

COMPETENCY MAPPING IN TECHNOLOGY AND MANAGEMENT

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ABSTRACT

It is an attempt to draw a line of correlation / mapping of Technology, Competitiveness, and Management in a single point with suitable case studies to establish and strengthen the findings of the paper. Rocket launching as specialization for Technology and the innovative concepts in Education for competitiveness, detailed in different views. The topic which is dynamic in nature, neatly mapped with road accident and surrogacy with apt connotation, both the issues are socially relevant, narrating the individual responsibility, women's rights and freedom.

KEYWORDS

Rocket launching – PSLV – GSLV – UAV, Meta University, road accident and surrogacy.

INTRODUCTION

Competency Mapping – Vital role in all walks of life irrespective of Engineering, Technology, Medicine and Management. “An able man for the noble post” – German Proverb, Hence mapping or matching is considered as most important aspect not only in recruitment sector also in Production Industries. Each and every field has some important parameters such as educational qualification, years of experience, skill, efficiency, performance ratio and leadership, totally named as COMPETENCY or standing orders or standard operating procedures.

How to build / hone / learn / equip the competency to match with the current corporate needs is the biggest question and burning issue before us, since the unemployment ratio in Tamil Nadu is abnormally high comparing to other states in India. 95% of the Indian Engineers unemployed, further Robotics and Software pose huge threat to the unemployed youth. Through knowledge on data science, analytical idea and hands on training on the respective subject is the need of the hour to ensure better placement.

COMPETENCY MAPPING

In recent years Technology spreads its wings wide open, incorporating the important platforms like, Artificial Intelligence, Internet of Things, Robotics, Quantum computing, Data

sciences, Cyber Security, Automation, 3D Printing & Design and Virtual Reality to ensure vertically and Digitally strong Indian nation with new dynamics and dimensions.

The commendable improvement in rocket launching such as PSLV and GSLV with mini multi beam communication facility and high resolution cameras. Recently rocket launching has become special feature in India either through PSLV or GSLV, As on now 53, Indian satellites and 269 Foreign Satellites have been launched through PSLV for the past 25 years – especially to study Agriculture, Forestry, Pollution Detection, Geology and Soil Survey, Coastal area, Inland water bodies, and Environmental Studies, further to monitor surveillance opted is Defence sector and Anti terrorist operations. Students from SRM and Jeppiar Institutions contributed mini Satellites were loaded in the Rockets in the past. Human space flight programmed and planned in 2022.

PSLV C37 – 27.01.2017 -104 satellites – 1378 Kg - Sathish Dawan Launching pad

PSLV C43 – 29.11.2018 – 30 satellites – 441 Kg – Sathish Dawan Launching pad

PSLV C44 – 24.01.2019 - 690 Kg - Sathish Dawan Launching pad

PSLV C45 – 01.04.2019 – 28 Satellites – 656 Kg - Sathish Dawan Launching pad

GSLV - India's Heaviest Satellite GS80 – 11 was launched on 05.12.2018 lifted off from Kourou Base at 2.07 am (IST) with GSAT-11 and the Korean geo Satellite, Geo Kompsat-2A. The special features are listed below:

- First 06 ton class Satellite of ISRO
- 34th Communication Satellite built by ISRO
- Total Mass 5854 Kg
- Orbital location 74 Degree E
- Space craft Power – 13.6 Kw
- Machine Life – 15 Years
- Data Rate – 16 Giga bit per second
- GSAT 11 Provides high data rate connectivity for users over India using spot beams. It also provides broad band connectivity to Gram Panchayat under Bharat Net Project as part of "Digital India" Program

DRONES: UAV - Earlier it was considered as toys, now Technology utilising the Drone in an effective and efficient methods. Drones have been categorized as follows by DGCA – Director General of Civil Aviation into 05 Mini upto 250 gm, Micro – 250 gm to 02 kg, small – 02 kg to 25 kg, Medium – 25 kg to 150 kg Large – More than 150 kg. 2018, Night Drone race was organized in Bangalore during last week of Nov 2018 wherein 23 Pilots across the country participated with square and rectangular Drones. Now Drones can skip returning to base stations or crash landing once the batteries are drained out since battery backup is a major consent for the Drones. The technical team working at the Robot Bosch and IISc. Addressed this problem for a solution. The team designed the charging ports which will be installed on top of the Electrical street poles, accommodated in the ensuing smart cities. Drones will automatically search for the nearest charging port by utilising the GPS and home in, the duration of the charging will around 01 hour, reduction of charging time is under progress, Further negotiations is going on with DGCA and Power Generating authorities to bring the norms and specification for the charging poles.

Jeyanth Sinha, Junior Civil Aviation Minister said Big Drones registration and creating Drone ports in Health Establishment would be processed from 1st Dec 2018 & New Policy to be drafted from Jan 15th 2019. Pilots allowed to use multiple Drones to deliver the goods and to facilitates speedy transportation of organs between Medical Establishment & Hospital.

EDUCATION

Education plays an integral part in shaping the individuals career & future

- Updation of Curriculum for Engineering and Management Studies.
- Industry oriented Syllabus and Hands on Training.
- Beyond Classroom studies – Internship and Industry Visit.
- Project, Research and Incubation Centre as effective tools of Learning.
- Guest Lectures and Special session by Industrial and Corporate Experts.
- 360 degree approach in all parameters and requirements.
- MHRD – AICTE – SWAYAM – MOOCH – NIRF – to be followed without any hesitation or postponed.

Meta University is a new concept for state run Universities for which RGUHS – Rajiv Gandhi University for Health Science wants to lead. Multidisciplinary Universities are joining hands together to pool the activities conducted by the Medical University to be introduced from the ensuing Academic year. It also aims to approach all Universities in the states to know their interest according to their expertise. Visvesvaraya Technological University & RGUHS both try for Meta University Concept since Technology is most important in the Health and Medical field. Medical Colleges coming under affiliation of RGUHS has to create simulation centre for getting hands on experience. These centres will have mannequins instead of real patients to utilize how to administer IV and Injections. – Since Bangalore is a Hub of Education Sector, the team is targeting IISc. IIMB and NIMHANS for Brain storming and to arrive at the general / common issues for the welfare of the Human Beings, under the banner of Meta University Concepts.

- Virtual Reality has been made as course elective in the Shastra University.
- B. Tech Artificial Intelligence to be introduced from 2019-20 at IIT Hyderabad.
- MBA Entrepreneurship introduced at IIM Bangalore in the Academic year 2015-16.

COMPETITIVENESS

Defined as Skill Development, Talent enhancing, Equipping with efficiency and effectiveness for the ensuing project or to face upcoming situation through training programmes. The competitiveness shall vary from time to time depends upon the circumstances / situation. Our Aim , Ambition is to hone our talent through Strategic plan and Training .

ROAD ACCIDENT

Total Length of the Indian Roads – 59 Lakh Kilometres. Infrastructures of the Road drastic - elevated Highway, over bridges, Flyovers resulting in more Transportation and accessibility. Average Accident per year in India 05 Lakhs.

Average Fatal per year in India 1.5 Lakhs and Millions more injured and disabled. In most cases people killed and injured are men in the age group of 15 to 45 years which is known as the productive age group in any Economy. Each such death results in the loss of precious Human resources in the Country and total disaster for the families for the victims.

CAUSES OF ACCIDENT – Excessive Speed and rash Driving, violation of Traffic Rules. Carelessness, Influence of Alcohol and Sleep.

VEHICLE – Brake Failures, Steering Systems, Puncture of Tyres , Lighting systems Road Condition, Skidding road surface, Patholes, Ruts.

ROAD DESIGN – Defective Geo Matic Design like Inadequate sight distance, inadequate with shoulders, improper lighting.

ENVIRONMENTAL FACTORS – Unfavourable conditions like mist, snow, smoke, heavy rainfall which restricts visibility making driving a safe. 5 % of the GDP generated from Road Transport and Logistics. HR and Department

Involved – Transport, Police, Hospital, Judicial and Insurance firms

TECHNOLOGY	COMPETITIVENESS	PROCESSES MANAGEMENT	FINANCE MANAGEMENT
Hastle Free Separate Lane for Ambulance	Valid Driving License	First Aid and Treatment	Insurance and Compensation
Heli – Taxi to be used as Ambulance	Road Traffic Awareness	Artificial Limbs	
Separate signalling system during Accident	Safety Measures – Seat Belt & Helmet	Post mortem Report	
Restriction of Drunken Drive through sensor inbuilt in Vehicle	Fitness Certificate and Emission Test 1	Insurance Process	

Long Live Foundation – an NGGO filed a PIL in the Delhi High Court for the Accident Victims, Good Samaritans and by standers safety and security. Based upon the High Court directions the SOP – Standard Operating Procedure has been pronounced, presently The Government of Karnataka implemented the same in all Health Establishments

SURROGACY

Technology, Competitiveness and Management plays a vital role in Surrogacy, the above mentioned 03 dimensions interlinked very closer to the process of child birth, considered as Technology, the financial and legal implications to be treated as Finance

Management. The contract, the property on the body by the women, the complete informed consent – parameters of one among the management considered by court of law. Hence the following topic “**surrogacy**” taken as case study.

Thousands of woman around the world are born without uterus. Experimental procedure could help more couples conceive healthy babies. Infertility is almost always thought of as a woman’s issue and it’s true that women bear the greater burden of it, they are the ones who ultimately either get pregnant or don’t and regardless of which partner has the fertility problem, the woman’s body is usually the site of treatment. (In Vetro Fertilization) IVF for instance, often requires just a sperm sample from men but a great deal more from their female partner. Injections of synthetic hormones, blood tests, ultrasounds. Many cases of female infertility are idiopathic, meaning their cause is a mystery to doctors, genetics or other health factor might be at play or it might be something environmental. Diet, Alcohol, Air Pollution, stress, pesticides, compounds in plastics, even wearing briefs instead of boxer, research has implicated all these in the potential degradation of fertility and the scientist are trying to figure out what’s most important. Recent research suggests that age is another contributor sperm quality not just egg quality decreases with time.

Female Athletes often like challenging work outs, but their intense training makes them lean reducing their capacity to conceive, around 18% of women dealing with infertility are athletes, it’s a common issue in long distance runners and professional dancers too. Any fitness freak who workouts excessively could experience reduced fertility for the same reason missing or irregular periods means the body can’t produce eggs due to lack of estrogens supply. Sports women body is under heavy physical stress specially when they don’t eat to compensate the energy they are expending the body goes into starvation mode the brain figures out that it is not good time to get pregnant hence body and reproductive organs / hormones go into shut down mode / silence mode.

Methods to regulate surrogacy and related practices, whereby childless persons hire the womb of a woman to carry and deliver their baby, have been actively discussed in the country for many years. This is because India has become a hub for surrogacy with people not only from the country but other countries too engaging women as surrogates. A whole system of clinics, doctors and other personnel and facilities has come up around it. There have been charges that many poor and ill-informed women are exploited, and that is why a regulatory framework for it was conceived. The Law Commission proposed a total ban on commercial surrogacy, which is surrogacy for a consideration, and supported only “altruistic surrogacy” But a parliamentary committee opposed an outright ban, calling it too moralistic and violative of a woman’s freedom of choice.

The surrogacy (Regulation) Bill which was passed by the Lok Sabha 2nd week of Dec 2018 is aligned to the Law Commission’s view. It allows only “close relatives” to become surrogate mothers and disallows any payment other than medical expenses. This is unrealistic and is based on a paternalistic view of family ties which is fast disappearing. It is difficult to imagine the a relative would be ready to carry a baby for nine months without a financial reward. If a woman finds it a means to earn an income the government should not deny it, and she has the right to decide what she should do with her body. It is not the idea of surrogacy but the malpractices that should be curbed and regulated. It is likely that such restriction would push surrogacy underground and create a black market. The committee’s view that financially weak relatives may be coerced into surrogacy cannot be dismissed altogether and so exploitation may still continue. Many women’s groups have opposed the provisions of the bill.

The bill allows surrogacy only to couples married for at least five years. It disallows it for couples marry for less than five years. It disallows it for couples in live-in relationships and for homosexuals. The Supreme Court has accepted live-in relationships as legal. The court has also decriminalised homosexuality. So why should these sections of people be denied the right to surrogacy? It amounts to discrimination. Many other countries do not have a legal ban on commercial surrogacy. This

may lead to new ways of violation of the ban in India. In the Lok Sabha, some members made a demand to make the bill more liberal and realistic and to expand its scope. These demands and suggestions should be considered when the bill is introduced in the Rajya Sabha, and the wrong and unnecessary restrictions should be removed.

FINDING AND SOLUTIONS

Education to be measured by Knowledge and skill based upon the practical and projects. Meta University concept has to be followed across the country for uniform solutions.

Road Safety Campaigns have to be aimed at specific road user groups. Separate campaigns should be designed for different road user.

Women's Rights and Freedom of thinking should be implemented in all walks of life, the contract between the surrogate mother and the childless couple should be clear and precise, with regard to finance and safety measures.

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