

INSIDE THIS ISSUE:

PG. 1

IQPM news

About IQPM

Quotes on Quality & Productivity

PG. 2

IQPM executive council 2023/24

PG. 3

Quality of Drinking Water

PG. 4

Digital Pedagogy for Quality Education

IQPM news

- Seminar on the title of “Road productivity” in collaboration with OPA Sri Lanka has been planned to be held at OPA Sri Lanka Headquarters in Colombo 07, and the details will be shared in due course.
- Next Annual General Meeting of IQPM has been planned for February 2024, and all members are invited to attend the same.
- Second issue of Quality Magazine, a joint initiative between Kotalawala Defense University (KDU) and IQPM is scheduled to be released in January 2024.
- IQPM has been actively engaging with industry as well as academic organisations to create a platform to gather professionals, academics, students and other enthusiasts for propagation of quality, productivity and sustainability knowledge and activities across the society. Await more activities in this regard, in this new year.

Editorial note:

Welcome to the very first issue of our monthly e-publication, and we look forward to making this a platform for sharing knowledge and news primarily related to Quality & Productivity community across the world.

Therefore, we invite all to contribute to this publication by sharing articles that may be of any use to our readers.

Articles can be sent via email to samadiw@live.com by 10th day of every month, to be included in upcoming issues.

About IQPM

The Institute of Quality & Productivity Management (IQPM), formally known as the Sri Lanka Society for Quality Control (SLSQC) was initially established in 1974. It became a member association of the country’s apex body of professional associations, the Organisation of Professional Associations (OPA) in 1977. Successor to the SLSQC, the Institute of Quality & Productivity Management was formally inaugurated at the Professional Centre of the Organization of Professional Associations on 22 May 2015.

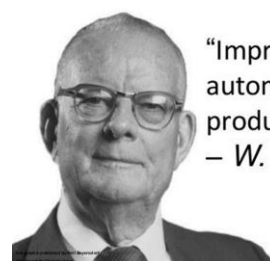
IQPM stands to be the apex professional body in the country in the fields of quality and productivity, with the objective of motivating and assisting the industry as well as academia to enhance productivity and ensure quality of products and services through effective management. Particular focus is on improving the quality of life, application of statistics in the industry for continual improvement of quality, effective use of ISO management systems to enhance productivity and effective quality management in social and educational services.

IQPM is managed by an Executive Council annually selected by its’ general membership through an Annual General Meeting, under the guidance of an approved constitution, and has its offices located at 1st Floor, 275/75, Organisation of Professional Associations, Prof. Stanley Wijesundara Mawatha, Colombo 07, Sri Lanka.

Quotes on Quality & Productivity

“Quality is the result of a carefully constructed cultural environment. It has to be fabric of the organization, not part of the fabric”

-Phill Crosby



*“Improve quality, you automatically improve productivity.”
– W. Edwards Deming*

IQPM executive council 2023/24



President - Mr Linton Fernando

MIIIE(USA) | MBA(PIM) | Dip.IE | Dip.BM | Dip.Tech Mgt



Past President - Mr E C M Fernando

BSc (Sp) (SL) | PG Dip-Ed | PG Dip-QA | MIChem | MIBio



Vice President - Dr Samadi Withanage

PhD (UK) | BEng (Hons) (UK) | Six Sigma Black Belt (USA) | Lean



Secretary - Mrs Nishadi Rajapakshe

MBA (SL) | MSc (SL) | BSc Sp (Hons) (SL)



Asst Secretary - Mr Priyantha Wickramaratne

BSc (SL) | MSc (SL) | AP (GBCSL)



Treasurer - Mr Kasun Fernando

MBA (SL) | PG Dip-Marketing (SL) | CMA (AUS)

Mr S G G Rajkumar

BSc Eng(Hons) | MSc (De) | MBA (USJ) | MEng (SL)

Council Member - Dr Kumara Hirimburegama

PhD (SL) | BSc (Hons) (SL)



Council Member - Dr Priyangani Jayasundara

DMgt (USA) | MBA (USA) | BA (SL) | FISSM (SL) | CMILT (UK)



Council Member - Dr Sanjaya Jayasooriya

PhD | MSc | BSc(Sp) | FCMA | MCPM | FMAAT



Council Member - Mr Sujeewa Dahanayake

Attorney at Law | LLM | MHR



Council Member - Mr Jayantha Gallehewa

MBA | Dip-supply chain | Dip-shipping



Quality of Drinking Water

by E C M Fernando

Existence of Water on Earth – In our solar system, location of our planet allows water to exist in 3 states, solid, liquid and gas. Life has originated in water and for it to continue, water is essential. Water is a special natural product of mother earth.

Physical Properties – We use fresh water for drinking. Nature provides the liquid. Drinking water should be colorless, odorless, tasteless, transparent. Between 0 to 100 degrees Centigrade, it is a liquid. It has very low electrical conductivity and a pH value closer to 7.

Water Molecule – Water molecule is unique in having 2 atoms of Hydrogen bonded to 1 atom of oxygen. It is an angular molecule and polar in nature. Water molecules have intermolecular hydrogen bonds.

Dissolved Gases in Water – Dissolved oxygen is necessary for all life forms except for lung breathers. Dissolved Carbon dioxide is necessary for algae and phytoplanktons to carry out photosynthesis and provide food as primary producers. Water should be free from chlorine, methane, sulphur dioxide and other poisonous gases.

Why do we need drinking water? – About half to 2/3 of our body weight consists of water which is the main reagent and solvent for the functioning of nearly all the living processes. An adult can survive without food for several weeks but only for a few days without water.

What is drinking water and what are the standards? – It should be non-hazardous to health and taste pleasant. It should be fresh water. The levels of chemicals in our water such as nitrates, phosphates, carbonates, chlorides, sulphates, pesticides, iron, Aluminium, Lead, Cadmium, Arsenic, polyaromatic compounds, are expressed in milligrams or micrograms per litre. There are Company Standards, National Standards, International World Health Organisation (WHO) standards for drinking water. By law, companies producing drinking water must inspect and conform to these agreed standards. Any breaches are punishable by law.

Lead Poisoning – Consuming lead dissolved water for long periods can lead to poisoning. Water supply companies must treat water to minimize lead content. WHO has recently announced a new guideline of 10 micrograms per litre. Water companies test for lead levels coming from domestic pipes. Although lead pipes were banned from home, it is the responsibility of the households to replace lead piping.

Aluminium Contamination – Aluminium sulphate is occasionally added to improve any color and suspended organic matter. Legal Standard Level is 0.2 milligrams per litre. Higher concentrations maybe a factor in development of Alzheimer's disease which causes progressive dementia.

Chlorine Addition for Purification – Chlorine is added to water to kill bacteria which may cause Typhoid, Gastroenteritis and Cholera. Chlorine can also react with naturally occurring organic matter to form trihalomethane, some of which are linked to cancer.

Nitrates – These may filter into waterways from artificial fertilizer and manure used in farming. High levels can cause a rare condition of babies which can lead to low oxygen flow to brain and other tissues. The human body converts nitrates into nitrosamines, some of which are suspected of causing cancer.

Pesticides, Herbicides, Insecticides, Weedicides and Fungicides – These are used in farming and may seep into rivers and end up in water supply reservoirs. Anything over the concentration of 0.1 micrograms per litre is considered harmful.

Calcium, Cadmium, Arsenic and Metallic Contaminants – The presence of these in water should be carefully monitored and restricted to be within harmless limits.

What about bottled water? – Sales of bottled water have rapidly gone up during this decade, as concerns and awareness of the quality of tap water for drinking purposes have increased. Bottled water may be classified as Mineral Water or Spring Water, implying that it is a healthy alternative. This is done at the source, free from pollution and harmful bacteria, without any chemical treatment. Many companies produce bottled water, from ground water, filtered through the earth's many layers of soil. The water can be on the surface of the ground or from a spring or it can be collected by drilling bore holes. Once opened, bottled water should be kept under refrigeration and consumed within 48 hours.

What about filtered water? – Domestic water filters may remove impurities from tap water but have been criticized due to risks of bacterial contamination. Using disposable filters and storing water in a fridge minimized the risks.

Future of Fresh Water for Drinking – We all have to be extremely cautious so as not pollute fresh drinking water, chemically, physically and microbiologically. This is a duty of the present generation, which they owe to the next ones; as drinking water is most likely to be the most expensive liquid in the future.

Digital Pedagogy for Quality Education by Viraji Ogodapola

We have come a long way since the times when education was a privilege for the chosen elite, attainable by virtue of class, religion or gender. And a long time from when sacred scriptures had to be memorized by a trusted few to transfer knowledge from one generation to the next.

The ancient Greeks had laws in place to ensure that formal education was primarily for males and for non-slaves. In early Mesopotamia, only the royal offspring and sons of the rich or the professionals had the entitlement to be schooled, i.e., access to reading and writing. The Chinese resorted to rote memorization for teaching over 40,000 characters in their language.

In the light of such absurdities, today we are in a position to pat our own backs gleefully for being able to read ridiculous ancient teaching practices leisurely. We are also able to grasp the fact of our learning habits, too, having leapfrogged tremendously from etching on wax tablets and oral recitals to browsing content in our devices conveniently today.

Given the enormity of the knowledge we have amassed and hoarded in numerous tricky technical formats in the present day, what is required of the sentient being now is the aptitude with which to retrieve and apply just the right resources for the problem at hand. The finesse of crafting the best with what we've got. The learner's armor today, in that sense, is very much personalized to the individual, in how and what works best for each individual.

The evolution of digital pedagogy has been rapid and unprecedented. And definitely expedited by the pandemic.

We have now entered an era of innovation-driven, immersive learning experiences aided by digitized tools and techniques for effective knowledge retention and application. Today's students are digital natives in every sense of the word – they are exposed to digital technologies at a very young age and understand how to use them, often in a very sophisticated manner.

In an ideal flipped classroom that we are headed to, the students embark upon actual problem-solving during the class hours, while reading up on theory and learning lessons have been moved out of the scope of the classroom. Students can watch lectures online, download relevant notes, and discuss/explore their ideas through online forums or discussion groups. This type of blended learning strategies reinforces active student engagement and knowledge application within the classroom.

Progression of education from 1.0 to 4.0:

Education 4.0 involves the use of tablets, laptops, smartphones, and various other devices as supportive tools for learning. Aimed at instilling the 4Cs the century calls for, our students are now being trained to think critically, make the most of their creativity, and communicate and collaborate effectively with their peers. With the students having a big say in the how of it today, learning has become a highly personalized experience to be indulged in from anywhere, at any time.

Such a transformation calls for an equally elaborate and sophisticated response from educational institutions. These institutions must be prepared to address challenges that arise with infrastructure, services, and facilities for students and teachers alike.

Education 1.0	Education 2.0	Education 3.0	Education 4.0
Teacher-centered Authoritarian Passive students	Content-based Assessment by exams Memorization encouraged	Student-centric Learning plan-based Collaborative initiatives	Personalized learning Flipped classrooms Individual assessment