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The voice of engineers

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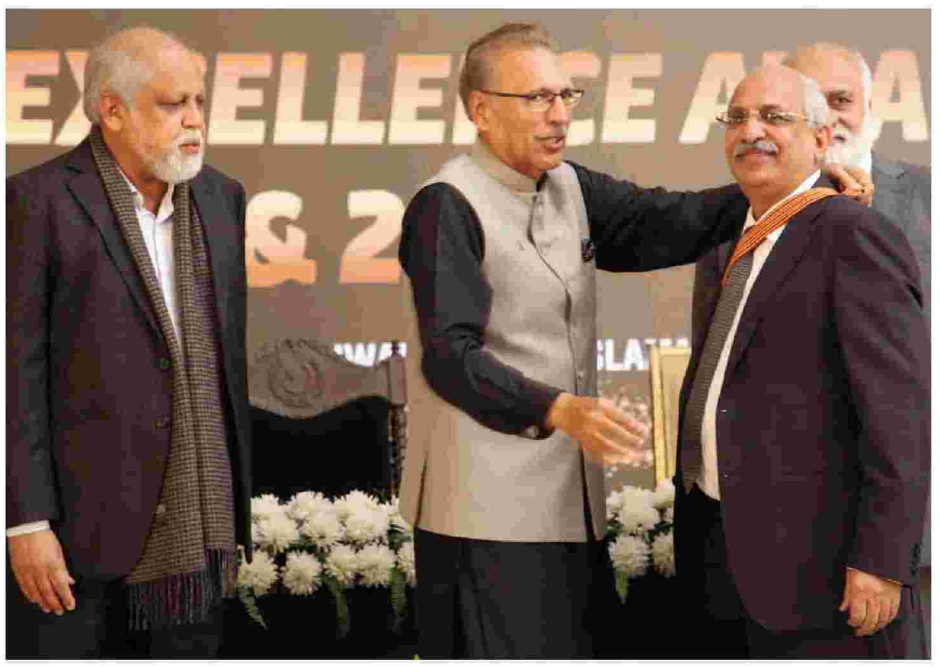
Inside the nest of Pakistani engineers

Let's have a look at extension and upgradation of the registrar saga

By Manzoor Shaikh

The grant of the second term and the elevation to grade 22 for the registrar Pakistan Engineering Council (PEC) Engr. Nasir Mahmood continues to be at the center of debate among engineers who appear divided on the question if the decisions are backed by the council act and bylaws. Seemingly, the talk, revolving around lawfulness, is essentially political, in its nature, and has worked to kick off the campaign for PEC Elections 2024.

The promotion and the grant of the extension to the registrar became a bone of contention between the ruling coalition led by Engr. Chairman Engr. Najeeb Haroon, claiming the extension and upgradation of the registrar were lawful and in accordance with the Restructuring Plan of the PEC prepared by the Human Resources (HR) Department. "It was approved by the 44th meeting of the Governing Body of the council on December 18, 2022, after getting the nod from the management committee—a body comprised of the chairman, senior vice chairman, and all four vice chairmen in the provinces."



The antagonists led by Engr. Mukhtiar Shaikh put forth PEC Service Rules 2020 saying that the criteria has not been fulfilled for filling the post of the registrar. Also, they oppose the induction of grade 22 in PEC and in support of their argument refer to the decision of the 32nd meeting of the Governing Body which did not approve grade 22 for the registrar.

Dr. Nasir Mehmood, the registrar of the council took charge of the office on March 22, 2024, for the second term granted by the chairman after he was promoted to grade 22.

The extension and elevation of the registrar were opposed by three vice chairmen as per a letter shared among engineers across the country. They are of the view that the three-year tenure of the Registrar expired on March 21,

Contd on page 2

My Dream University

In continuation of our efforts, Engineering Review has talked to 4 vice chancellors of engineering universities to have a grasp of the elements which can make the institution closer to the concept of Dream University. All four interviews are published in a special supplement starting from page 5 in this issue for our readers.

Inside the nest of Pakistani engineers

Contd from page 1

2024, as per PEC Service-2020. He is not eligible to work as Registrar and his continuation in the office will be illegal and in violation of PEC Service Rules 2020.

Quoting rules regarding 'Selection/Tenure post', they claim the criteria has not been fulfilled for filling the post of the registrar. Also, they oppose the induction of grade 22 in PEC and in support of their argument refer to the decision of the 32nd meeting of the governing body which did not approve grade 22 for the registrar.

However, Engr. Haroon did not mince words saying he used his powers under 3A of the PEC Act to give the second term to Dr. Nasir Mehmood. 'I am satisfied with his performance and ability as the registrar. He is a highly qualified senior officer with post-doctoral education from Japan. He has vast experience interacting with national and international organizations besides his expertise in policymaking.'

Engr. Najeeb Haroon said the post of registrar was upgraded for PEC scale 21/22 after the huge restructuring effort aimed at bringing a balance in the hierarchy and building a pyramid in the departments, regional offices, and entire council. Also, this is not the first time that the grade 22 post has been created in PEC. The council had Mehboob ul Muzafar in grade 22 in the past.

Sharing details, he said the 3rd HR Committee designed the restructuring plan on the directives that we issued after taking the reins of PEC in 2021. The plan was presented before the 88th management committee which made a subcommittee and mandated it to make recommendations within ten days. The subcommittee met in Lahore on September 24, 2022, and referred the final document to the 90th management committee which approved the document.

In 2023, we recruited directors in Finance, IT, and HR through the selection board. It was aimed at consolidating the council. Earlier, there was no promotion board for 8 years. I gave the lead to the vice chairmen and then promoted 8 officers from 17 to 21 grades. Two 21-grade officers were already available in the council, he says.

National Engineering Alliance formed by Chairman Engr. Najeeb Haroon, Engr. Abdul Qadir Shah, Engr. Mukhtiar Shaikh, Syed Ashfaq Shah (CAP), and others are at the center of the heated debate and have created an atmosphere to look at the alliance from numerous perspectives. Engr. Haroon has already declared his candidacy for the second term and simultaneously Engr. Qadir Shah has also shown his eagerness to contest for the office of the chairman.

Though the alliance between Engr. Haroon and Shah-Shaikh group is intact as yet but much before the present ruckus both sides had started exploring possibilities of new alignments in the wake of disagreements between the partners.

Now when the focus is on the forthcoming elections, any playable issue was understandably to be picked up by the warring groups in the ruling alliance to begin with their campaign. Thus, the issue pertaining to the extension of the registrar which appeared at the ripe time has caught the fire, and every differing segment keeping its interest in sight in the alliance started playing with it.

Had the issue of the extension of the registrar appeared say year ago, the reaction might have not been as swift and steadfast as it is today as the allies were yet to be in power for a longer period and conceived early to damage the alliance. Since, the polls are just five months away now, every possible issue has the potential to be played for the elections.

This issue has identified board outlines of the groupings in the alliance that can be analyzed from different angles. For instance, if one attempts to see it in the context of the registrar's extension issue, Dr. Niaz Akhtar, VC Chairman Punjab seems standing with Engr. Najeeb Haroon. Engr. Akhtar did not sign the letter that his counterparts in the three remaining provinces sent to the chairman of PEC over the grant of a second extension to the registrar.

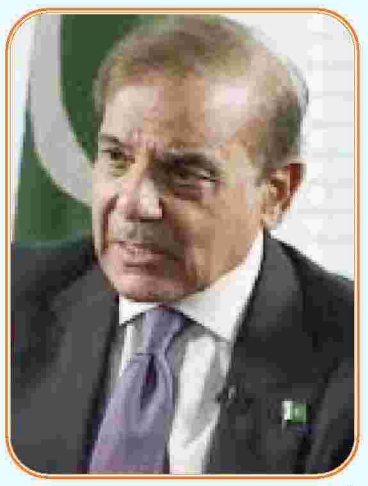
Interestingly enough Vice Chairman Balochistan Engr. Nasir Majeed who stands with Engr. Mukhtiar Shaikh and Engr. Ejaz Ansari on the issue of extension has sought information from the council about the foreign visits, the amount spent on these visits, and the purpose and relevance of the visiting engineers. He believes a lot of international visits /foreign tours have been made by different delegations on behalf of the council. The information that is in the circulation of the record says his couple of allies have been part of foreign visiting teams. Keeping at bay as to how his friends will react, his province is housing an influential engineer Engr. Waseem Asghar, President of ACEP is said to be ready to contest for the office of the chairman. How this alignment will work out is also yet to be seen. ■

FORTNIGHTLY
ENGINEERING REVIEW
The voice of engineers

Islamabad launches campaign to curb theft of power

Though the theft of electricity in Pakistan has decreased in recent times but is still at a level that has forced Islamabad to establish a mechanism to check it in an appropriate way, as the prime minister believes the current economic scenario cannot bear the brunt of the menace swallowing billions of dollars.

Shehbaz Sharif set on the table with a whole team of people connected with power to ensure a concerted campaign that should be launched to stop power theft in the country.



The moot, held in the last day week of March had handed out strict directives to the authorities to take immediate disciplinary action against the officers besides awarding exemplary punishment for abetting the crime causing loss of billions of dollars.

Sharing data with the moot the prime minister said under the anti-theft campaign, since September 2023, Rs 57 billion have been recovered. A whole of the government approach was adopted during the campaign to stop the theft of electricity. Under the electricity anti-theft campaign, 45,777 people in Punjab, 1250 in Sindh, 5121 in Khyber Pakh¬tunkhwa and 181 were arrested in Balochistan.

The premier said it was their responsibility to create a stable system by taking measures like launching a campaign to stop electricity theft.

The present situation of the economy could not bear the problem of electricity theft, he added directing that a strategy should be formulated at the earliest for decreasing line losses and the upgradation of transmission lines.

He believes generation companies are a burden on the national exchequer and work should be started on their privatization at the earliest.

In the moot, it was decided that a comprehensive plan for solarization of tube wells in Baluchistan should be presented besides installing smart meters on transformers under the public-sector development

program. Feeder monitors would be deployed at the feeders which were causing huge losses.

The meeting was briefed that the areas with low rates of electricity theft would have less load-shedding.

An amendment was brought in section 462(O) of the Pakistan Penal Code through an ordinance to make electricity theft a cognizable offense. Due to the anti-theft campaign in September last year, the rate of electricity theft has seen a considerable drop.

Interestingly enough, the data on the theft presented in the moot shows that under the electricity anti-theft campaign, 45,777 people in Punjab, 1250 in Sindh, 5121 in Khyber Pakhtunkhwa, and 181 were arrested in Balochistan.

During the campaign, 350 personnel of distribution companies were suspended for their bad performance or abetment. -- ERMD

Pakistan Climate Action Plan 2025

3rd Pakistan Cables Children's Art Contest 2024 showcases creative ideas

The 3rd Pakistan Cables Children's Art 2024 was organized by Pakistan Cables recently.

The contest invited entries from the Company employees' children from two age groups between 6-11 years and 12 – 14 years old. This year the theme, Pakistan Climate Action Plan 2025, was selected to highlight the climate change issues and the priorities to combat the impact of climate change on the country.

Contestants attended a colorful prize distribution ceremony held at the TDF

Contd on page 8

Dr. Tahir Masood Ex-MD NESPAK conferred Civil Award

Dr. Tahir Masood, former Managing Director NESPAK, has been conferred Tamgha-i-Imtiaz in the field of engineering by the President of Pakistan. The investiture ceremony for the award was held on Pakistan Day, March 23, 2024, wherein Dr. Tahir Masood received the award from Punjab Governor Muhammad Baligh-ur-Rehman.

Dr. Tahir Masood remained the President and Managing Director of NESPAK from 2018 to 2023. He is an outstanding professional by any standard. During his career spanning over thirty-nine years, he has made significant contributions to diverse projects of vital importance in Pakistan and abroad. A diehard Civil Engineer by profession, Dr. Masood is well-versed in the various disciplines of engineering and carries a diverse work record of over three decades in Corporate Management, Project Management, Geotechnical, Hydro & Thermal Power Engineering, and Dams. During his illustrious career, he has worked on many mega projects of national and international importance such as:

1. 1223 MW CCPP Balloki Project
2. 1180 MW CCPP Bhikki Power Project
3. 660 MW Engro Thar Coal Fired Power Project
4. Sindh-Engro Coal Mining Project
5. Orange Line Metro Train Project
6. Tarbela 4th Extension Project
7. 1450 MW Ghazi Barotha Hydropower Project
8. Chashma Hydropower Project
9. Khanki Barrage Project
10. Bay Area Hazard Assessment after 1989 Earthquake California, U.S.A.

Under his leadership, NESPAK achieved significant progress and goals including securing a lead role in Joint Venture for consulting services for Mohmand Dam and Basha Dam projects. Given his professional excellence, outstanding commitment, and his role in the development of Pakistan for over thirty-nine years, Dr. Tahir Masood has been conferred the civil award. -- PR

Special Supplement on Engineering Universities & Institutions

My Dream University

Mehran is my whole life, find myself fit to lead in new industrial revolution: Dr. Tauha Hussain Ali

"Universities cannot be set up; they evolve through a process spanning over decades of effort and development of the people. MUET is my whole life beginning with being a lecturer to the position of Vice-Chancellor. Thus, I did not confront any challenge that a new head of the institution might have faced. "

I have been closely monitoring all vice-chancellors before me for being a member of their teams. I find myself relaxed while maintaining the continuity of policy and the advancement with changing times, says Dr. Tauha Hussain Ali, Vice Chancellor, Mehran University of Engineering & Technology (MUET), Jamshoro in a special interview with Engineering Review.

We are entering into Industry Revolution 4.0 and we are required to lead undergraduates to the times of this revolution I find myself fortunate to be settled in this position and lead it.

Leadership roles

Running the university with my style is better than following my predecessors' who put the system in place. I and my team fully understand the system and the prime objective is to improve the system.

Vision 2030 – 'RISE' is making a difference

We had a vision already. Maybe it was restricted to concepts only. What I, with my team, have done is to enshrine it keeping in view the most modern demands of the day, and have incorporated it into the system. It is making a difference—a feat of appreciation.

Salient features of 'RISE' (Research, Innovation, Sustainability, Entrepreneurship)

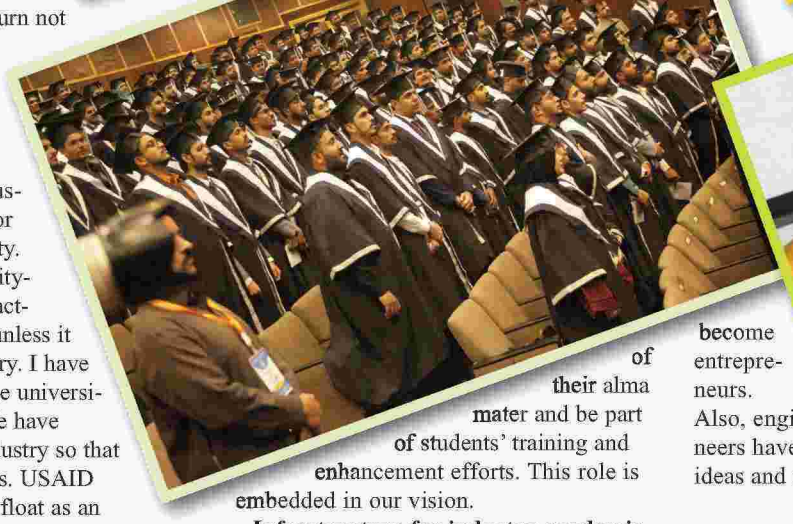
Vision 2030 is student-centric. We believe if the students are not content with the standard of education and the level of facilities and in return not agree to carry the brand name of the university then all our efforts will be in vain.

Liaison with industry

Collaboration with industry is a basic prerequisite for the identity of any university. No research, be it community-based, commercial, or impact-related, can bear any fruit unless it is in liaison with the industry. I have made endeavors to bring the university closer to the industry. We have opened ourselves to the industry so that we can solve their problems. USAID Water Center is just one to float as an example. Numerous national and international donors are now approaching the university to use the capacity and ability of the institution.

Role of Alumni and Vision 2030

We need the experience, capability, and competence of our alumni rather than their money. They must move forward to take care of their alma mater and be part of students' training and enhancement efforts. This role is embedded in our vision.



Infrastructure for industry-academia liaison

The concept of entrepreneurship is failing in practice in our universities and one of the major causes is the absence of an echo system for entrepreneurship. The system of education especially the syllabus and attendance etc. needs to be transformed so that the students are able to become entrepreneurs. Also, engineers have ideas and they must be equipped with the ability to sell them. They must either collaborate with the industry or with business universities. therefore, many things should be changed.

Engagement with industry turning fruitful

We are reviewing our curriculum keeping in mind the feedback of the industry we are in liaison with. We have sought their input as to what kind of changes should be made so that the students are ready to perform in the industry from the very onset. I think the present system of internships also needs to change and the students should go into the industry for a longer term {let's say 4 to 6 months} before completing their final years in the university; a few weeks period does not work.

Money matters

Universities have no way but to vie for sustainability. Things are moving in this direction at all levels—government, regulatory bodies, and universities. Regulatory bodies should allow the institutions to move towards commercialization linked with engineering education and the financial benefits of the university. For instance, MUET, Jamshoro has enough land to offer for setting up solar or wind parks. The industry may invest and give dividends to the university whose students can benefit through working with solar or wind power companies. Also, the universities can establish technology parks and the authorities can declare them tax-free zones. We have moved ahead keeping in view some good ideas of Sindh's investment board. We are in the advanced stage of talks with some companies. The Sindh government is extending a helping hand to the universities as regards the solarization of the universities.

Expanding academic side

We are running 26 programs through 18 departments. We have introduced 5 new programs during the last two years. These include AI and Cybersecurity and also technology programs. This is because our students pay attention to technology rather than engineering which seems to be shrinking over the years. --- **By Manzoor Shaikh**

Our universities are not succeeding in resolving local issues of society: Dr Valiudin

We see a rising demand around the world in the backdrop of emerging technologies and telecom, says VC, SSUET, Karachi in a special interview with ER

Dream University

Dreams are always there, they vary from person to person and are also coupled with societies so are the concepts of a dream university. Largely the role of universities is to impart knowledge, create it, and improve societies by its application. Every role is a comprehensive area of activities. University serves as a center where all people who have set themselves for such goals congregate for a concerted effort. This congregation leads you to achieve numerous levels of dreams that you see for any university.

My dream for Sir Syed University

I had set my goals once I joined this university. By the grace of God, we have achieved many parts of those goals like accreditation of programs, achieving KPIs in research programs, and drafting over 60 policies to create a conducive atmosphere in all areas. Each and everything is on our website to ensure transparency.

Shoulder to shoulder with the changing world

Covid 19 Pandemic taught us all. Now, we are pursuing a goal as to how to incorporate technology in all of our programs to enhance the level of learning. We were among 13 universities in terms of preparedness for online learning during the pandemic era. We do not compare ourselves with the rest of the world as we still lag far behind. We have to think collectively about how to take over 60 percent of our young population on board.

Are we failing to resolve local problems?

I feel our universities are not succeeding in resolving local issues of society. We are doing everything be it education, research, etc. but we are not addressing individual problems. Maybe we are referring to books written for different societies, research is not linked with local settings, and case studies that we use for business are also alien. We are not focusing on our problems. For instance, we {I mean all including academia, industry, and government} are still unable to solve the garbage problem in Karachi. Universities cannot work in isolation; students come from society and go back to society and work with industry and government. Unless we break the disconnect between us, we cannot succeed. Also, policies and their continuity are a must.

Inter-connectivity of universities

We {all universities} have been working in silos. Now people have begun realizing that without collective effort and connectivity, we cannot solve our problems. I can share that our university is in collaboration with numerous public as well as private universities in Pakistan. The biggest initiative in this regard is the National Idea Bank that we led taking along around 25 universities in Pakistan. Moreover, we are in collaboration with other universities in numerous programs.

Ideas Vs Reality

National Idea Bank served as a platform for interaction between the universities. It is an ongoing process but the benefit is that we are working collectively. In some programs, we are collaborating simultaneously with national and international universities. For instance, four Pakistani and three European universities are partners in a climate change program. Now we are working as collaborators rather than competitors.

Bottlenecks for implementation of projects

We need to change many things but they cannot be done with a single stroke. Things are changing wherever they can change gradually. We experienced it during our tenure at the National Idea Bank and we clinched results from the ideas that we implemented. We received every kind of support from all corners proving that the people are willing to support each other. We have finalized some projects with some other universities.

Engineering losing attraction

It is a reality. Not more than 50 percent of candidates appeared for admissions in engineering programs last year. Of course, it is not a good situation in a country like ours where the ratio of engineers should be bigger. There are multiple reasons for this situation. It will create a gap between supply and demand—a damage that we see. We see a rising demand around the world in the backdrop of emerging technologies and telecom. More and more young candidates are picking IT fields for the benefit of earning quickly. Maybe we are not able to convince the youth why engineering is necessary. They believe engineering has lost its scope. We have to work collectively.–

By Manzoor Shaikh

Employers do not invest in fresh graduates like their predecessors: Dr. Tariq Soomro

Our Capstone Program is well-grounded addressing real problems and the students under this program are linked with the same faculty, says Acting Rector, IoBM, Karachi

Dream University: Knowledge Vs Job

One can see it from two aspects. One, a university that any student desires to get enrolled in, and two, a university whose majority of graduates fill prestigious vacancies. Once upon a time, we would get education for knowledge and consciousness whereas today the objective is to get a good job. A university whose degree is believed to be a trump card for the job is the highest preference.

Now have a look at it yet from another two aspects. In some good universities, a student may fail to become an impactful graduate for society while an impactful graduate may be produced by a relatively lesser-known university.

Teaching style matters

All universities have the same course set in the curriculum by accreditation bodies in Pakistan. Then why the outcomes are different? Because the teaching styles vary from one teacher to another. I look at universities from three perspectives: faculty, facility, and locality—all three aspects have a great impact on the institution. Of them, faculty makes a great difference.

Faculty, Facility, Locality & IoBM

In terms of facility and locality, we are in the run and a plus point is our status of W Category—one among Pakistan's 9 business universities. We are improving our faculty and are adopting ways and means to reduce the burden on our faculty. But we are faced with an issue here. Our regulators want us to run degree programs and research simultaneously unlike universities abroad where one set of universities only run degree programs and the others offer research programs such as doctoral research. Our faculty in Pakistani universities are overloaded to accomplish tasks like teaching, research, and also activities linked with the functioning of the institution.

IoBM Academic Excellence Framework

To reduce the load on faculty, we have worked a lot and have made a framework, the very first in Pakistan to be put into practice in our institution. This framework passed through our BoG and got a nod. Now we want more faculty to implement such a framework but we are short of faculty and it is pretty difficult to acquire from the market.

Dearth of Faculty

Because of a bad economy, good faculty are moving abroad—a trend very much prevalent in Pakistan. So, it has created a dearth of faculty in the country. Pakistan's academia is losing its faculty

Cognitive measures

Do we recognize brain drain from our universities? Yes, we do and also the thought process is everywhere. We at our university are reviewing the salary structure and have given a 10 percent raise for the time being. Since we are an established institution, we are able to manage these things but the newer universities may face more problems.

IoBM & industry

Industry wants a finished product that can be put right to work from day one.

Today's employers do not invest in fresh graduates like their predecessors in the past. When I joined the industry, I did not know the language that was in use in the company. I knew seven languages as a programmer but the 8th language that I learned was from the employer.

Model of collaboration with industry

Around 70 percent of our visiting faculty is from the industry. Our Capstone Program is well-grounded addressing real problems and the students under this program are linked with the same faculty. Resultantly, most of the graduates are picked up by the companies where the faculty is coming from. Our Capstone Program comprises over one and a half thousand projects at the moment. We have earned a name in the market and you can find our alumni in every institution.

Imminent Challenge

Faculty retention is the major challenge at the moment. We are striving to address this challenge. Then there is yet another issue pertaining to reporting to regulatory bodies. After the 18th amendment, the Higher Education Commission (HEC) was devolved but the central commission was retained at the center. Now we are reporting to HEC Islamabad as well as HEC Sindh. They do not have any coordination between them. Moreover, similar issues are experienced with other regulatory bodies too.

A growing institution

We have planned to expand in two ways. One, we have decided to move to computing for its expanding demand in the market for the next ten years. We have recently approved new computing programs in our academic council. Two, We are establishing an IT Park where we shall offer short courses in IT to students who have done matriculation or intermediate. – **By Manzoor Shaikh**

Engg universities should learn to work with constrained resources: Dr. Samreen A. Hussain

VCs need to know financial management; I have been claiming DUET, Karachi is not a poor university at all, says VC in a special interview with ER

Dream University

I see it a bit differently. I think universities can help you make your dreams come true. They cannot be a dream institution. Since everybody has different experiences, every university cannot fulfill all expectations. Thus, one university may be a dream for you, and it may not be for the other. One cannot please everyone simultaneously. My interaction with several universities led me to believe that there are issues everywhere. So, any university cannot be a dream institution for all.

Getting rid of brands attached to universities

We should change the brands to which certain mindsets are attached. If we are able to do it, many things will change with time. We have to move in any university keeping in mind the dynamics of such an institution. When I was making BNB (Begum Nusrat Bhutto) University, my mindset was different rather than the one that I had at Arore University. You cannot make a single yardstick for all universities and with this approach, you cannot make any university.

Discipline & DUET

We have everything written in the University Act and statutes. When I started implementing them, it seemed as if I was doing something new. I am documenting things here. First, we needed to bring discipline to the university at all levels. The preference was to create a sense of security in the employees of the university and we ensured it by taking requisite measures.

Financial woes & self-sustainability

I inherited a financial deficit university. You need to know financial management and I have been claiming this university is not poor at all. What we need is proper management processes. I draw my strength from the collective wisdom; not from a one-man show. We {all universities} have ways and means to address the fiscal issues of the institutions. Firstly, we should be geared up to work with constrained resources and should think about self-sustainability. Initially, the Council of Common Interests (CCI) had decided that the universities would generate 60 percent of resources, the provinces would pool 25 percent, and the rest 15 percent would come from the federal government. When it remained inconclusive, it was said that the federal government would surely give 50 percent of the reckoning. But my university doesn't get even 6 percent of it. My resources are much bigger than the Fed's. I have pursued scientific management and thus reduced the quantum of amounts against the university. We are in a comfort zone now.

Changing scenario

Given the intake of batch 2023, there is a drastic change in the university. I am trying to move this university towards a true semester system. Earlier, it was like a mix of term and semester systems. Now rules are in place for the semester system. Now the student is fully aware of the requirements. They have choices now being in the same core. The fee structure is relaxed now, the fee for all programs made even and transport system is optional.

I packed up the Business Incubation Center in the university as we could not do it properly; we needed no optics. I took it to Sukkur and made the Center for Entrepreneurship and Management Technology. It is working there now. We replaced the incubation center with the Career Council and Placement Bureau (CCPB) which is my most vibrant organ. Because 60 percent of our graduates want to go abroad, 16 percent to industry, and the rest to entrepreneurship.

Academia-industry collaboration: the missing tools

Known names of the industry are coming to our university and credit goes to my predecessor also. I think what we miss is the presentation of the data. Companies like Schneider are doing recruitment tests here. I think we miss the marketing tool and there is a need to enhance the collaboration with the industry. We are in collaboration with Pakistan Railways on three projects. We are also in touch with PNRA.

Why final-year projects die down

The students do final-year projects just to acquire degrees from the university.

Empty Incubation centers

We have been unsuccessful in creating an echo system for business incubation centers in engineering universities. But still, some are progressing very well. If out of 400 universities, 30 have successful business incubation centers then it's not bad in the backdrop of our country. Successful incubation center exists in universities that have business programs whereas in engineering universities, undergraduates are not being trained for business and thus cannot make business models. We cannot teach them business rather than engineering. Yes, we can do it only if we adopt an interdisciplinary approach keeping in view the framework of engineering. – **By Manzoor Shaikh**

3rd Pakistan Cables Children's Art Contest 2024

Contd from page 1

Magnifiscience Centre, Karachi. The Chief Guest at the ceremony, , Mr. Faraz Maqsood Hamidi, a well-known creative leader of Pakistan's advertising industry, encouraged children to challenge the norms and never give up their creative pursuits. An esteemed panel of judges included renowned visual artist, Ms. Durriya Kazi, Ms. Bina Ali (Founder ARTEL) and, Mr. Naveed Shaikh, Project Manager, Sindh SDGs Unit, UNDP. This year the contest received 87 entries from six cities across Pakistan.

Speaking on the occasion, Ms. Bina Ali encouraged the children to continue using art as a form of expression and authenticity. Mr. Naveed Shaikh also appreciated the participants who expressed their vision on a difficult yet essential topic. An engaging storytelling session was conducted by the CEO of GOREAD, Ms. Nusser Saeed, which was enjoyed by everyone in the auditorium.

The event was widely attended by participants, parents, esteemed judges, and senior management of the Company. Winners were awarded special prizes and certificates alongside contestants who also received certificates, a storybook from Goread.pk and gift vouchers.

Pakistan Cables is an advocate of environmental conservation and through the art contest, it engages its employees and their families to support the cause. -- PR

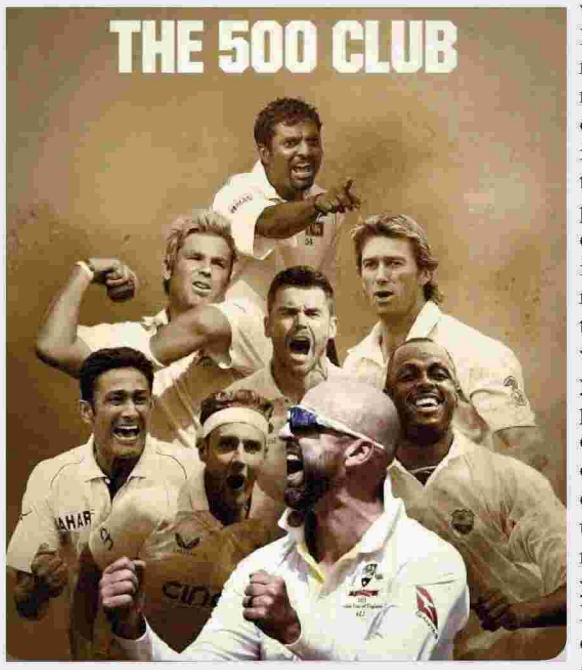
Sales Blog for Young Engineers and Entrepreneurs

The Five Hundred Club

Muhammad Tariq Haq | ESL

Rain or shine, the whole foundation of selling, in general, and industrial selling, in particular, is based upon quality interactions with the customers, consultants etc.

this article, author tries to draw an analogy between salespeople and the world's best bowlers! In the world of cricket, the elite "500 Club" is reserved for the best bowlers who have displayed exceptional skill, dedication, and perseverance by taking five hundred or more wickets in test matches. These legendary bowlers, such as Murlitharan, Shane Warne, James Anderson, Kumble and Ashwin etc, did not achieve this remarkable feat without immense effort. They had to bowl their hearts out, facing challenging conditions and opponents, with an average of fifty or more balls bowled per wicket. Yes, they faced rejection and dejection; were attacked and assaulted, punished and plundered more than fifty times for each of their successes! Just like these cricketing champions, sales engineers selling highly priced capital goods must be willing to put in the hard work and dedication required to succeed. They should draw inspiration from the relentless pursuit of excellence exhibited by the members of the 500 Club. Each successful sale is akin to taking a prized wicket, requiring meticulous planning, preparation and perseverance in the face of challenges.Sales engineers, much like bowlers in cricket, must be prepared to toil in various conditions - from hard, harsh and hostile client meetings to challenging negotiations in the boardroom. Just as the bowlers honed their



skills through rigorous practice sessions and hundreds of grade matches, sales engineers must continuously refine their sales techniques through training, industry knowledge, and hands-on experience in the field.The analogy between the 500 Club and sales engineering extends to the concept of strike rate. Just as bowlers have a strike rate based on the number of balls bowled per wicket, sales engineers have a strike rate based on the number of client interactions needed to secure a successful deal. Like the best bowlers who achieve success after fifty or more deliveries, sales professionals may need to make similar number of visits and build relationships with clients before closing a sale. From another angle , they may need to visit one customer fifty or more times to receive his order.The key takeaway for aspiring sales engineers is the importance of patience, perseverance, preparation and persistence. Success in industrial sales, like reaching the 500 Club in cricket, requires unwavering determination, strategic planning, and a willingness to put in the hard yards. Sales engineers must be prepared to face rejection, overcome obstacles, and stay focused on their goals, just like the legendary bowlers who never gave up.So, to all the young sales engineers out there, gear up, tighten your belts, and embrace the challenges of a sales engineering career with the same passion and dedication as the members of the 500 Club. The road to success may be long and challenging, tedious and torturous but the rewards and opportunities that await at the top are truly worth the effort. The champion in you deserves the reward just as each of the five hundred club members deserves their ascent to glory and immortality!

Pakistan Cables wins Gold Award for 'Women Empowerment, Gender Equality'

Pakistan Cables won the Gold Award at the 'Women Empowerment & Gender Equality' recognition Awards 2024 ceremony organized by the Employers' Federation of Pakistan.

The award was presented by

the Federal Secretary of the Ministry of Overseas Pakistanis and Human Resource Department, Dr. Arshad Mahmood to Mr. Aadil Riaz, Director, Human Resources, Pakistan Cables Ltd.

Pakistan Cables is committed to championing gender equality and female empowerment in the industry. . As part of a focus DEI strategy, the Company actively fosters a diverse organizational culture through various internal and external initiatives. "Pakistan Cables is playing a pioneering role to promote female empowerment in the engineering sector. We are an equal opportunity employer that challenges stereotypes in the industry and we continually invest in a diverse workforce. Our internal policies and practices are aligned to promote inclusion in all aspects of business. We have also made social investments through external partnerships to promote women in STEM-based subjects and aim to inspire others to follow in Pakistan.", said Fahd K. Chinoy, CEO of Pakistan Cables Ltd.

The award is an acknowledgment that underscores the Company's unwavering dedication to diversity, equity, and inclusion internally and also pioneering best business practices in the industry.

Founded in 1953, Pakistan Cables is the premiere and most reputable cable manufacturer in Pakistan. Being the only wire and cable manufacturer listed on the PSX since 1955, it is also a member company of the Amir S. Chinoy group. The company has the largest geographical footprint in Pakistan with a presence in over 200 cities. It is ISO 9001:2015, ISO 14001:2015, and OHSAS 18001:2007 certified, and various cable types tested by KEMA, Netherlands. -- PR

Technology Management in a Globalized World: Challenges and Opportunities

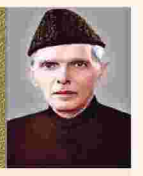
Engr. Dr. Muhammad Nawaz Iqbal

In today's globalized world, technology management faces a plethora of opportunities and problems as businesses negotiate the difficulties of doing business in a dynamic, interconnected global context. Across-border management of varied technologies is one of the main issues. Organizations operating in international environments frequently struggle to integrate and harmonize disparate technology stacks while taking regulatory framework compliance, compatibility, and interoperability into account. Global technology management is further complicated by the speed at which new technologies are developing. Businesses need to constantly evaluate new technologies, comprehend the potential effects they may have, and strategically implement innovations that support their goals. It is difficult for enterprises to strike a balance between the necessity of innovation and the requirement for stability as they work to minimize the risks related to technological disruptions and maintain their competitiveness. Managing technology globally also means tackling cybersecurity issues on a large scale. Organizations are more exposed to cyber dangers, such as sophisticated cyber-attacks and data breaches, as a result of expanding their technology footprint internationally. Robust rules, proactive threat detection techniques, and ongoing employee training are necessary for managing cyber security threats in a global setting and enhancing the organization's overall cyber resilience.

Global technology management requires careful attention to cultural factors. The cultural quirks that affect how technology is adopted, used, and accepted must be understood and navigated by organizations. Optimal implementation of technology in a multinational setting requires modifying management procedures to accommodate varied work styles and customizing technological solutions to suit cultural preferences. One of the major challenges in global technology management boils down to guaranteeing regulatory compliance across jurisdictions. Businesses have to manage a confusing terrain of conflicting privacy rules, data protection statutes, and industry-specific mandates. This necessitates the adoption of strong compliance procedures to reduce legal risks and a thorough awareness of the legal frameworks in each operating region. The globalization of technology management also creates new chances for collaborations and strategic cooperation. Global networks can be used by organizations to collaborate on R&D projects, share technology resources, and access talent pools. Forming strategic alliances with foreign partners can boost innovation, quicken the acceptance of new technologies, and aid in the expansion of a company as a whole. Recruiting and retaining people requires a sophisticated strategy that is driven by global technology management. Companies need to create teams that are geographically distributed and varied while still promoting an inclusive and cooperative work environment. Understanding and adjusting to diverse employment practices, cultural norms, and career goals is essential to luring and keeping top talent across international borders.

Networked supply chains are an essential component of international technology management. Global sourcing and distribution of hardware, software, and other technological components must be managed by organizations. This includes maximizing the logistics of the supply chain, reducing the risks brought on by natural disasters or geopolitical events, and making sure that technological resources are distributed in a reliable and effective manner. Organizations have difficulties with ethical issues in technology management in a worldwide environment. Diverse cultural viewpoints on matters like data privacy, the morality of artificial intelligence, and responsible technology use can give rise to ethical quandaries. Maintaining open communication with stakeholders, adhering to ethical norms, and being transparent are all necessary for navigating these ethical issues. Sustainability issues related to the environment are another aspect of global technology management. Businesses need to evaluate and reduce the negative effects of their technological systems on the environment, including carbon emissions, energy use, and electronic waste. Adopting environmentally conscious technology management techniques supports worldwide initiatives to create a more sustainable and greener future while also encouraging environmental responsibility. For worldwide operations to be consistent and effective, technology management procedures must be standardized. The establishment of standardized protocols, documentation, and standard procedures promotes smooth collaboration between heterogeneous teams, improves communication, and expedites the global deployment of technology initiatives.

In today's globalized world, managing technology demands a thorough and calculated strategy in order to take advantage of the opportunities and overcome the obstacles given by a dynamic and interconnected environment. In order to fully realize the potential of strategic partnership, recruitment of talent, and sustainable practices, organizations must strike a balance between the complexities of varied technologies, cybersecurity concerns, cultural nuances, and regulatory compliance. One of the most important factors in determining an organization's success in the ever-changing digital age is its ability to manage technology effectively in a global setting.■



فرمانِ قائداعظمؒ

ایمان ، اتحاد ، تنظیم

آزادی اور قربانی

پس جہاں تک ممکن ہو ہمیں اپنے حریفوں کو سمجھانے کے لئے عقل اور دلیل سے کام لینا چاہیے۔ میں جانتا ہوں کہ دلیل اور عقل ہمیشہ ہی کامیاب نہیں ہوتیں لیکن ہمیں اپنی طرف سے پوری کوششیں کرنی چاہیئے۔ جو لوگ فی الحال لاہور کی قرارداد پاکستان کے خلاف ہیں، ہمیں ان کے دل میں غیر ضروری تلخی پیدا نہیں کرنی چاہیے۔ آخر ہمیں ضرورت ہی کیا ہے؟ مجھے پورا پورا یقین ہے کہ ہمارے یہی حریف ایک نہ ایک دن محسوس کر لیں گے کہ ہندوستان کے انتہائی پیچیدہ مسئلے کا واحد اور بہترین حل قیام پاکستان ہے کہ جس کے قیام کی نظیر پوری دنیا کی تاریخ میں نہیں ملتی۔

(پنجاب مسلم سٹوڈنٹس فیڈریشن۔2 مارچ 1941ء)

آوازِ اقبال

اقبال کا ترانہ بانگِ درا ہے گویا
ہوتا ہے جادہ پیما پھر کارواں ہمارا

آہ! یہ دست جو اے گل رنگیں نہیں
تو شناسائے خراش عقدۂ مشکل نہیں
کس طرح تجھ کو یہ سمجھاؤں کہ میں گل چیں نہیں
اے گل رنگیں ترے پہلو میں شاید دل نہیں
کام مجھ کو دیدۂ حکمت کے الجھیڑوں سے کیا
زیب محفل ہے شریک شورش محفل نہیں
دیدۂ بلبل سے میں کرتا ہوں نظارہ تر
یہ فراغت بزم ہستی میں مجھے حاصل نہیں
اس چمن میں، میں سراپا سوز و ساز آرزو
اور تیری زندگانی بے گداز آرزو
توڑ لینا شاخ سے تجھ کو مرا آئیں نہیں
یہ نظر غیر از نگاہ چشم صورت میں نہیں

آئی ایم ایف کی شرائط کا حل، تعمیراتی اور آئی ٹی صنعت کا فروغ

پاکستان کو ایک مرتبہ پھر آئی ایم ایف سے ایک اعشاریہ ایک ارب ڈالر کا قرض مل رہا ہے جس کے بعد کسی حد تک معاشی استحکام ہوگا تاہم اس قرض کے نتائج میں ہمیشہ کی طرح شدید مہنگائی اور مشکلات ہیں جن کا براہ راست اثر پاکستانی عوام پر ہوگا۔ یہ حقیقت ہے کہ بین الاقوامی سرمایہ کاری کیلئے پاکستان جیسے ممالک کو آئی ایم ایف اور عالمی بینک جیسے اداروں کی گارنٹی درکار ہوتی ہے کیونکہ کوئی بھی سرمایہ کار کسی بھی جگہ سرمایہ کاری سے پہلے یہ دیکھتا ہے کہ اس کے سرمائے کی حفاظت اور اسے فوائد کیا ہونگے۔ نئی حکومت نئی نہیں بلکہ نگراں سیٹ اپ کا ہی تسلسل ہے اس لئے یہ کہنا غلط ہوگا کہ نئی حکومت کو معاملات سمجھنے میں وقت لگے گا۔ یہ پہلی مرتبہ نہیں کہ پاکستان آئی ایم ایف کے قرض پروگرام میں جا رہا ہے بلکہ یہ کہنا غلط نہ ہوگا کہ دنیا کے تقریباً سب ہی ممالک قرض لیتے بھی ہیں اور واپس بھی کرتے ہیں آئی ایم ایف کا قیام انیس سو چوالیس میں جب عمل میں آیا تھا تب دوسری جنگ عظیم ختم ہوئی تھی اس وقت یہ طے پایا تھا کہ آئی ایم ایف کے رکن ممالک ہی نہیں دیگر کو بھی جب معاشی مشکلات کا سامنا ہوگا تو ان کی مدد کی جائے گی۔ اس مدد میں معاشی اور سیاسی استحکام، صنعتی ترقی اور خود کفالت شامل ہے۔ اس وقت آئی ایم ایف کے ایک سو نوے رکن ممالک ہیں جو اپنی ضرورت کے مطابق قرض لیتے رہتے ہیں قرض لینا برا نہیں لیکن قرض کے مقاصد کا طے ہوگا ضروری ہے۔ پاکستان ایک زرعی ملک ہے جبکہ پاکستان کی ٹیکسٹائل صنعت ایک وقت میں دنیا پر چھا چکی ہے لیکن سیاسی عدم برداشت، غیر مستحکم حکومتوں اور دہشتگردی جیسے عفریت نے پاکستان کی معاشی ترقی کو بریک لگا دی۔ سوال یہ ہے کہ کیا پاکستان بس یہی ماتم کرتا رہے گا کہ مذکورہ بالا وجوہات کی بناء پر ہم ترقی نہیں کر سکے یا کچھ عملی اقدامات بھی کئے جائیں گے۔

موجودہ حکومت کو تعمیراتی صنعت کے فروغ کا بڑا تجربہ ہے۔ ملک میں موٹروے جیسے پراجیکٹس اسی حکومت کے قائد کی انفرادیت ہے اس لئے یہ امید کی جاسکتی ہے کہ اگر موجود حکومت تعمیراتی صنعت کو فروغ دے تو ملک میں تعمیراتی صنعت سے جڑی دیگر بہت سی صنعتوں کی مشینیں بھی چل پڑیں گی۔ مثال کے طور پر جب ایک عمارت تعمیر ہوتی ہے تو سریا، سیمنٹ، اینٹ، بجری کے علاوہ بجلی کے آلات، وائرنگ، پلمبرنگ سے متعلق شعبہ جات سمیت بہت سے دیگر شعبے بھی چل پڑتے ہیں جن کے ذریعے نہ صرف روزگار کے مواقع پیدا ہوتے ہیں بلکہ پیسہ بھی گردش کرنے لگتا ہے۔ ایک صنعت کا دوسری صنعت سے تعلق ہوتا ہے جس کی وجہ سے بہت تیزی سے معاشی سرگرمی شروع ہو جاتی ہے۔ انڈسٹریز میں نئے سامان بننے لگتے ہیں مشینیں چل پڑتی ہیں جن کے چلنے میں بھی متعدد انجینئرنگ کے شعبہ جات اپنا کردار ادا کرتے ہیں اس لئے معاشی سرگرمی کا ایک مکمل سائیکل مکمل ہوتا ہے جو ایک عام آدمی سے لے کر حکومتی خزانے تک کو مدد فراہم کرتا ہے۔

زراعت کے شعبے میں پاکستان کے پاس بہت پوٹینشل ہے پاکستان اس شعبے کو جدید ٹیکنالوجی کی مدد سے مزید بہتر بنا کر اپنی زرعی زمین سے بہتر پیداوار حاصل کر سکتا ہے۔ اس حوالے سے ترقیاتی ممالک میں زراعت کے لئے اٹھائے گئے اقدامات کا مطالعہ کیا جاسکتا ہے۔ پڑوسی ملک بھارت نے اپنی زرعی زمین کی پیداوار بڑھانے کیلئے بہتر حکمت عملی اپنائی ہے۔ پاکستان کو غذائی قلت کا بھی شدید سامنا رہتا ہے ملک میں سبزی اور دالوں کی پیداوار بھی کم ہو رہی ہیں جس کی وجہ سے کراچی اور لاہور جیسے شہروں میں بھی مختلف ایسی اشیاء کی کمی ہو جاتی ہے جو ہمارے ہاں وافر مقدار میں ہونی چاہیں۔ اسی طرح آئی ٹی کے شعبہ میں بہت کام کی گنجائش ہے۔ اس وقت دنیا بھر میں آئی ٹی کی مانگ ہے اور اس میں روزگار کے بھی وسیع مواقع ہیں بہتر ہوگا کہ اگر حکومت وقت اس جانب خصوصی توجہ دے۔ اس کیلئے ضروری ہے کہ انجینئرنگ جامعات میں بہتر سہولتیں فراہم کرے کیونکہ بیشتر سرکاری جامعات میں دی جانے والی تعلیم موجودہ دور کے تقاضوں کے مطابق نہیں ہے۔ پاکستان میں ساٹھ فیصد سے زائد نوجوانوں پر مشتمل آبادی ہے، اگر حکومت انہیں ہنرمند بنانے پر توجہ دے تو یہی نوجوان ملک کے تابناک مستقبل کے ضامن ہو سکتے ہیں۔ آئی ٹی اور ٹیکسٹائل کی صنعت کو بھرپور توجہ دینے کی ضرورت ہے۔

پاکستان میں آئی ٹی ماہرین کی شدید کمی ہے جس کی وجہ سے اکثر اداروں میں ملازمتیں ہونے کے باوجود بہتر لوگ نہیں ملتے۔ بہتر ہوگا کہ حکومت اس جانب توجہ دیتے ہوئے نوجوانوں کو باصلاحیت بنائے اور آئی ٹی کے شعبوں میں مفت کورسز متعارف کرائے جبکہ داخلوں میں بھی آسانی ہو۔ فیصل آباد سے سیکڑوں ٹیکسٹائل فیکٹریوں کے بنگلہ دیش منتقل ہونے کے بعد ہزاروں افراد بیروزگار ہو گئے۔ یہ وہ لوگ تھے جو اپنے کام کے ماہر تھے محض توانائی کے بحران کی وجہ سے فیکٹریاں بند ہوتی گئیں نواز شریف کے پہلے دور حکومت میں ملک میں توانائی کے مسائل پر کافی حد تک قابو پا لیا گیا تھا اس لئے امید کی جاسکتی ہے کہ اس مرتبہ بھی اس مسئلے پر خاص توجہ دی جائے گی جس کے بعد ٹیکسٹائل سمیت دیگر صنعتی مشینری بھی دوبارہ سے بہتر انداز میں چلنے لگے گی اور جب صنعتی پہیہ چلتا ہے کہ ملکی معیشت بہتر ہوتی ہے۔

آئی ایم ایف کی شرائط میں سخت ٹیکس پالیسی اور چھوٹے کاروبار کے ذریعے بھی پیسہ کی کلکشن ہے جبکہ تعمیراتی صنعت پر بھی سخت ٹیکس پالیسی کی شرط رکھی گئی ہے۔ یہ حقیقت ہے کہ گزشتہ دور حکومت میں رئیل اسٹیٹ کے کاروبار میں تیزی آئی تاہم ملک کی ترقی رئیل اسٹیٹ نہیں بلکہ صنعتی پہیہ چلنے سے ہوتی ہے۔ اس لیے ضروری ہے کہ جہاں رئیل اسٹیٹ کو ڈاکومنٹ کیا جائے وہیں تعمیراتی شعبے کو بھی بہتر مراعات کے ساتھ مانیٹرنگ کا درست طریقہ اپنا کر ملک کی بہتری کیلئے استعمال کیا جائے۔ ملک میں سول انجینئرز تعلیم مکمل کرنے کے بعد بیرون ملک جا کر روزگار حاصل کر رہے ہیں جو اس لحاظ سے تو بہتر ہو سکتا ہے کہ ملک کو زرمبادلہ کی صورت میں پیسہ مل رہا ہے تاہم اچھے اذہان کا ملک سے چلے جانا نیک شگون نہیں۔ اگر حکومت وقت تعمیراتی صنعت کو فروغ دیتی ہے تو یہ سول انجینئرز نہ صرف اپنے ملک میں روزگار کو ترجیح دینگے بلکہ بیرون ملک سے سرمایہ کار بھی اس شعبے میں دلچسپی ظاہر کرینگے۔ کراچی کو معاشی حب کہا جاتا ہے، ایک پورٹ سٹی ہونے کی وجہ سے یہاں کی معاشی سرگرمیاں پورے ملک کی مدد کرتی ہیں، جس طرح دبئی اور سنگاپور وغیرہ میں ہائی رائز بلڈنگز کی تعمیرات سے ان ممالک میں سول انجینئرز سمیت دیگر شعبہ جات کے لوگوں کو روزگار ملے جبکہ ان عمارتوں میں قائم ہونے والے بین الاقوامی اور ملکی فرموں کے دفاتر کے ذریعے جس طرح پیسہ گردش کرنے لگا یہی کچھ یہاں کراچی میں ہو سکتا ہے۔ ■

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ٹیکنالوجی کو دیر سے اپنانے کی عادت قوموں کو نقصان دیتی ہے، مقررین

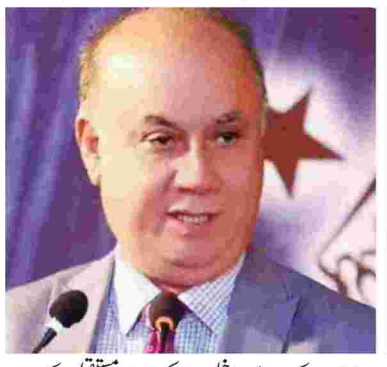
ہماری ترقی کے میدان میں پیچھے رہنے کی بڑی وجہ تعلیم و تحقیق کے میدان اغیار کے حوالے کرنا ہے، وی سی جامعہ کراچی ڈاکٹر خالد عراقی

نوجوانوں کو مستقبل کیلیے اپنے آپ کو تیار کرنا ہی ہوگا، پروفیسر ڈاکٹر زبیر، ڈاکٹر عزیز الرحمٰن، پروفیسر ڈاکٹر عبدالحئی و دیگر کا خطاب

جامعہ کراچی کے وائس چانسلر پروفیسر ڈاکٹر خالد محمود عراقی نے کہا کہ علم کسی کی میراث نہیں ہے، علم تو مومن کی کھوئی ہوئی متاع ہے اسے جہاں سے اچھی بات ملے اسے قبول کرنا چاہیے، چیٹ جی پی ٹی اور مصنوعی ذہانت کے دیگر ٹولز سے ہمیں بھاگنا نہیں ہے، شروع میں ہم اسے نظر انداز اور اپنانے سے گریز کرتے ہیں اور پھر ہم اس کو اس وقت اپناتے ہیں جب دنیا اس میں بہت آگے نکل جاتی ہے، ٹیکنالوجی کو دیر سے اپنانے کی عادت قوموں کو نقصان دیتی ہے اگر آپ تاریخ دیکھیں تو دنیا بھر کی ترقی یافتہ قومیں مسلمانوں کی تحقیقات پڑھ کر اور اس سے استفادہ کر کے تاریک دور سے باہر آئی ہیں، ہماری ترقی کے میدان میں پیچھے رہنے کی بڑی وجہ تعلیم و تحقیق کے میدان اغیار کے حوالے کرنا ہے، ان خیالات کا اظہار انھوں نے سیرت چیئر جامعہ کراچی کے زیر اہتمام آڈیو ویژول سینٹر جامعہ کراچی میں منعقدہ سیمینار بعنوان ''سیرت طیبہ کی رہنمائی میں ملازمت اور کاروبار کے مواقع پر مصنوعی ذہانت کے اثرات سے خطاب کرتے ہوئے کیا۔

ڈاکٹر خالد عراقی نے مزید کہا کہ موجودہ دور کے مربوط اقدامات کرنے کی ضرورت ہے۔

محمد علی جناح یونیورسٹی کے وائس چانسلر پروفیسر ڈاکٹر زبیر احمد شیخ نے اپنے کلیدی خطاب میں کہا کہ ہم مصنوعی



ذہانت کے دور میں داخل ہو چکے ہیں اور مستقبل کے چیلنجز سے نبرد آزما ہونے کے لیے ہمیں ان چیزوں کو سیکھنا ہوگا، ڈائریکٹر سیرت چیئر جامعہ کراچی ڈاکٹر عزیز الرحمٰن سیفی نے خطبہ استقبالیہ پیش کرتے ہوئے سیمینار کے اغراض و مقاصد پر روشنی ڈالی اور اس بات کی نشاندہی کی کہ تمام مخلوق کو رزق پہنچانا اللہ تعالی نے خود اپنے ذمہ لیا ہے، جامعات کا مقصد اعلیٰ تعلیم اور تحقیق

کے یکساں مواقع فراہم کرنا ہے، سیرت طیبہ سے ہمیں یہ بات پتہ چلتی ہے کہ اسلام نے اس بات کو پسند نہیں کیا کہ انسان اپنے ذرائع معاش خود تلاش کرنے کے بجائے کسی پر بوجھ بن جائے، اسلام بہت ترقی یافتہ مذہب ہے، اسلام نے کچھ قیود و ضوابط کے ساتھ سائنسی ترقی کی کبھی نفی نہیں کی ہے۔

این ای ڈی یونیورسٹی کے پروفیسر ڈاکٹر عبدالحئی مدنی نے اپنے خطاب میں کہا کہ اللہ تعالی پر بھروسہ رکھیں اور اپنی محنت جاری رکھیں مصنوعی ذہانت کے دور میں کسی کی نوکری ختم نہیں ہوگی، لیکن آپ کو مستقبل کیلیے اپنے آپ کو تیار ضرور کرنا ہوگا، سیمینار میں لیاری یونیورسٹی کے وائس چانسلر پروفیسر ڈاکٹر اختر بلوچ، رئیس کلیہ معارف اسلامیہ جامعہ کراچی پروفیسر ڈاکٹر زاہد علی زاہدی، رئیس کلی فنون و سماجی علوم جامعہ کراچی کراچی پروفیسر ڈاکٹر شائستہ تبسم، شعبہ اصول الدین، تاریخ اسلام جامعہ کراچی کے اساتذہ، سندھ کے کالجز کی نمائندہ تنظیم سپلا کراچی ریجن کے نمائندوں و دیگر نے شرکت کی، سیمینار کے اختتام پر سیمینار کو آرڈینیٹر پروفیسر ڈاکٹر عبدالرزاق شہزاد سیالوی نے کلمات تشکر ادا کیے۔■

کاٹھور تا سرجانی گیس لائن منصوبہ، عمران منیار نے سنگ بنیاد رکھ دیا

24 انچ قطر کی 31 کلومیٹر لائن پر 5.1 ارب روپے لاگت، منصوبہ جون 2024 تک مکمل ہوگا

سائٹ امیریا اور جب ٹاؤن میں گیس فراہمی بہتر بنانے میں مدد ملے گی، ترجمان ایس جی سی کراچی

سوئی سدرن گیس کمپنی کے منیجنگ ڈائریکٹر عمران نیار نے ویسٹرن ریجن کو گیس کی فراہمی کے لیے سیلز میٹر اسٹیشن (ایس ایم ایس) کاٹھور سے ایس ایم ایس سرجانی تک 24 انچ 31، کلومیٹر گیس پائپ لائن منصوبے کا سنگ بنیاد رکھ دیا، منصوبے سے کم پریشر کے مسائل کو حل کرنے، سائٹ ایریا اور جب ٹاؤن میں گیس کی فراہمی ایل این جی کو صارفین تک پہنچانے کے لیے بھی

بہتر بنانے میں مدد ملے گی، جبکہ یہ منصوبہ آر فائدہ مند ثابت ہوگا، منصوبہ 5.1 بلین روپے کی لاگت سے جون 2024 تک مکمل کر لیا جائے گا، سنگ بنیاد کی تقریب میں ڈی ایم ڈی آپریشنز، اے ایس جی ایم ٹیکنیکل سروسز)، اے ایس جی ایم (ٹرانسمیشن)، و دیگر حکام نے شرکت کی۔■

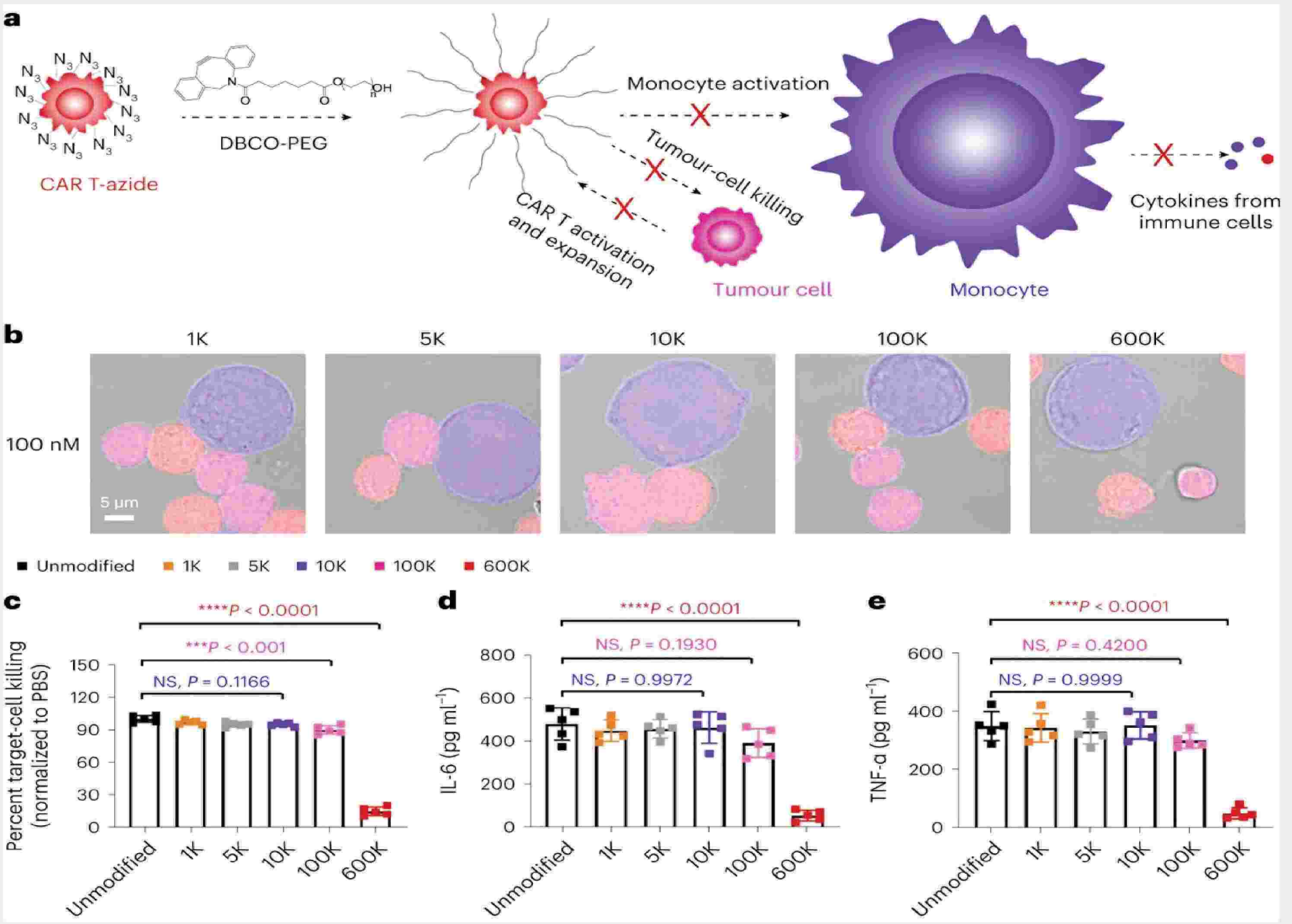
کراچی کے کنٹریکٹروں کے ساتھ امتیازی سلوک بند کیا جائے۔ نعیم کاظمی، اسلم مغل

جمہوری حکومت کے ساتھ ہر ممکن تعاون کیا جائے گا کنٹریکٹر رہنما

کنٹریکٹر ایسوسی ایشن پاکستان سندھ کے وائس چیئرمین نعیم کاظمی اور ترجمان اسلم مغل نے ایجوکیشن ورکس ڈیپارٹمنٹ میں ایس آر بی کی اکٹوتی پر امتیاز سلوک پر تشویش کا اظہار کرتے ہوئے کہا ہے کراچی میں ایجوکیشن ورکس ڈیپارٹمنٹ میں کنٹریکٹرز کے بلوں سے 9 فیصد اور چودہ فیصد سروس ٹیکس کا ٹا جا رہا ہے جبکہ تہہ شدہ پالیسی کے مطابق پورے سندھ میں حکومتی کاموں سے 5 فیصد منہا کرنا مقرر ہے اپنے ایک بیان میں کنٹریکٹر ایسوسی ایشن کے رہنماؤں نے کہا کہ پورے سندھ میں 5 فیصد ایس آر بی کٹوتی کی جا رہی ہے ایجوکیشن ورکس ڈیپارٹمنٹ نے کراچی میں یہ کٹوتی 9 اور 11 فیصد تک کر دی گئی ہے جو بلا جواز اور انصاف کے منافی ہے۔

کنٹریکٹر رہنماؤں نے کہا کہ ایک ہی صوبہ میں دو قانون سمجھ سے بالاتر ہے۔ وزیر اعلیٰ سندھ اس مسئلے پر خصوصی توجہ دے، اور اس امتیاز کو ختم کیا جائے۔ انہوں نے کہا ایسا لگتا ہے کہ بعض قوتیں عوامی حکومت کے خلاف سازش کے طور پر صوبہ اور خاص طور پر کراچی میں افراتفری پھیلانے کی کوشش کر رہی ہیں یہ کنٹریکٹروں کو پریشان کرنے کے ساتھ جمہوری حکومت کے خلاف بھی سازش لگتی ہے کہ کنٹریکٹروں کو اتنا تنگ کیا جائے کہ شہر میں ترقی کا عمل ہی رک جائے۔ انہوں نے کہا ہم اپنی منتخب حکومت کے ساتھ ہر ممکن تعاون کے لیے کمر بستہ ہیں اور ہر سازش کو بے نقاب کرتے رہینگے، ہم سمجھتے ہیں کہ یہ ہماری حکومت ہے اور ہمارے مسائل کو ترجیح اول کے طور پر حل کیا جائے گا۔ انہوں نے امید ظاہر کی کہ وزیر اعلی سندھ سید مراد علی شاہ اس مسئلے پر خصوصی توجہ دیں گے۔■

Turning back the clock on cancer cells to offer new treatment paradigm



St. Jude Children's Research Hospital scientists reversed an aggressive cancer, reverting malignant cells towards a more normal state. Rhabdoid tumors are an aggressive cancer which is missing a key tumor suppressor protein.

Findings showed that with the missing tumor suppressor, deleting or degrading the quality control protein DCAF5 reversed the cancer cell state. These results suggest a new approach to curing cancer -- returning cancerous cells to an earlier, more normal state rather than killing cancer cells with toxic therapies -- may be possible. The results were published today in Nature.

"Rather than making a toxic event that kills rhabdoid cancer, we were able to reverse the cancer state by returning the cells toward normal," said senior author Charles W.M. Roberts, MD, PhD, Executive Vice President and St. Jude Comprehensive Cancer Center director. "This approach would be ideal, especially if this paradigm could also be applied to other cancers."

"We found a dependency which actually reverses the cancer state," said first author Sandi Radko-Juettner, PhD, a former St. Jude Graduate School of Biomedical Sciences student, now a Research Program Manager for the Hematological Malignancies Program at St. Jude. "Standard cancer therapies work by causing toxicities that also damage healthy cells in the body. Here, it appears that we're instead fixing the problem caused by the loss of a tumor suppressor in this rhabdoid cancer."

Drugging the un-targetable

In many cancers, there is no easily druggable target. Often, these cancers are caused by a missing tumor suppressor protein, so there is nothing to target directly as the protein is missing. Loss of tumor suppressors is much more common than a protein gaining the ability to drive cancer. Consequently, finding a way to intervene therapeutically in these tumors is a high priority. The researchers were looking for a way to treat an aggressive set of cancers caused by the loss of the tumor suppressor protein SMARCB1 when they found a new approach to treatment.

The St. Jude group found a little-studied protein, DCAF5, was essential to rhabdoid tumors missing SMARCB1. Initially, they identified DCAF5 as a target, using the Dependency Map (DepMap) portal, a database of cancer cell lines and the genes critical for their growth. DCAF5 was a top dependency in rhabdoid tumors. After the initial finding, the scientists genetically deleted or chemically degraded DCAF5. The cancer cells reverted to a non-cancerous state, persisting even in a long-term mouse model.

"We saw a spectacular response," Roberts said. "The tumors melted away."

Removing quality control to reverse cancer

Normally, SMARCB1 is an essential component of a larger chromatin-regulating complex of proteins called the SWI/SNF complex. Unexpectedly, the study found that in the absence of SMARCB1, DCAF5 recognizes SWI/SNF as abnormal and destroys the complex. When DCAF5 degrades them, the researchers showed that SWI/SNF re-forms and maintains its ability to open chromatin and regulate gene expression. While the SWI/SNF activity level in the absence of SMARCB1 was to a lesser extent than usual, it was nonetheless sufficient to reverse the cancer state fully.

"DCAF5 is doing a quality control check to ensure that these chromatin machines are built well," Roberts said. "Think of a factory assembling a machine. You need quality checks to examine and find faults and to pull it off the line if it doesn't meet standards. DCAF5 is doing such quality assessments for the assembly of SWI/SNF complexes, telling the cell to get rid of complexes if SMARCB1 is absent."

"The mutation of SMARCB1 shuts off gene programs that prevent cancer. By targeting DCAF5, we're turning those gene programs back on," Radko-Juettner said. "We're reversing the cancer state because the cell is becoming more 'normal' when these complexes aren't targeted for destruction by DCAF5." -- SD

Engineering household robots to have a little common sense

From wiping up spills to serving up food, robots are being taught to carry out increasingly complicated household tasks. Many such home-bot trainees are learning through imitation; they are programmed to copy the motions that a human physically guides them through.

It turns out that robots are excellent mimics. But unless engineers also program them to adjust to every possible bump and nudge, robots don't necessarily know how to handle these situations, short of starting their task from the top.

Now MIT engineers are aiming to give robots a bit of common sense when faced with situations that push them off their trained path. They've developed a method that connects robot motion data with the "common sense knowledge" of large language models, or LLMs.

Their approach enables a robot to logically parse many given household task into subtasks, and to physically adjust to disruptions within a subtask so that the robot can move on without having to go back and start a task from scratch -- and without engineers having to explicitly program fixes for every possible failure along the way.

"Imitation learning is a mainstream approach enabling household robots. But if a robot is blindly mimicking a human's motion trajectories, tiny errors can accumulate and eventually derail the rest of the execution," says Yanwei Wang, a graduate student in MIT's Department of Electrical Engineering and Computer Science (EECS). "With our method, a robot can self-correct execution errors and improve overall task success."

Wang and his colleagues detail their new approach in a study they will present at the International Conference on Learning Representations (ICLR) in May. The study's co-authors include EECS graduate students Tsun-Hsuan Wang and Jiayuan Mao, Michael Hagenow, a postdoc in MIT's Department of Aeronautics and Astronautics (AeroAstro), and Julie Shah, the H.N. Slater Professor in Aeronautics and Astronautics at MIT.

Language task

The researchers illustrate their new approach with a simple chore: scooping marbles from one bowl and pouring them into another. To accomplish this task, engineers would typically move a robot through the motions of scooping and pouring -- all in one fluid trajectory. They might do this multiple times, to give the robot a number of human demonstrations to mimic.

"But the human demonstration is one long, continuous trajectory," Wang says.

The team realized that, while a human might demonstrate a single task in one go, that task depends on a sequence of subtasks, or trajectories. For instance, the robot has to first reach into a bowl before it can scoop, and it must scoop up marbles before moving to the empty bowl, and so forth. If a robot is pushed or nudged to make a mistake during any of these subtasks, its only recourse is to stop and start from the beginning, unless engineers were to explicitly label each subtask and program or collect new demonstrations for the robot to recover from the said failure, to enable a robot to self-correct in the moment.

"That level of planning is very tedious," Wang says.

Instead, he and his colleagues found some of this work could be done automatically by LLMs. These deep learning models process immense libraries of text, which they use to establish connections between words, sentences, and paragraphs. Through these connections, an LLM can then generate new sentences based on what it has learned about the kind of word that is likely to follow the last.

For their part, the researchers found that in addition to sentences and paragraphs, an LLM can be prompted to produce a logical list of subtasks that would be involved in a given task. For instance, if queried to list the actions involved in scooping marbles from one bowl into another, an LLM might produce a sequence of verbs such as "reach," "scoop," "transport," and "pour."

"LLMs have a way to tell you how to do each step of a task, in natural language. A human's continuous demonstration is the embodiment of those steps, in physical space," Wang says. "And we wanted to connect the two, so that a robot would automatically know what stage it is in a task, and be able to replan and recover on its own."

Mapping marbles

For their new approach, the team developed an algorithm to automatically connect an LLM's natural language label for a particular subtask with a robot's position in physical space or an image that encodes the robot state. Mapping a robot's physical coordinates, or an image of the robot state, to a natural language label is known as "grounding." The team's new algorithm is designed to learn a grounding "classifier," meaning that it learns to automatically identify what semantic subtask a robot is in -- for example, "reach" versus "scoop" -- given its physical coordinates or an image view.

"The grounding classifier facilitates this dialogue between what the robot is doing in the physical space and what the LLM knows about the subtasks, and the constraints you have to pay attention to within each subtask," Wang explains.

The team demonstrated the approach in experiments with a robotic arm that they trained on a marble-scooping task. Experimenters trained the robot by physically guiding it through the task of first reaching into a bowl, scooping up marbles, transporting them over an empty bowl, and pouring them in. After a few demonstrations, the team then used a pretrained LLM and asked the model to list the steps involved in scooping marbles from one bowl to another. The researchers then used their new algorithm to connect the LLM's defined subtasks with the robot's motion trajectory data. The algorithm automatically learned to map the robot's physical coordinates in the trajectories and the corresponding image view to a given subtask.

The team then let the robot carry out the scooping task on its own, using the newly learned grounding classifiers. As the robot moved through the steps of the task, the experimenters pushed and nudged the bot off its path, and knocked marbles off its spoon at various points. Rather than stop and start from the beginning again, or continue blindly with no marbles on its spoon, the bot was able to self-correct, and completed each subtask before moving on to the next. (For instance, it would make sure that it successfully scooped marbles before transporting them to the empty bowl.)

"With our method, when the robot is making mistakes, we don't need to ask humans to program or give extra demonstrations of how to recover from failures," Wang says. "That's super exciting because there's a huge effort now toward training household robots with data collected on teleoperation systems. Our algorithm can now convert that training data into robust robot behavior that can do complex tasks, despite external perturbations." -- SD

A solar cell you can bend and soak in water

Researchers from the RIKEN Center for Emergent Matter Science and collaborators have developed an organic photovoltaic film that is both waterproof and flexible, allowing a solar cell to be put onto clothes and still function correctly after being rained on or even washed.

One of the potential uses of organic photovoltaics is to create wearable electronics -- devices that can be attached to clothing that can monitor medical devices, for example, without requiring battery changes.

However, researchers have found it challenging to achieve waterproofing without the use of extra layers that end up decreasing the flexibility of the film.

Now, in work published in Nature Communications, a group of scientists have been able to do precisely that.

They took on the challenge of overcoming a key limitation of previous devices, which is that it is difficult to make them waterproof without reducing the flexibility.

Photovoltaic films are typically made of several layers. There is an active later, which captures energy of a certain wavelength from sunlight, and uses this energy to separate electrons and "electron holes" into a cathode and anode.

The electrons and holes can then reconnect through a circuit, generating electricity.

In previous devices, the layer transporting the electron holes was generally created sequentially by layering.

For the current work, however, the researchers deposited the anode layer, in this case a silver electrode, directly onto the active layers, creating better adhesion between the layers.

They used a thermal annealing process, exposing the film to air at 85 degrees Celsius for 24 hours.

According to Sixing Xiong, the first author of the paper, "It was challenging to form the layer, but we were happy to have accomplished it, and in the end were able to create a film that was just 3 micrometers thick, and we looked forward to seeing the results of tests."

What the group saw from the testing was very encouraging. First, they immersed the film completely in water for four hours and found that it still had 89 percent of its initial performance.

They then subjected a film to stretching by 30 percent 300 times underwater, and found that even with that punishment, it retained 96 percent of its performance.

As a final test, they ran it through a washing machine cycle, and it survived the ordeal, something that has never been achieved before.

According to Kenjiro Fukuda, one of the corresponding authors of the paper, "What we have created is a method that can be used more generally. Looking to the future, by improving the stability of devices in other areas, such as exposure to air, strong light, and mechanical stress, we plan to further develop our ultrathin organic solar cells so that they can be used for really practical wearable devices."

In addition to RKEN CEMS, members of the research group were from the University of Tokyo and the Huazhong University of Science and Technology in China. -- SD