pre-employment period. A teacher should learn how to teach by experiencing actual teaching. It is also important to provide continuous professional education as it increases the quality of the teacher’s work and enhances job satisfaction. The quality of an education system depends on the quality of the teachers employed within that system, leading to a special emphasis on professional teacher education globally.

In 2009, the National Institute of Education defined teacher education as the mechanism for teachers to achieve professional skills. Professional development is achieved as the teacher learns the practical skills necessary to pass on the knowledge he possesses to the students. Professional development can therefore be defined as become aware of and further improving the experience, skills and usage to carry out the task of teaching more effectively. In 21st century professional development, the teacher has to prepare himself for an uncertain, highly complicated future.

Teacher education and certification started in Sri Lanka in 1970 with the establishment of general schools. The Universities of Colombo and Peradeniya, the Eastern University, the University of Jaffna, the Open University and the National Institute of Education offer Post-graduate Diploma in Education and Master of Education programmes, which are in line with modern global trends of teacher education, primarily for teachers with a Bachelor’s degree. The primary content in these programmes is to provide pedagogical

education to teachers (National Education Commission Report, 2014). This report also states that further education programmes for teachers without a basic degree also give primary focus to pedagogy.

Research on the current school education system in Sri Lanka has indicated that teachers recruited for maths and science education are often placed in schools without adequate teacher education and professional development. Short-term training sessions for these teachers are primarily carried out by Teacher Centres and Divisional Education Offices. These in-service training sessions need to be modernised to help provide teachers with the knowledge, attitudes, skills, and values to meet the demands for high-quality teachers. It is a weakness within the system that there is no national level consensus on the objectives to be met on Sri Lanka's teacher education and professional development. A number of institutions work on this matter in isolation, and an eminent Sri Lankan educator, Dr. G. B. Gunewardena stated in 2012 that it is a necessity to have a confluent system to liaise between all these separate institutions. It is also necessary to further study the effectiveness of in-service training sessions in improving the quality of teachers.

Principals' professional development

This is not a factor that has received much attention in the Sri Lankan education system. All that usually happens is that the divisional/provincial education office informs principals when a new circular is issued. This has led to principals focusing more on meeting the responsibilities imposed upon them by senior officers and working according to the circulars, rather than on working on their responsibilities towards students and teachers nor on attempting to build a high-quality education system. There is very limited research on professional development of principals.

The key institution that offers professional development training to Sri Lankan principals is the Faculty of Education Leadership, Development and Management affiliated with the National Institute of Education. It is however very difficult for principals from areas faraway from Colombo to attend such trainings. Travel and financial difficulties and the resistance to residential courses are the key problems, whereas there is also no motivating factor for principals to participate in such programs. It is therefore rare that principals from far away areas such as Ampara, for example, opt for continuous professional development.

However, it is clear that the number of principals participating in these trainings has increased as the training has moved to online learning. This is clearly a benefit of online education. Research on education systems in other countries has shown that although online education is less successful for school children, it can be highly effective in adult education.

For the new educational reforms to be truly effective, it is important to emphasise on the need to consider the bigger picture. Accordingly, a significant change in the mentality of students, teachers and society that helps place teachers and the teaching profession at an honoured and optimal level is necessary.

(vii) Integrating research within the overall scheme of education

Children are by nature researchers. They are inquisitive and explore the world from the day they are born. Children want to know everything; they question everything they see. Some children take apart toys to see how the toy works. This is science. Scientists who investigate the world are those who do what children do, in a professional and systematic manner. In this sense, every child is a researcher and a scientist. Researchers go beyond asking questions. They seek answers or solutions to the problem, based on

research methods, make observations, arrive at conclusions based on the observed data and derive theories from it.

It is therefore easy to turn every child into a researcher and explorer. It is questionable as to what extent our education system achieves this objective. The group and individual project work introduced for G.C.E. Advanced Level students was an excellent opportunity to achieve such an objective. However, it appears that the value of this project work was not fully appreciated, and perhaps because of it, individual project work was removed from the Advanced Level Syllabus. I do not believe there is sufficient emphasis on research even within the university system. Moreover, research projects are frequently concluded with the limited objective of obtaining career promotion.

Research and development, innovation and technological transformation

The post-industrial knowledge economy and its growth is closely interlinked with innovation and localised research capacity. University-based research has been shown to be an effective driver for such economically productive innovation. In order to remain globally competitive, it is therefore necessary for a country to utilise state investment in universities to stimulate research and development. In line with this global trend, most top Asian Universities have transformed from 'Teaching Universities' to 'Research Universities'.

A paradigm shift is required in Sri Lankan graduate and post-graduate education to position research and innovation as a key feature and to develop persons with the creative vision for innovation, along with the wide and deep knowledge necessary to convert that vision into a reality. Contribution from research and development is critically necessary for Sri Lanka to stabilise its economy, to ensure national security and for the sustainable development of strategically important sectors. Strategy should focus on capturing available opportunities in a dynamic world since scientific opportunity cannot often be predicted. Flexibility in responding to novel ideas and seizing available opportunities is important for success. For example, the knowledge gaps that were exposed during Covid-19 created unprecedented opportunity for research on as yet unexplored fields. It is also necessary to create mechanisms in co-operation with industry, for the commercial exploitation of innovative products arising from the research, as well as for knowledge creation and transfer.

Sri Lanka urgently needs reforms in higher education that lead to establishing a value chain of co-operation and integration between multiple fields, which can ultimately result in innovation being converted to new products and services. Mere imitation of what is being done in this regard in foreign countries will not, however, suffice in this instance. An in-depth study of the geographic, cultural and socio-economic factors that can impact the relationship between universities and industry is necessary, and these findings should be used to determine a model best suited to Sri Lanka.

Co-operation between universities and industry on innovative products should be developed within a format that benefits all stakeholders. Capacity building, job creation and creation of intellectual property should also be included as part of this process. The research agenda of higher education institutions should therefore be developed within a structured framework of scientific, economic and social factors, that can lead to practical solutions for supporting innovation, technological development and its disbursement.

Innovation ecosystem model is a mechanism that has successfully been adopted by many countries and economies with a research and development agenda, and this could be used to help convert Sri Lankan

universities into innovation centres where research and development projects are carried out. Accelerating innovation requires the cumulative action and support of a research-friendly vision and culture, legal and regulatory framework, financial and human resources, infrastructure and finally, supportive end-market users. To identify the best mechanisms to stimulate innovation in areas where Sri Lanka has a competitive edge, the innovation process should be considered in its entirety, bearing in mind the inter-dependencies between various stakeholders.

As the first step, research prioritisation should be carried out to identify the sectors which are necessary for post-Covid economic restructuring. Priority should be given to areas such as health, nutrition, food security, import substitution and export promotion. Technological innovation can be used to investigate areas such as online learning, environmental protection, increasing local production, and renewable energy sources such as solar, wind and tidal energy. Policy making at a national level should be evidence-based and universities should be encouraged to play a pivotal role in this endeavour.

Secondly, research and development centres should be created with a global vision, adhering to the highest quality measures and research should be carried out on the most globally relevant fields, so that these institutions and the research benefits generated remain globally competitive. Building effective links with globally reputed research and development institutions, entrepreneurs and industry can add further value to Sri Lankan universities and entrepreneurs, leading to further national development.

In order to arrive at this transformation, attention needs to be paid to increasing resources through investment, identifying and utilising skilled human resources, recruiting and retaining the best researchers and innovators, and to carrying out critically necessary structural changes. Further key factors necessary are: establishing the highest quality research centres, collective action to raise funds including sourcing donations, and, improving the ability to compete for international research funding. A 'Department for sourcing, supporting and managing research funding' should be established at university level. Post-graduate programs should be structured around key research projects that can lead to effective outputs.

For knowledge creation, it is necessary to strengthen research in Sri Lankan universities.

The focus of research should shift from publishing research papers and using it for promotion towards commercial development of the outcomes of the research.

The new knowledge created from research should be useful for socio-economic development, yielding returns to the public. It is necessary to address the loopholes in this process, to remove obstacles and create opportunities for research that leads to intellectual property creation, innovation and commercialisation. The University Act could be used for this purpose.

Research findings should be used to inform policy making at national, regional and international levels.

The obstacles to bringing in competitively won research funding from reputed foreign research funding institutions into the country should be removed urgently.

We need to clearly understand that we live in an era which demands not one Dr. Kannangara but hundreds of, thousands of, Dr. Kannagaras in order to overcome the challenges ahead of us.

The single mechanism to overcome the multiple crises Sri Lanka faces now is to create productive citizens meeting the requirements of the modern world. Finally, I would like to emphasize that this is indeed the most appropriate time for a discussion on the broad educational reforms necessary to develop teachers,

intellectuals, educators and politicians who can think beyond personal gain, have the knowledge, skills, attitude and the will, to help create such citizens.

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About the author....



Prof. Athula Sumathipala is the Director, Institute for Research and Development, Sri Lanka, which he proposed and co-founded in 1997. Since 2020 he is the Chairman of the National Institute of Fundamental Studies at Hanthana Kandy. He is a Visiting Professor in Psychiatry and Biomedical Research at the Faculty of Medicine, Kotelawala Defence University, Sri Lanka. Prof. Sumathipala has an academic background in Psychiatry and Family Medicine. Furthermore, Prof Athula Sumathipala is also an Emeritus Professor of Psychiatry at School of Medicine, Faculty of Medicine & Health Sciences, Keele University, UK. He is also an Emeritus Professor of Global Mental Health, Kings College, London, UK. He is a Member of the Regional Expert Group on Mental Health for WHO South-East Asia Region. He is the only Sri Lankan to serve as an Editorial Board member of the British Journal of Psychiatry, since it was founded in 1850s.

He is considered an international expert in mental health, ethics and twin research. The majority of his research is based in Sri Lanka, and he has given leadership to multicentre research in collaboration with internationally renowned researchers. He has made an impressive global contribution to scholarly work exceeding 100 publications and text book chapters to publications arising from Oxford University Press and Cambridge University Press

The greatest contribution in his academic career is the establishment of the Institute for Research & Development (IRD) in Sri Lanka, nurturing it from one room and a handful of people to what it is today: an internationally recognised academic research centre that conducts innovative research for policy impact, locally and internationally, and promotes capacity building at all levels.

The IRD received 'Excellence in international collaboration for the advancement of science and technology' National Awards Science and Technology Achievements 2018. Its founder Prof Sumathipala received. Individual outstanding leadership in promoting and developing science and technology. National Awards Science and Technology Achievements 2018. He has received HE President's award (National Research Council of Sri Lanka) for publications in 2001, 2009, annually from 2010 to 2015, and in 2017.

He has been a research ambassador for Sri Lanka, representing the country as a keynote speaker, and panellist at a number of high-profile scientific meetings in numerous international locations.