

Vegetables are source of many nutrients, including potassium, fiber, folate (folic acid) and vitamins A, E and C which play an important role in maintaining health. People who include fruits and vegetables in their daily diet have a reduced risk of many chronic diseases

Opinion on page 03

Nabeel Ahmad Ikram

OPINION

Asymptomatic Means You Have An Illness Without Symptoms — But You May Still Be Contagious



Hasan Akhter

Asymptomatic transmission refers to the transmission of the virus from a person, who have illness without symptoms.

There are usually a few indicators when you're sick. It's common to feel noticeable symptoms with any illness, such as a fever, headache, shortness of breath, stomach or chest pain, and coughing or sneezing.

But sometimes, you can be sick without even knowing it — whether you have a viral infection like the flu or a chronic condition like high blood pressure.

These types of illnesses are called asymptomatic, meaning they present without symptoms. Here's what you need to know about asymptomatic illnesses, how they differ from presymptomatic illnesses, and why these terms are important to understand.

Examples of asymptomatic illnesses

There are many long-term medical conditions and short-term illnesses that have no symptoms, says epidemiologist Aaron E. Glatt, MD, chair of medicine at Mount Sinai South Nassau.

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Research Commercialization And Technology Transfer – Five Ways That Can Help You To Protect And Commercialize Your Creative Work In Sciences And Social Sciences



Muhammad Haseeb Shakil & Dr Shafique Ahmed

Any creation of mind such as invention, design, symbol, process etc. is referred to as Intellectual Property (IP). Just like tangible assets, intellectual property also contributes to the success of a business.

Patenting is a primary tool to protect an IP, but there are number of intellectual properties such as copyright, trade secrets, know how, designs, trademarks, and database rights which should be managed properly.

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Care Of Animals In Harsh Winter Season

Dr. M. Mohsin & Dr. Rab Nawaz Kausar

The extreme meteorological variation leads to drastic drop in temperature even up to minus degrees during December and January months. During this winter season, it's really hard to manage livestock and hence it's really important to take proper care of livestock animals. So today we are going to discuss the important things and factors of animal husbandry to keep in mind during winter season for the good health of animals.

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Govt Demanding Google To Set Up Compliance Office In Islamabad

It is important for Pakistani citizens to understand the state's likely motives behind this demand and how this may affect the use of Google services by ordinary Pakistani users.

In a recent development, the social media giant, Google LLC, has opened a liaison office in Karachi with the intention of exploring business opportunities in Pakistan. However, the government is persisting in its demand for Google and other social media companies to set up compliance office in Islamabad.

It is important for Pakistani citizens to understand the state's likely motives behind this demand and how this may affect the use of Google services by

ordinary Pakistani users.

Google, one of the leading big-data companies in the world, offers a wide range of free services globally, including search engine, email, a video sharing platform, analytics, maps, cloud services, video conferencing and calendars. However, the "so-called" free services come at a cost; they require users to give up their time and resources into creating content for Google's social media platforms, such as YouTube.

In recent years, Pakistan has become a lucrative market for Google, with over 71 million users using its YouTube platform. Many users have successfully

established themselves as vloggers, creating a wide range of content for the platform. In return, YouTube generates revenue through its artificial intelligence and machine learning-powered algorithms, which push personalised third-party advertisements to its users.

Google also accesses and stores its users' browsing histories from internet browsers. However, many users are unaware of the information they are unintentionally giving up and the potential consequences of that.

Google collects, controls and processes all kinds of digital information and data generated through users' online activities

through its products, which can be installed on computers, smartphones, smart TVs and other devices. Every click creates data that reflects a user's patterns of life.

In some cases, this data can be sensitive, such as when an investigative journalist accesses online databases or a human rights defender runs an online campaign for marginalised groups that are victims of discrimination and inequality. While corporations may be interested in this data for business purposes, states also have a strong desire to access it. The Pakistani government's demand for Google to set up a compliance office in Islamabad...[Read More](#)

Pakistan Technology Sector Outshines Rival Countries In 2022

According to Gartner IT data, Pakistan's IT exports increased by 9% in first eleven months of 2022, while other countries in global index mostly remained stagnant throughout the year.

Technology and communication sector of Pakistan performed better than its rival countries in 2022, according to a new report from Topline Securities.

Because it is the most relevant comparable index, Information Technology sector of Pakistan was compared to the MSCI AC Asia Pacific Information Technology Index. It is a market capitalization-adjusted index that includes large and mid-cap securities from five Developed Markets (DM) and nine Emerging Markets (EM) countries in the Asia Pacific region.

Pakistan is included in the MSCI AC Asia Pacific Information Technology Index. Australia, Hong Kong, Japan, New Zealand, and Singapore are among the DM countries in the index, while China, India, Indonesia, Korea, Malaysia, Pakistan, the Philippines, Taiwan, and Thailand are among the EM countries.

According to the report, Pakistan's IT sector fell by 22% (in terms of USD), while the MSCI AC Asia Pacific Information Technology Index fell by 33% in 2022. The sector's performance in terms of PKR remained constant throughout the year.

Systems Limited (SYS), a Pakistani technology company that provides mortgage, apparel, retail, BPO, and other services, was primarily responsible for these figures. In 2022, the company's market capitalization increased by 4% in USD terms and 34% in PKR terms.

In September 2022, the com-

Pakistan Planning To Start Manufacturing SIM Cards Locally



According to official documents, local physical SIM manufacturers may set up eSIM management platforms and sell eSIM products to CMOs via "Platform as a Service."

Pakistan intends to begin local manufacturing of SIM cards and

smart cards in order to protect the country from cyberattacks, create job opportunities, and save valuable foreign exchange.

According to official documents, local physical SIM manufacturers may set up eSIM management platforms and sell eSIM

products to cellular mobile operators (CMOs) via "Platform as a Service." Digital transformation and the creation of an enabling ecosystem are two of the key objectives of the government of Pakistan, and in the era of digital services, SIMs and smart cards assume pivotal importance.

The local manufacturing of SIMs will massively benefit the economy, as millions of SIMs are currently imported. According to the documents, the Pakistan Telecommunication Authority (PTA) fully supports the required roles of performing authorization, complying with regulations, and adopting SIM card manufacturing...[Read More](#)

CN-Pak Hangor Class Submarine Project Progressing Steadily

"Despite some delays caused by COVID-19 and technical complexities, the project is proceeding as planned," Admiral Niazi said.

The Hangor class submarine project between China and Pakistan is progressing steadily, and the boats with air-independent propulsion (AIP) systems are now in various stages of construction in both countries, according to Admiral M. Amjad Khan Niazi, Chief of the Naval Staff of the Pakistan Navy, in a recent exclusive interview.

Admiral Niazi described the Pakistan Navy's development strategy as "progressive capability enhancement" in order to create a balanced, potent, and combat-ready force to meet evolving

threats. As part of this modernization, the Pakistan Navy is replacing its existing ageing platforms with acquisitions from friendly countries as well as technology transfer for in-country construction.

In this regard, Admiral Niazi stated that the Pakistan Navy has strengthened collaboration with China through the procurement of F-22P frigates, Fast Attack Craft (missile), helicopters, a survey ship, and medium-

altitude, long-endurance unmanned combat aerial vehicles, as well as the ongoing planned induction of Type 054A/P frigates and Hangor-class submarines, which will further cement naval ties between the two countries.

The naval chief revealed that the Hangor-class submarine project is progressing steadily and that the submarines are in various stages of assembly in Pakistan and China. "Despite some delays caused by COVID-19 and technical complexities, the project is proceeding as planned," he said.

These conventional modern submarines are outfitted with the most advanced weapons and sensors...[Read More](#)



KP Government Opposes Planned Solar Project In Muzaffargarh

The project's goal is to gradually wean the country off of costly fossil fuels for energy generation. The 600-MW solar project will generate green energy instead of thermal power.

In a public hearing held on Monday by the National Electric Power Regulatory Authority, the provincial government of KP opposed the federal government's planned solar project in Muzaffargarh (NEPRA).

The project's goal is to gradually wean the country off of costly fossil fuels for energy generation. The 600-MW solar project will generate green energy instead of thermal power.

During the NEPRA hearing, KP government representatives stated that the federal government did not consult them before launching the project. This, they claim, violates the ARE policy approved in 2019.

The opposition came despite the Ministry of Law and Justice's legal opinion in favour of the project, which was based on the Alternative and Renewable Energy (ARE) Policy.

Because the provincial government was not consulted, the KP government has declared that the federal government cannot begin the solar energy project in Muzaffargarh (Punjab) without first obtaining approval from the Council of Common Interest (CCI).

The CCI is a constitutionally mandated body of the Pakistani government. The president appoints it based on the prime minister's recommendations. The council resolves disputes over power-sharing between the federal and provincial governments.

On the contrary, federal government representatives believe that the Ministry of Law and Justice has also provided a legal



opinion that is consistent with the overall renewable energy strategy, making opposition unnecessary.

According to documents obtained by Profit, the law division has legally supported the proposed solar projects. According to federal government representatives, the solar project will begin under the auspices of the Alternative Energy Development Board (AEDB).

The AEDB had previously approved this in a meeting attended by the chief secretary of KP as well as stakeholders from other provinces.

It is important to note that the proposed initiative for the substitution of expensive imported fossil fuel with solar energy is in fact in line with the ARE Policy, 2019, that was approved by the PTI government at the time.

The 2019 Policy for Alternative and Renewable Energy lays...[Read More](#)



IT Sector In Pakistan Needs More Skilled Youth

Engr. Prof. Dr. Athar Mahboob stated that information technology has emerged as the best tool for dealing with global business challenges.

According to Engr. Prof. Dr. Athar Mahboob, Vice Chancellor of Islamia University of Bahawalpur, the best opportunities for youth of Pakistan are available in the field of information technology, and now is the best time to grow in the IT sector because there is a need for young people equipped with IT skills.

The Vice-Chancellor made these remarks to the media as part of the ongoing, three-day Tech Conference and IT Expo Future Fest 2023 in Lahore.

He stated that information technology has emerged as the best tool for dealing with global business challenges. Business opportunities have grown in tandem with technological advancements.

Globally, there is a lot of investment in the information technology sector.

In recent years, the IT sector in Pakistan has expanded rapidly, owing to increased demand for software development, mobile application development, digital marketing, and data analytics services.

In light of these challenges, the Islamia University of Bahawalpur is also very active in the field of information technology. The establishment of the Faculty of Computing at Jamia Islamia has added a new dimension to information technology education and research in South Punjab.

The Islamia University of Bahawalpur is currently one of the universities in Punjab that is actively involved in the development of entrepreneurship and the preparation of skilled labour in this field.

The Punjab Information Technology Board is working on several projects, one of which is Tech Pura, which will turn



Bahawalpur into an information technology hub.

The Digital South Punjab Road Show recently organised IT events in the cities and towns of South Punjab, and IT experts and people associated with the IT industry from all over the country brought digital technology to the youth's doorsteps.

Fest 2023 will be a significant milestone in Pakistan's IT development, and the Islamia

University of Bahawalpur will be a partner in this journey.

Dr. Athar Mahboob also spoke on a panel about education as a catalyst for change, stating that the Islamia University of Bahawalpur has become a leader in the transformation of the current education system into a market-driven, business-oriented system that promotes entrepreneurs and young leaders having access to global markets.

Joint Agreement Signs For Pak China Technical Vocational Institute

The Pak-China Technical and Vocational Institute aim to shape and improve the skills of Gwadar's active population in the port city's growth.

The signing ceremony for the joint operation agreement of the Pak-China Technical and Vocational Institute (PCT & VI), which was built with a Chinese grant under CPEC, was held at Gwadar Business Center on Monday.

Shandong Institute of Commerce and Technology (SICT), Gwadar Port Authority (GPA), The University of Gwadar (UoG), and China Overseas Ports Holding

While SICT teachers and officers will participate in the ceremony online.

The Chinese government gifted and handed over the Pak-China Technical and Vocational Institute (PCT & VI) to GPA in September 2021 with the intent of training, preparing, and equipping the youth of Gwadar, Makran, and Balochistan with skill sets for the future needs of Gwadar port, free zones, smart cities, a new international airport, and other CPEC projects pertaining to commerce, marine industry, market-based businesses, modern fisheries practises, real estate, tourism, and other sectors.



Company (COPHC) signed a joint operation agreement to provide free six-month short courses and three-year diploma programmes with hands-on technical and professional training to thousands of Gwadar youths.

Participants will include students from the University of Gwadar's first batch of representative students, local COPHC employees, GPA officers, and COPHC officers.

According to the joint operation agreement, GPA is responsible for providing spaces and supporting facilities to meet the needs of teaching, offices, and accommodations in the existing new PCT and VI buildings.

It will work with all government departments to carry out relevant procedures in accordance with Pakistani laws...[Read More](#)

Focused Pen Writing Allows To Appreciate Power Of Silence



When you write with a pen rather than a keyboard, more body systems are involved, and your ability to focus improves dramatically.

Aside from the surprise of receiving notifications, focused pen writing (FPW) has the potential to become a meditation session when you are so engrossed in the present moment that you forget about the world around you. Focused pen writing allows you to appreciate the power of silence.

Writing helps one think critically and pay attention to the present moment. When you

write with a pen rather than a keyboard, more body systems are engaged, and your ability to focus improves dramatically.

Writing is a time-consuming process, which makes it preferable to typing. Rough draft come to us all the time, but when you write with a pen, you have to hold on to a thought for a longer period of time than when you are typing it.

This results in a more composed and mature writing process. We are all aware that not every thought is worth pursuing, and handwriting can serve as a preliminary filter for better,

worthier ideas.

Writing activates more body systems than typing. Your hand appreciates the structure of each letter of the alphabet when you write a sentence. To write "cat," draw the half-circle of "c" and recognise its structural differences from "a" and "t." When you type "cat," however, all you need from your hand is to perform the monotonous task of pressing the keys "c," "a," and "t" on the keyboard. In other words, writing requires more mental and muscular effort than typing.

With these considerations in mind, I began focused pen writing (FPW) activities and would like to encourage others to do the same. During 30-minute FPW sessions, no mobile or internet use is permitted. Aside from the surprise of receiving notifications, FPW has the potential to become a meditation session when you are so engrossed in the present moment that you forget about the rest of the world.

Similarly, FPW allows you to appreciate the power and serenity of silence. The amount of useless conversation we frequently engage in on a daily basis is mind-boggling...[Read More](#)

Closing Day Of Future Fest Witnesses Signing Of MoU Worth \$100 M

A historic delegation of Saudi startups and venture capitalists met with Pakistani companies and key stakeholders to discuss investments and talent recruitment at Future Fest 2023.

On the third and final day of Future Fest, Pakistan's largest tech conference and expo, over 50 MoUs worth \$100 million were signed. Indeed, these agreements, as well as their ongoing financial impact, will make a significant contribution to Pakistan's digital economy.

The following key agreements were signed on the final day of Future Fest: an investment and global expansion partnership signing MoU between GINKGO and the Kingdom of Saudi Arabia's DigiPACKS; the launch of Bridging to Saudia; and Saudi Arabia-based Tracking.

Telematics Private Limited, a Pakistani company, is being acquired by me. Tracking also signed a contract with Technomatics. Reskills has signed with PNY Trainings, Saudi Azm has signed with Everest Square Management, Octek has signed with Saudi Azm, and Classera has signed with Ejad Labs. Furthermore, the potential for formal collaborations was investigated between Reskills and PITB, Ginkgo Retail Gained Investment, Takadao and Craftoo, vFAIRS, the Institute of Entrepreneurship and PAFLA, and NUST's E-clinic...[Read More](#)

Pakistan Electric Fan Industry Objects To Imposed Unilateral Restrictions



The industry is willing to shift to inverter technology or energy-efficient fans in general because market consumers demand such products.

The electric fan industry is outraged that the federal government has imposed unilateral restrictions on it, requiring it to produce energy-efficient fans without first consulting the manufacturers. According to them, talks have taken place between fan manufacturers and Pakistan Standard Quality Control.

The Public Sector Quality Control Authority (PSQCA) was

working on the issue, but the government imposed the unilateral restrictions without considering the "ground realities" of the sector, which primarily consisted of small and medium-sized enterprises (SMEs) that had yet to build capacity in this regard.

They claim, however, that the industry is willing to shift to inverter technology or energy-efficient fans in general because market consumers demand such products.

A meeting of industry representatives and a cabinet committee led by federal minister is scheduled for January 10 (Tuesday) in Islamabad to discuss issues pertaining to the implementation of government decisions in connection with recent federal...[Read More](#)

Over 0.1M Acres Land In KP Highly Suitable For Cultivation Of Saffron

Concerning the potential for olive oil production, he stated that approximately 80% of the province was suitable for olive cultivation and that high-quality oil could be produced from it.

Dr. Mohammad Israr, Secretary Agriculture and Livestock, Khyber Pakhtunkhwa, stated that over 0.1 million acres of land were highly suitable for saffron cultivation, which could earn the province Rs 870 billion per year. According to an official handout issued here on Monday, he was speaking during a meeting at the Saudi Royal Embassy.

The meeting was also attended by the Director General (DG) Agriculture (Extension), Jan Mohammad, the Director General (DG) Research, Abdul Bari, the Director General (DG) Agriculture (Extension), Newly Merged Areas, Murad Ali, agriculture experts Ahmad Said and Mohammad Younas, and Aqil Shah.

Agricultural experts briefed the Saudi Royal Embassy's Commercial Attaché and other office bearers on the promotion of saffron, olive cultivation, and Berry Honey, as well as investment opportunities, during the meeting.

The Secretary of Agriculture KP informed the meeting participants that saffron was cultivated



ed in the province on an experimental basis two years ago, with positive results, and that the provincial government has also approved a specific plan on that basis.

He claimed that KP provided a good investment opportunity for Saudi investors looking to import cheaper saffron from the province.

Concerning the potential for olive oil production, he stated that approximately 80% of the province was suitable for olive cultivation and that high-quality oil could be produced from it. According to a survey, KP has 70 million wild olive plants that could easily be transformed into the best variety.

Saffron is a spice that is obtained from the dried stigmas

of the crocus plant (*Crocus sativus*). It is considered one of the most expensive spices in the world due to the labor-intensive process of harvesting and the low yield of the plant.

To cultivate saffron, the crocus bulbs must be planted in well-drained soil that is rich in organic matter. They should be planted in the fall, about 6 inches deep and 4-6 inches apart. Saffron plants prefer a sunny location with temperatures between 60 and 70 °F.

Once the plants have matured and flowered, the stigmas must be carefully hand-picked and dried. This process must be done quickly, as the stigmas will begin to lose their flavour and colour if they are not processed within a few...[Read More](#)

HEC Warns Students To Take Admission In Two Year Degree Programs

"It is to inform you that HEC has not allowed any extension in timelines for admission in the two year BA/BSc and two-year MA/MSc degree programs," the student alert stated.

The Higher Education Commission (HEC) has issued a warning to students and parents about enrolling in the two year BA/BSc and two-year MA/MSc degree programs.

The higher education regulatory body has issued a Student Alert following the dissemination of a number of false messages, information, and news on websites, in the media, and on social media claiming that HEC has extended admissions in two-year degree programs.

"It is to inform you that HEC has not allowed any extension in timelines for admission in the two year BA/BSc and two-year MA/MSc degree programs," the student alert stated. It is important to note that the alert was shared on all of HEC's official social media pages, including Facebook, Twitter, Instagram, and the website.

It's important for educational institutions and regulatory bodies to be clear and transparent when communicating with students and to quickly address

any false or misleading information that may be circulating. The dissemination of false information can cause confusion and concern among students and ultimately harm their academic progress.

According to the commission, the last dates for enrollment in the BA/BSc and MA/MSc programmes were December 31, 2019 and June 30, 2022, respectively.

According to the HEC's tweet, students and parents should "beware of such misleading and fake information" circulated on social media.

The commission advised visiting HEC's official website for all up-to-date information on the

matter. The HEC did not postpone the four-year BS and two-year associate degree programmes until July 2021, after several affiliated colleges across Pakistan had already begun them.

HEC stated that, at the request of the Vice Chancellors' Committee, the implementation of the Undergraduate Education Policy 2020—which includes the four-year BS and two-year associate degree programmes—has been delayed at some universities until the fall of 2022.

Universities that have already adopted the education policy, on the other hand, can continue to implement it.



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Hasan Akhter

"With many illnesses, especially viral illnesses, you're generally contagious in the day or two beforehand and during the first few days of illness," Glatt says. "We don't really know how many people without symptoms spread the illness, but it's certainly possible."



Asymptomatic Means You Have An Illness Without Symptoms — But You May Still Be Contagious

Asymptomatic transmission refers to transmission of the virus from a person, who has illness without symptoms.

There are usually a few indicators when you're sick. It's common to feel noticeable symptoms with any illness, such as a fever, headache, shortness of breath, stomach or chest pain, and coughing or sneezing.

But sometimes, you can be sick without even knowing it — whether you have a viral infection like the flu or a chronic condition like high blood pressure.

These types of illnesses are called asymptomatic, meaning they present without symptoms. Here's what you need to know about asymptomatic illnesses, how they differ from presymptomatic illnesses, and why these terms are important to understand.

Examples of asymptomatic illnesses

There are many long-term medical conditions and short-term illnesses that have no symptoms, says epidemiologist Aaron E. Glatt, MD, chair of medicine at Mount Sinai South Nassau.

In fact, millions of people around the world have what are called silent, or latent, infections, Glatt says. They are called this because some bacteria and viruses transmit infections for which there may be no symptoms at all.

"People can go through their whole lives having an asymptomatic illness such as tuberculosis, which we call latent tuberculosis," Glatt says.

Moreover, a study published in The Lancet in 2014 found that 77% of flu infections didn't have any symptoms. The lack of symptoms may be due to having preexisting immunity to the infection.

Hypertension (high blood pressure)

Hepatitis B and C
Herpes simplex virus (HSV)
Type II diabetes
Glaucoma
Osteoporosis
Respiratory diseases, like the flu or COVID-19
Asymptomatic illnesses can still be contagious
Most asymptomatic illnesses,

researchers believe that the rate of influenza spread by asymptomatic people is about one third to one half of the rate spread by people with symptoms.

However, the evidence for asymptomatic influenza transmission is scant, as it's difficult to track who has the flu if they don't have any symptoms.

"With many illnesses, especially viral illnesses, you're generally contagious in the day or two beforehand and during the first few days of illness," Glatt says. "We don't really know how many people without symptoms spread the illness, but it's certainly possible."

Asymptomatic vs. presymptomatic

It's important to understand the difference between these two medical terms. Asymptomatic means there are no symptoms through the duration of your illness. Presymptomatic means that there is an initial period without symptoms, but symptoms will develop later on.

For example, both the flu and cold are most contagious within the first three or four days of catching each respective virus, and this is often before symptoms occur, or when people are presymptomatic.

The coronavirus outbreak has also led to a greater understanding of these terms. It's estimated that about 40% of COVID-19 transmissions occur when people are presymptomatic, according to the US Centers for Disease Control and

Prevention.

Moreover, up to 45% of COVID-19 infections may be asymptomatic, as symptoms may simply never develop for some people. The actual rate of asymptomatic transmissions of COVID-19 is not yet known, according to the World Health Organization (WHO).

This is part of the reason why screening tests are so important. If you're presymptomatic or asymptomatic, you won't know you have an illness. Without getting a medical test, you would go about your life as normal, possibly further spreading contagious illness.

In many cases, these tests can be lifesaving — both for COVID-19 and other illnesses. For example, some types of cancer show no indication of symptoms until it spreads in the body, and by that point, it may be more difficult to effectively treat.

That's why to help detect breast cancer, the American Cancer Society recommends annual mammograms for women who are 45 to 54 years old, and every other year for women 55 and older. Similarly, the best way to know if you're at risk of heart disease is by having your doctor check your blood pressure readings at least once a year.

Overall, routine medical check-ups and screening tests are the most effective measure for preventing health complications from asymptomatic or presymptomatic illnesses.



Some chronic illnesses also have no symptoms, such as high blood pressure (hypertension), which affects more than 30% of adults in the US. In fact, it is often called the "silent killer" because it can develop over time and damage your body without you even knowing it.

The following common diseases can occur without any symptoms:

like hypertension or diabetes, are not contagious.

However, if you do have a contagious illness, like the flu or common cold, and never have any symptoms, you can still spread it to other people.

For example, one in three people with the flu are asymptomatic, according to a study published in Public Health Reports in 2009. Accordingly, some



"First we thought the PC was a calculator. Then we found out how to turn numbers into letters with ASCII — and we thought it was a typewriter. Then we discovered graphics, and we thought it was a television. With the World Wide Web, we've realized it's a brochure."

—Douglas Adams

A license agreement should be a written document signed by all involved parties. Sometimes one party defines the terms of agreement but most of the time both the parties negotiate



Muhammad Haseeb Shakil



Research Commercialization And Technology Transfer – Five Ways That Can Help You To Protect And Commercialize Your Creative Work In Sciences And Social Sciences

Muhammad Haseeb Shakil & Dr Shafique Ahmed

Anyone of minds such as invention, design, symbol, process is referred to as Intellectual Property (IP). It is the legal assets intellectual property also contributes to the success of business.

Patenting is a primary tool to protect an IP, but there are number of intellectual properties such as copyright, trade secrets, know how, designs, trademarks, and database rights which should be managed properly. First, consultancy is application of existing knowledge generated by research which helps to solve an existing challenge. If you are an expert on something technical for example designing communication strategy for a growing organization or shortening of an industrial process for some product development, then you can approach the right parties as consultant or vice versa. Second, licensing allows the owner to sell the rights of his creation/innovation to a licensee. Third, spin-outs are formed specifically to commercialize the outputs of a research with the help of Technology Transfer Office (TTO). Fourth, negotiation is term defined as planning, reviewing, analysis that

a buyer and seller conduct to reach an agreement. You may want to create a proposition where everyone benefits, i.e., win-win situation. Otherwise, it will not be sustainable. And finally, you must mind stakeholder engagement as fifth pillar of your commercialization effort. Your stakeholders may be senior management of the organization you work in or your academic leaders, or your co-workers on the project. Clearing any conflict of interest at this stage is vital. Try to nip it in bud.

Types of Patent Application in Pakistan

"An ordinary patent application is defined as an application with complete specification, which contains the date of the official filing of the patent application".

"A convention patent application is defined as declaring "right of priority", which is dated as of the official date of the corresponding application for patent first made in a country which is the member of World Trade Organization (WTO)".

According to the World Data Bank report 2020:

Country	Number of Patents
Pakistan	338
India	

23,141
China
1,344,817

Let's discuss five ways to commercialize research that also protect your creation:

Consultancy

Consultancy is the term defined as "application of existing knowledge, skills and abilities generated by research". It helps to solve existing challenges of a firm. It helps to solve a particular problem but it doesn't create new knowledge. As consultancy is the commercial project so the concerned person (client) can own the results of project. Consultancy opportunities can come from developing marketing material, having representatives who can convey your message to other stakeholders, providing trainings along with material, having an effective website, highlighting success stories, and networking.

Level of Stakeholder Engagement:

Inform: Inform stakeholders on the initiative, the issue, and the potential solutions by providing them with fair and impartial information.

Consult: Seek opinion on the information provided. The amount of input might range

ing from minor to a great. Opportunities to provide feedback that will be taken into account during the decision-making process can be one-time or recurring.

Involve: During the process, work very closely with stakeholders to ensure that their issues and expected outputs are thoroughly addressed and taken into consideration at each level. The consultant / consulting firm continues to make the final decisions, but with thoughtful input from the many stakeholders.

Empower: Keep stakeholders in authority of making the final decisions. Votes and voting ballots are notable examples.

Licensing

Licensing an intellectual property allows the owner to sell the rights to use intellectual property to a licensee (holder of a license). IP licensing is a form of contract. By holding license, the licensee has been permitted to allow what they want to do with that property. A license agreement is beneficial if both parties have awareness to identify appropriate permissions. A license agreement should be a written document signed by all involved parties. Sometimes one party defines the terms of agreement but most of the time both the parties negoti-

ate. In the process of written agreement, IP attorneys help to draft the agreement which includes permission, duration, and term of use etc. Five important considerations in licensing that you should know are as follows:

Rights: The rights being transferred to licensee for reproducing a work

Financial Consideration: Financial exchange, type of currency to be used etc.

Territory: Where the licensee may use the license

Term: Duration of license

Exclusivity: The concerned who have rights under the license

Governing Laws: The jurisdiction that will handle a dispute

Dispute Resolution: Whether the parties will resolve the dispute on their own or in court

Spin-outs
Spin-out companies are formed specifically to commercialize the outputs of a research or technology. Usually, one or more of the researchers is directly involved as a founder or stakeholder. In some cases, due to institutional policies, the researchers are not allowed to form part of the spin-out venture so they may just be beneficiaries of the license agreement the university makes with the spin-out venture. The success

of a spin-out will be enhanced where a wide range of local support mechanisms are available, such as: proof of concept funding management expertise accelerator programs start-up friendly spaces and access to suitable facilities access to customers (whether consumers or large businesses) specialist support service providers

venture finance, including dedicated investment funds

TTO is the entity that helps in the process of technology transfer among researcher and interested parties. TTO can extend the following support measures to a spinout:

developing the proposition managing the licensing of intellectual property to the spin-out helping build the team providing early-stage seed funding assisting with ongoing business management

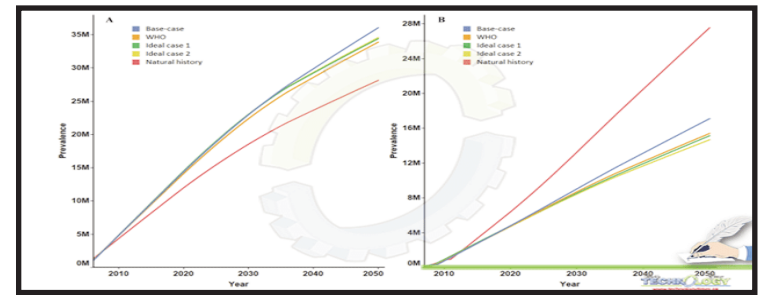
Negotiation: The term negotiation refers to a strategic discussion that resolves an issue in a way that both parties find acceptable.

Commercial Negotiation is term defined as planning, reviewing, analysis that a buyer and seller conduct to reach an agreement...**Read More**



Dr. M. Mohsin

Three things require utmost attention that three aspects require much attention in this season



Care Of Animals In Harsh Winter Season

Dr. M. Mohsin & Dr. Rab Nawaz Kausar

The extreme meteorological variation leads to drastic drop in temperature even up to minus degrees during December and January months. During this winter season, it's really hard to manage livestock and hence it's really important to take proper care of livestock animals. So today we are going to discuss the important things and factors of animal husbandry to keep in mind during winter season for the good health of animals.

Three things require utmost attention that three aspects require much attention in this season

1. Environment modification through proper shelter Management

Improving body reserves through nutritional management and proper health care. Curtains should be used in the sheds of loose housing system to obstruct the flow of wind at animal's level. Curtains can be made from tarpuline, bamboo, dry

grass, paddy straw, guinea bags, jute etc. Shady trees around the shed should be trimmed to encourage the infiltration of sunlight in the shed which will not only provide warmth but will also disinfect the animal houses due to action of ultraviolet rays. Furthermore, animals should be permitted under direct sun exposure during daytime in open paddocks.

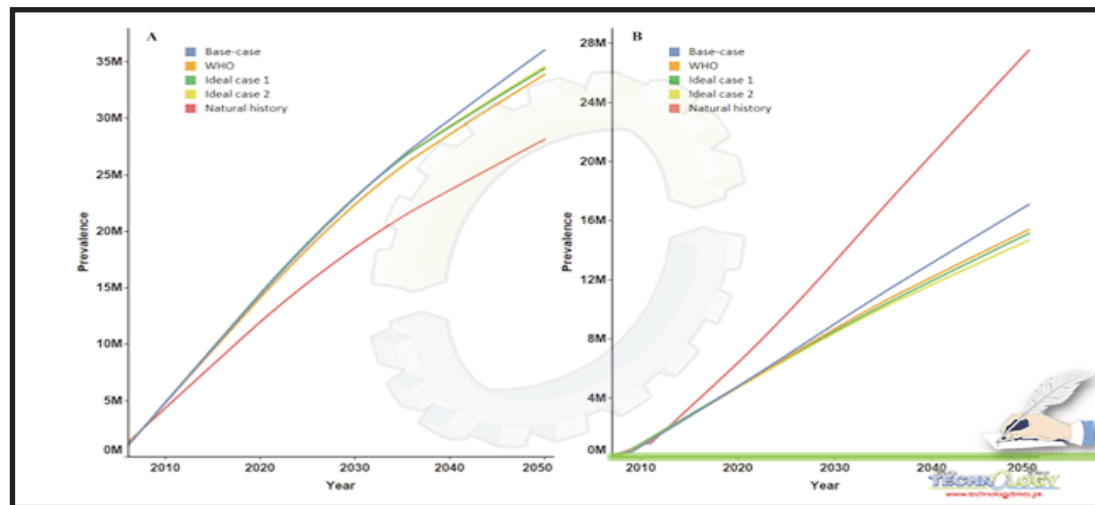
Animal's shed and its floor should not remain wet and cool for longer periods of time. This may expose the animals, especially younger ones, to various ailments like pneumonia, fever, coccidiosis, diarrhoea and even death in severe cases.

Modern dairy practices suggested that suitable bedding up to the depth of 4-6 inches in large animals and 2 inches for smaller animals should be provided on pucca (concrete) floor as direct contact of animal with cold floor will lead to more body heat loss through conduction. Paddy straw, dry grass, wheat bhusa, saw dust, rice husk etc. could be used as bedding material.

Jhuls (clothing) made up of gunny bags may also be used on larger animals to

be clipped during winters. Bathing of animals with cold water during winter should

and growing animals. So, accordingly protein containing ingredients i.e. cakes in



provide them insulation and warmth during extreme winter season.

2. Good Ventilation

Good ventilation must be ensured during winters. Shed should be cleaned at least twice in a day for proper disposal of wastes and minimum piling up of ammonia gases. Animals should be cleaned regularly with clean cloth or some brush. Hairs of animals should not

be avoided. 3. Animals should be provided with good nutritious and balanced diet during winters

Animals should be provided with good nutritious and balanced diet during winters. Berseem, most abundantly available green fodder, has high protein percentage and water content, can easily support production level of lactating

concentrates shall be reduced for economical production. The sequence of various types of cake to be used may be in order of Mustard cake, Cotton seed cake, Groundnut cake and Soybean flakes.

If there is shortage of green fodder, then 25-30 kg of leguminous fodder can be mixed with 5-10 kg of wheat bhusa for feeding larger animals. In addition to this 3 kg

of concentrate mixture will be sufficient to maintain the body temperature. If fodder is not scarce then 40 to 50 kg of good quality green fodder will be sufficient to maintain the production up to 10 litres of milk in cattle and buffaloes. To avoid incidences of nitrate toxicity and bloat in winter, the leguminous fodders should be mixed with either non legumes or wheat bhusa.

Incorporate 2% mineral mixture and 1% salt in concentrate feed

He advised that one should never forget to incorporate 2% mineral mixture and 1% salt in concentrate feed during winters. It should be purchased from reputed manufacturers. Clean, fresh, lukewarm water should be offered to the animals during winters.

De-worming should be repeated 21 days after the initial dose to prevent other worm eggs

and larvae in their additional stages of development. One should use suitable acaricides in the shed and on animals to control this problem.



Nabeel Ahmad Ikram

Programs for awareness of society for healthy plant based foods and promotion of kitchen gardening for self-sufficiency in vegetables were conducted at Forty nine schools, colleges, universities, industry, housing colonies and villages including government and private sector



Vegetable Nursery Production And Supply System For Promotion Of Innovative Trends In Kitchen Gardening

Asif Ali Khan and Nabeel Ahmad Ikram

Vegetables are source of many nutrients, including potassium, fiber, folate (folic acid) and vitamins A, E and C which play an important role in maintaining health. People who include fruits and vegetables in their daily diet have a reduced risk of many chronic diseases.

The importance of vegetables in human health necessitates promotion of vegetable eating and growing for sustainable human health.

Vegetable are cash crops and require regular irrigation, unlike most of crops including cereals and pulses.

Vegetables grown in the peri-urban areas are mostly irrigated by sewage water. Although sewerage water has a huge amount of nutrients needed for plant growth and farmers do not have to pay for fertilizer yet contain heavy metals and other toxic compounds.

Vegetables grown on this water containing residues of these toxic compounds cause many diseases like cancer, diarrhea and hepatitis etc. in human beings. As vegetables grown commercially using sew-

erage water are contaminated with compounds toxic to human health therefore growing vegetables as kitchen gardening needs to be promoted for producing healthy vegetables at household level.

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imports

Growing vegetables through seed is a problem and is not very successful for kitchen gardening. In this regard Prof. Dr. Asif Ali, Vice Chancellor MNS-University of Agriculture Multan started a project in 2017 funded by AIP (Agriculture

Innovation Program) and USAID with objectives to promote kitchen gardening, home gardening and roof top gardening by establishing a system for provision of healthy nursery for economical and clean (pesticide free) vegetable production for a healthy community.

Both male and female stu-

national conferences, two International horticulture expo. A permanent vegetable nursery sale point is established at the university as well as Online Vegetable Nursery Supply System has been started which provides us the freedom to keep our vegetable supply system open 24/7.

Programs for awareness of society for healthy plant based foods and promotion of kitchen gardening for self-sufficiency in vegetables were conducted at Forty nine schools, colleges, universities, industry, housing colonies and villages including government and private sector.

Three Plant centric meal competitions have been organized at the University in which students from different schools, colleges and universities participated with different plant based food ideas which were appreciated by visitors. The awareness campaigns were also launched on electronic and print media.

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The response of private nursery partners, general public, and female students in awareness campaigns was positive, which has led to linking this project to community. A state of the art vegetable nursery house has been constructed at MNS- University of Agriculture

Multan for raising of season and off season vegetables.

Different vertical vegetable production structures have been developed for promotion of innovative trends in kitchen. In this modern era of computer and internet, consumers are increasingly turning to the social media facilities in this regard Facebook page and WhatsApp Group has been created to provide advice, guidelines and assistance to stakeholders regarding successful production of vegetables as kitchen gardening.

Fourteen demonstration plots are established at different industrial unites, government and private organizations for awareness among the community regarding clean and healthy vegetable production at household level through proper use of roof tops.

So far 9300 nursery plants of tomato 5000 plants of chilies, 3000 plants of sweet pepper, 2040 plants of brinjal, 2070 plants of cucumber and 1200 plants of bitter melon 980 plants of Pumpkin, 1890 plants of vegetable marrow, 2300 plants of luffa, 1509 plants of melons have been raised in multipot trays. Up till now 28,339 seedlings of different vegetables have been distributed among community.

interesting reading: Speakers call for efforts to promote

organic Cotton production in Pakistan

Project is moving towards self-sufficiency by involvement of students with the aim to promote entrepreneurship and receiving nominal cost of five rupees per plant from sale of nursery plants.

Furthermore, this project has the potential of changing the preference of people from meat based foods to plant based foods to ensure a healthy life through awareness programs. The training to stakeholders and availability of nursery plants will also help the community to grow vegetables in their backyards and rooftops to harvest healthy vegetables free from toxic chemicals.

This also added value to the aesthetic sense of the community.

Lock down due to corona viruses pandemic caused an opportunity for community to start kitchen gardening at their household level which results in availability of nutritious vegetable as well as improve immunity level of community against infectious diseases.

In this regard MNS-University of Agriculture Multan is providing healthy and ready to transplant vegetable seedling to the community at the cost of 5 rupees per plant. These seedling are available from university in office hours.



FNB's Free EBucks Recognizes As Global Leader For Best Use Of Tech

The Free eBucks Rewards program of FNB was named the global leader for the best use of technology and the Middle East and Africa Regional Loyalty Champion of the Year.

At the 2022 International Loyalty Awards, the Free eBucks Rewards program of FNB was named the global leader for the best use of technology and the Middle East and Africa Regional Loyalty Champion of the Year.

The awards recognise businesses that go above and beyond expectations in terms of excellence and innovation. Regional awards are also given to brands that have the most innovative and engaging loyalty programmes in their indus-

try. "eBucks Rewards was founded over 20 years ago to facilitate eCommerce and shape consumer financial behaviour through partnerships with customers and partner retailers," says Jacques Celliers, CEO of FNB.

"In many ways, eBucks was an innovative currency in that it allowed customers to use their eBucks to pay for goods and services digitally. "Today, eBucks is South Africa's most aspirational platform-based rewards programme, with a focus on providing real and meaningful value to members and partners."

"Since its inception, eBucks has paid out billions in rewards to customers and has an indus-

try-leading earn-to-spend ratio, with most customers using their eBucks within days." Celliers states that FNB is committed to keeping free eBucks Rewards as the most rewarding multi-partner program in South Africa. "In the current economic environment, millions of South Africans continue to rely on the program to alleviate financial constraints. Customers use the programme to supplement the high cost of fuel and food, travel expenses, and daily essentials like airtime and data."

"Since we continue enabling more customers to earn eBucks, the benefits go a long way toward helping families stretch their budgets. As part of our platform journey, we've

also enabled customers to manage their rewards on our digital platform through interfaces such as the FNB App," he says. "The accolades we've received for our eBucks programme throughout the years are a constant reminder of its value and impact on our customers and their families."

"More importantly, these accolades are a tribute to our partners, who continue to support our efforts, and our customers, who make the programme as engaging and meaningful as possible to make today and tomorrow better. We look forward to continuing to delight our customers with value-added solutions tailored to their specific needs," concludes Celliers.

African Telcos Yet Not Ready For 5G Technology: GSMA



Experts say Africa can't afford to be left behind the rest of the world, considering the future benefits the technology can help unlock.

African Telcos are not yet ready for 5G technology, according to data and research firm GSMA. Market factors such as population, urbanisation and GDP per capita point to a lack of readiness for 5G rollouts in Africa.

5G technology has not yet delivered its promise, even in other parts of the world. Despite this, some African countries have begun issuing 5G licences, and telcos are marketing it aggressively. Experts say Africa can't afford to be left behind the rest of the world, considering the future benefits the technology can help unlock.

From regulators issuing new licences to African telcos marketing it as the best thing since sliced bread, 5G technology has been making news and marketing rounds in Africa. While the appeal is great for you to jump on board, we have to ask some questions: is Africa ready for 5G? Is getting a 5G device worth it?

The short answer is not yet; data shows Africa is not ready for 5G. Some experts are unsure what 5G even means, while others are adamant that Africa can't be left behind in the 5G race. First, why is 5G important?

5G technology is a massive evolution from 3G and 4G that most of us are used to, and it promises to unlock massive opportunities in education, health, entertainment, and business. It's not just about holding that online call without going "can you hear me?" countless times; it's about hosting massive conferences and concerts without missing a beat. After years of deliberations in the International Telecommunications Union (ITU), find out about them here, in 2019, we saw the first commercial launch of 5G in the US and South Korea...[Read More](#)

Africa Mini Grids Program Launched To Improve Investments



The Global Environment Facility is funding the four-year project, which is being supported by the United Nations Development Program (UNDP) in Nigeria.

The Africa Mini-grids Program (AMP) is a specialized support initiative that was established to provide electricity at economies of scale, to encourage increased commercial investment with new growth opportunities, and to develop novel business models in some of Africa's poorest countries. The Rural Electrification Agency launched it on

September 29, 2022. The Global Environment Facility is funding the four-year project, which is being supported by the United Nations Development Program (UNDP) in Nigeria.

This program covers 21 African countries. The main goal of Africa Mini-Grids Program is to focus on various low-cost models, improve investments, and develop financial credibility for mini-grids.

It will collaborate with countries to implement policies and regulations that encourage private investment...[Read More](#)

Airtel Nigeria Announces Acquisition Of 5G Spectrum



Airtel Nigeria announced the purchase of 5G spectrum as well as additional spectrum for its 4G network for a total of

\$316.7 million on Monday. According to a statement issued by Airtel Africa's local unit, the decision is part of the compa-

ny's commitment to expanding higher-speed connectivity in Nigeria through 5G cellular technology. The company stated that it paid the Nigerian Communications Commission (NCC) \$316.7 million in cash for 100 MHz of spectrum in the 3500 MHz band and 2x5 MHz of spectrum in the 2600 MHz band.

A strategic strand of a broader plan to boost Airtel Nigeria's mobile data network as well as the power of its fixed wireless home broadband, the spectrum purchase raises Airtel Nigeria's current capacity ahead of the rollout of 5G technology...[Read More](#)

For The First Time Cape Town Hosted World Science Forum 2022

The World Science Forum 2022, themed "Science for Social Justice," was held in Cape Town in December.

The World Science Forum series, which began in 2003, fosters and sustains dialogue between the scientific community, society, policymakers, and industry. Around a thousand leading scientists, decision-makers from politics, industry, civil society, and the media from over 100 countries shared their perspectives on the new challenges facing science in the twenty-first century. The World Science Forum 2022, themed "Science for Social Justice,"...[Read More](#)

First African Produced Breast Cancer Tests To Cut Costs

Most of the diagnostic kits for cancer and other diseases in Africa are expensive imports from outside the continent, usually from Europe and the US. The first African-produced tests to diagnose breast cancer and leukaemia will become commercially available within months, cutting costs and waiting times for patients across the continent. Most of the diagnostic kits for cancer and other diseases in Africa are expensive imports from outside the continent, usually from Europe and the US. "The price of the kit can be double that of what it would cost to manufacture it locally. It is also a long process. It can take weeks or months for the kits to arrive," said Hassan Sefrioui, an executive board member of the Moroccan Foundation for Advanced Science, Innovation and Research (MASciR), which developed the new tests.

Development of the cancer kits has been under way since 2010, Sefrioui said, and the leukaemia tests have already been used in Morocco on 400 people. Previously, all samples would have to be sent to France for analysis, prolonging and delaying treatment. "But with locally manufactured test kits, we can get results within hours," he said.

Breast cancer is the most prevalent cancer in Morocco and a leading cause of death among women. While global survival rates for those diagnosed early is high, a large percentage of breast cancer cases in low- and middle-income countries, including Morocco, are detected at a later stage.

Africa's reliance on imported tests, treatments and vaccines has been a pressing concern for health authorities on the continent since the Covid-19 pandemic. An estimated 70% of pharmaceutical products and up to 99% of vaccines used in African



countries are imported.

"Africa is over reliant and over dependent," said Christian Happi, director of the African Centre of Excellence for Genomics of Infectious Diseases, at a health conference in Rwanda last month. "The continent was entirely dependent on the outside at the start of the pandemic. We could not even produce simple diagnostics."

The conference discussed ways to increase Africa's manufacturing capacity. Last year saw the launch of the African Pharmaceutical Technology Foundation to expand production, and plans to improve regulatory oversight through the African Medicines Agency (AMA) were approved in 2019.

Opening ceremony of the International Conference on Public Health in Africa, Rwanda, 13 December 2022 Ways to increase Africa's drug and vaccine manufacturing capacity were discussed at the International Conference on Public Health in Africa, Rwanda, 13 December 2022. Photograph: Courtesy of CPHIA 2022 "We still need a comprehensive strategy to support local manufactures," said Yewew Kebede Tebeje, head of laboratory systems and networks...[Read More](#)

Nigeria Wheat Farmers Assure To Cultivate Over 350,000 Hectares

The Wheat Farmers Association of Nigeria (WFAN) has pledged to cultivate over 350,000 hectares in order to produce at least one million metric tonnes during the 2022-2023 farming season.

Salim Saleh Mohammed, the association's former national president, stated in his final interview a few days before his death on December 25, 2022, that this was possible with the support and encouragement of the Central Bank of Nigeria's (CBN) Anchor Borrowers Programme, the Federal Ministry of Agriculture and Rural Development, and other interested private partners.

He had stated that the association anticipated receiving significant and timely attention in order to produce enough to mitigate the disaster and the growing population.

He also stated that massive food production and technical and financial assistance to

increase production and productivity are critical to overcoming the global food crisis and rising prices of essential commodities, particularly wheat farming.

He also claimed that this would halt internal and external supply shortages and avert the expected increase in prices of essential daily necessities such as bread, indomie, and snacks that become household consumption.

He also stated that Nigeria has

the potential to be a breadbasket for Africa, emphasising the importance of collaboration among the country's agricultural stakeholders.

He emphasised the importance of stakeholders collaborating with the government to achieve much-needed synergy in identifying challenges and developing strategies for improvement.

Dr. Oluwashina Olanji, former Executive Director of the Lake Chad...[Read More](#)

