ARTIFICIAL INTELLIGENCE IN SKILLTech AND SKILLCast Commander Satyajit Roy, Veteran Indian Navy

A Skill And Employment Based Social Engineering National Skill Capacity Development Program For Socio-Economic Empowerment Of The Working Class In India

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The AI Theme For SkillTech and SkillCast Problems Being Faced and Probable Solutions Understanding The Need For Problem Solving Technology And Solution Strategy

CASE STUDY

Private Security Industry In India

The AI Solution For SkillTech and SkillCast

A DeepTech platform, which joins the dots of Indian social security domain, it's services flow like the blood stream of the system providing life and fulfillment of the Skill-Employment space. SkillX leverages large number of technologies, management tools and business strategies to fulfill any and every task an employable beneficiary may need to routinely undertake or solve issues that hamper the normal fulfillment of his socio-economic entitlement. Some of the schemes where much needed assistance is sought are EPFO, ESIC, JAM, Skilling and employment, etc. The mission, vision and objective of SkillX is to supremely empower the entire working class in India and make them strong, resilient, self reliant and highly aspirational for a better life and sustainable livelihood.

Theme.

Convergence of a huge pool of Human Resource with Industries and Businesses and with Skilling Domain onto a single pivotal e-platform to deliver highly improved throughput on numerous monetization opportunities on online and off-line formats, to fulfill the needs of the numerous stakeholders by providing them immense value prepositions at affordable costs; consistently, incrementally and customized beneficially.

Competitive Tech-Drivers For Business Success

• Digital Platforms.

Dynamic digital learning content such as adaptive, gamified or games-based and social for better leveraging the unique capabilities of the digital format to improve efficiency and effectiveness of Skilling programs and reaching learners at no or low costs.

• Artificial Intelligence.

AI-based tools used to assess skills, curate content, create personalized learning pathways and automate routine course management and assessment tasks.

• Adaptive Learning.

Adaptive learning delivers personalized learning at mass scale. This has ability to create program content that is customized for each learner and adaptive to that learner's performance brings key advantages and distinguishing factors through digital learning. Adaptive learning also provides a large amount of data to program operators and instructors. It also provides a way for blended learning programs to understand which content areas to focus on to maximize learner comprehension.

• AR/VR.

VR and AR technologies provide realistic simulations to help workers master new manual tasks so they can work with smart processes or machinery.

• Block chain.

In the skilling ecosystem, block chain can be used to award qualifications, licensing and accreditation, manage student records and intellectual property, and make payments.

Value Deliverables By SkillX Platform

- Build massive awareness of new skills needed to make the pivot
- Technology applications through Digital learning platforms and DeepTech
- Assess skills using analytics to customize learning based on individual needs
- AI-based adaptive learning to build specific learning pathways
- Foster job shadowing and test job readiness
- AR/VR for simulations and immersive job training
- Monitor individuals and help them navigate the change as they build expertise
- Block chain-based micro credentials for lifelong learning
- Digital technology helps democratize learning, employability and livelihood empowerment

Impact on Stake Holders

Employees

- Acquire transferable skills
- Learn to learn
- Pursue flexible employment, not just lifetime careers

Employers

- Shift from necessity to opportunity entrepreneurs
- Ramp up to reap economies of scale
- Provide in-service training for fresh trainees, re-skilling and up-skilling for experienced workers
- Adopt modern labor and human resource practices
- Ensure corporate social responsibility
- Support employees when employers have to retrench them

Skill Providers

- Focus on employability.
- Extend knowledge plus advanced cognitive, non cognitive and/or technical and vocational skills
- Sharpen academic-industry mutual interaction
- Ensure flexibility in education and training
- Train students for a knowledge economy, with social awareness

Government

- Connect private and public stakeholders
- Provide social security
- Focus on quality and inclusion

Target Group And Population Segment

Estimated ~100 million employees, impacting ~400 million Indian population; who describe as below:

- People who are covered under EPFO and or ESIC
- People who are covered under other employee or social welfare schemes
- People who are eligible under EPFO and ESIC but not yet empaneled
- People who are engaged in unorganized or informal sector and who would be benefitted by joining EPFO and ESIC
- Daily wages earners
- Others who are in similar employment zone

Problems Areas

Statutory

- Employee Provident Fund and Pension Fund Schemes
- Employee State Insurance Corporation
- Professional Tax
- The Payment of Bonus Act
- Payment of Gratuity Act

Employer

- Employee Duty Attendance Records
- Labor Welfare, Leave and HR Policies
- Minimum Wages Act
- Employee Benefit

Government Schemes

- Social Welfare Benefit Schemes
- Direct benefit Transfers Scheme
- Financial Inclusion (Jan Dhan) Scheme
- Social Identification (Aadhaar) Scheme
- Mass Connectivity (Mobile) Scheme

Skill Development

- Awareness and sensitization
- Basic skilling in area of core employability
- Reskilling and up skilling to upgrade employment, sustainability and earnings capability and capacity
- Life skills
- Money skills
- HSE (health safety and environment) skills

Cause Of The Problems

- Overall ignorance, apathy and limited intellectual capacity
- Lack of various skill sets enumerated above
- Limited understanding of procedures followed at EPFO, ESIC and all such welfare schemes entitled
- Complicated procedures followed at those organizations/platforms and user un-friendly online processes
- Corruption in society and systems
- Almost all (99.9%) the beneficiaries' are not tech savvy
- Inability to access the Departments/Organizations and system being non approachable, user un-friendly
- Cost of enrolling for such benefits, cost of issue resolution,
- Beneficiaries' susceptible to falling in corruption or exploitation trap

Stakeholders In The System

• The individual employee or worker, whether already employed, unemployed or an individual who has the potential to become employable

• The employer

• The concerned Ministries, Government Departments, Organizations, and Agencies involved in formulating, managing and delivering the said social welfare benefits to the citizens.

- Middlemen and parties interested to exploit this system
- Well-wishers parties i.e. individuals, organizations and corporates.

Proposed Solution To The Problem

- Basic short skills (online tutorials, online tutors or trainers, etc.)
- Career counseling
- Job portal CV/Bio posting and job search
- Information of job market
- Help-line to provide online/tele/AVR responses to basic queries and assistances
- Tele/online counseling and guidance by qualified counselors to resolve or assist in specific or typical issues/problems
- Video/chatbot/other digital interventions for self-help tutorials/assistance inn problem solving in maximum popular languages.
- Basic data and information repository for easy availability to the inquirer.
- Assist in completing basic open-ended functions on the said portals, like correction of spellings, correction or updating of basic KYC, to ascertain status of their accounts, etc.
- Basic and advance Skill courses across sectors and levels
- Career couching
- Job placement
- E-locker facility with assistance to retrieve, archive and access the employees vital documents, records and timeline
- Al assisted predictive employability, livelihood and social engineering interventions for futuristic positive trajectory of participant

Part-II

BACKGROUND, DEMOGRAPHICS AND ISSUES FACED BY THE INDIAN WORKING (MIDDLE) CLASS

Background

India is at a tipping point, both in terms of economic growth and in the human development of its more than one billion citizens. The country is the sixth largest economy in the world, with a GDP of \$2.6 trillion in 2017. Its GDP growth rate for 2019 was projected to be almost 7.5%, and it continues to be a major engine of global economic growth. It does this while being the world's largest democracy and the world's second most populous nation, with nearly 1.35 billion people spread across hundreds of thousands of large urban centers, small towns and rural clusters. *World economic forum

Who Constitute The Working (Middle) Class

A new study says the Indian middle class doubled in size over an eight-year period from 300 million in 2004 to 600 million in 2012. Economists at Mumbai University defined middle class as people spending anywhere between \$2 and \$10 per capita per day. Another Mumbai University study says that the middle class now includes carpenters, street vendors, decorators and drivers amongst others. From 2027 India's population is set to overtake China's and the middle class will overtake that of the United States, Europe and China.

India will gain nearly 10-12 million working age people every year over the next decade, leading to a "working age majority". Therefore, to ensure the country's envisioned income growth, and hence consumption growth, massive efforts will be required to provide the right skills and gainful employment, with leadership needed from all stakeholders, including corporates, academia, not-for-profit organizations and government leaders. Essentially and strategically required will be 360* empowerment to this working class.

Economists Amartya Sen and Jean Dreze distinguish two aspects of social security; "protection" and "promotion." While the former denotes protection against a fall in living standards and living conditions through ill health, accidents, the latter focuses on enhanced living conditions, helping everyone overcome persistent capabilities deprivation. The biggest gap, and one which may only widen, is in social protection for the working poor. The National Commission for Enterprises in the Unorganized Sector (NCEUS) in 2004 was assigned to look into livelihood conditions and social security for un-organized workers employed in the un-organized sector and those in the formal sector, without any social protection. Their study found that only those in the formal sector, constituting 8% of India's workforce, enjoys social security. It further found that over 395 million workers constituting ~91% of workers in the informal sector remain underserved. NCEUS' finds that 79 percent of workers in the unorganized sector lived on an income of less than Rs. 20 a day made it evident that the gains of growth were bypassing the majority of the working population

India spends 1.4 percent of its GDP on social protection, among the lowest in Asia, far lower than China, Sri Lanka, Thailand, and even Nepal. There was a proposal for issue of a smart card, "U-WIN," Unorganized Sector (Worker) Identification Number, to every worker in the unorganized sector with a unique identification number for accessing social schemes.

*The Code on Social Security, 2019 (Draft)

*India: The Code On Social Security, 2019 by AZB and Partners

The Ministry of Labor and Employment, Government of India has circulated a preliminary draft of the Code on Social Security, 2019 (Draft Code) via letter dated September 17, 2019. The Draft Code has been issued as part of the Government's pre-legislative consultative process and comments and inputs from stakeholders and public have been invited. The Draft Code proposes to simplify, amalgamate, rationalize and replace the following central labor legislations:

- The Employees' Compensation Act, 1923;
- The Employees' State Insurance Act, 1948;
- The Employees' Provident Fund and Miscellaneous

Provisions Act, 1952;

- The Maternity Benefit Act, 1961;
- The Payment of Gratuity Act, 1972;
- The Cine Workers Welfare Fund Act, 1981;
- The Building and Other Construction Workers Cess Act, 1996; and
- The Unorganized Workers' Social Security Act, 2008.

India's social security system is composed of a number of schemes and programs spread throughout a variety of laws and regulations, however, the government-controlled social security system in India applies to only a small portion of the population. Predominantly the following social security schemes are commonly prevalent; albeit with poor implementation satisfaction level at the beneficiary end and requires much intervention from SkillX platform to achieve better fulfillment.

- The Employees' State Insurance Act, 1948;
- The Employees' Provident Fund Organization includes three schemes:
 - o The Employees' Provident Fund Scheme, 1952;
 - o The Employees' Pension Scheme, 1995; and,
 - o The Employees' Deposit Linked Insurance Scheme, 1976.
- The Employee's Compensation Act, 1923
- The Payment of Gratuity Act, 1972

A Sample Scheme for Detailed Study: The Employees' State Insurance Act, 1948;

Benefits

- Medical benefits: Full medical care is provided to an Insured person and his family members from the day he enters insurable employment. There is no ceiling on expenditure on the treatment of an Insured Person or his family member. Medical care is also provided to retired and permanently disabled insured persons and their spouses on payment of a token annual premium of Rs.120/-
- Disablement Benefit (Employment Injury)
- **Dependents Benefits**: 90% of the daily average wages to be divided amongst the dependents in the prescribed ratio.
- Maternity Benefits: Maternity Benefit for confinement/pregnancy is payable for Twenty Six (26) weeks, which is extendable by further one month on medical advice at the rate of full wage subject to contribution for 70 days in the preceding two contribution periods.
- Funeral Expenses: An amount of Rs.15,000/- is payable to the dependents or to the person who performs last rites from day one of entering insurable employment.
- Rehabilitation Expenses: At 100% of daily average wages.
- Sickness Benefit: Sickness Benefit in the form of cash compensation at the rate of 70% of wages is payable to insured workers during the periods of certified sickness for a maximum of 91 days in a year. In order to qualify for sickness benefit the insured worker is required to contribute for 78 days in a contribution period of 6 months.
- Medical benefits to retired / disabled injured person and his spouse
- **Confinement Expenses**: An Insured Women or an I.P. in respect of his wife in case confinement occurs at a place where necessary medical facilities under ESI Scheme are not available.
- Unemployment Allowance: App. 50% of average daily wage.
- Vocational Rehabilitation Skill Development Scheme (under Rajiv Gandhi Shramik Kalyan Yojana): Entire fee charged by the Institutions is to be paid by the Corporation. To and from Rail/Bus fare to IP/ IW who has to travel to attend the training programme at AVTIs as charged, is reimbursed.
- **Conveyance Allowance**: Under this Scheme, PDB beneficiaries are paid Rs. 100/- as conveyance allowance on their personal visit to Branch Office for submission of life certificate once in a year.

Documents required for ESIC Registration

- ID proof of the Applicants (PAN Card)
- Address proof of the Applicants (Aadhar Card / Passport / Election id / Driving License)
- PAN of Business and Applicants
- Registration certificate of Shop and Establishment / Factories
- Specimen Signature of Applicants
- Rent Agreement /Office Address Proof
- Partnership Deed
- Certificate of Incorporation
- MOA/AOA
- Employees details in a Specified Format

Advantages and Benefits of Employee Welfare Measures

- Increases efficiency: The employee welfare schemes act as a morale booster. When the employees get an appreciation for what they do, it helps in increasing the work efficiency of the employees. When the work is done lauded by the organization, it proves lucrative to both the company as well as the employees.
- **Boost morale of employees**: The employees work only when they are motivated to work. If the company wishes to get 100% output, then the company has to put in efforts to encourage the employees.
- **Builds competitive edge**: Competition is must if the company wants employees to work well. In order to form a competitive environment in the office, it must provide employees with opportunities. The competitive edge in the work environment can help in getting the required work from the employees.
- Improves industrial relations : The employees when benefited, results in good industrial relations too. Work output and mutually amicable relationship is built when employee is encouraged through various schemes. So, various employee schemes are essential to make employees work better in an organization.
- Improves mental and moral health: When given various facilities at work the employee's mental health improved as well as helps in making a good citizen. This helps in the overall development of an employee as well as the company.
- **Increased productivity**: Various social benefits provided to employees increase productivity, production as well as the work efficiency of the employees.
- **Employee preference**: The employee welfare schemes attract more employees within an organization. This is one of the good ways of recruiting employees. If your company has less staff then these schemes are enough to invite more employees within the company.
- **Higher retention for longer tenure**: Attrition of trained and experience employees is a major loss to any Company, hence it is essential for companies to adopt welfare schemes to enhance employee retention for long tenures.

Problem being faced by labor market and its solution

Social and economic empowerment of the working class does not repeatedly find traction due to the following factors:

•The throughput of the Skilling mechanism being slower than the rate at which new labor force gets added results in increasing number of unskilled laborers who find it difficult to become self employed and thus create a huge army of unemployed in the country.

• Similarly, the absorption rate of skilled labor force is also very poor. A huge number of technically educated youths after completing their vocational courses find it difficult to get themselves absorbed in the secondary sector, leading increase in educated unemployment in India.

• Labor market in India suffers from imperfections such as lack of adequate information regarding jobs, lack of suitable agency for the proper utilization of labor force, lack of proper manpower planning, lack of incentivizing

• Due to high rate of growth of population, a huge number of labor forces are continuously being added with the existing labor force leading to a huge surplus in the unskilled labor market resulting in lower labor pricing and improper delivery of social security benefits, etc. Such imperfections have been resulting in various hurdles in the path of absorption of labor force smoothly.

• Low moral of working class and poor work culture is resulting in lesser economic surplus in the system, which restricts indirectly its upliftment and absorption capacity in future.

• Labor market has to deal with the serious problem of unemployment, as large work force remains partially or wholly unemployed throughout the year or some part of the season. This has led to the problems like disguised unemployment, seasonal unemployment, general unemployment and educated unemployment

Part-III

CASE STUDY: INDIAN PRIVATE SECURITY INDUSTRY

Background

In the 70's when PSI (Private Security Industry) was in its nascent stage, PSAs (Private Security Agencies) could demand mobilization fee to the extent of one month's cost of service, which was later amortized over a few months. Alternately some agencies insisted and did receive advance payments for their services. However, then the business format was rudimentary and compliances were not stringent. Over these five decades or so, Guarding services have transformed into a recognized Industry, complete with watchdog agency, legislations and regulatory framework, the Private Security Agency (Regulations) Act, 2005, (PSARA). The PSI is mentored by CAPSI (Central Association of Private Security Industry), which functions both ways; like a watchdog and like a representative interphase between the Industry and Governing bodies and the Government. To further the cause of skill development in the PSI under the ages of Skill India movement, the SSSDC was formed to set up NOS (National Occupational Standards) for the PSI and implement Skill training and certifications under the various schemes launched under NSDC. Open data sources indicate that the Indian PSI is today, INR ~90,000 crores size business actively operated by 12,848 active PSARA licensed PSAs (Total PSARAs licenses issues are 21,750 out of which 8904 have expired), the largest employer in India employing ~90 lakh security guards which includes 90% strength in unorganized segment. As per market sources, the Global Security industry will touch ~\$127 billion by 2021.

What Ails Private Security Industry In India

This industry presently thrives on common minimum demand and supply fulfillment on price and value proposition hence prices are always under immense pressure as low satisfaction level is acceptable to the service takers. This defeats the aspiration and objects of all stakeholders in PSI, i.e. the employer, the agency and the employee. Markets cannot be regulated or dictated by service providers or by regulator. Security needs get relegated to lowest priority at recipient business value structures. Markets see very poor Rol on their security spends hence just perfunctionary physical security (guarding) provisions are called for. Mostly it is seen that physical asset losses attributed to functions of it's physical security (guarding) is generally negligible in comparison that decision makers do not find any viability in allocating anything more than the minimum required as visual deterrence. Furthermore, most of the business securitization, including loss of physical assets under manned guarding cover, is mitigated or loss recovered against various formats of insured risk covers. A vast majority of the manned guarding is mainly deployed for physical access control and regulating foot and vehicular traffic (a perception of Darwandari), watch and ward function over physical assets (a perception of Chowkidari) at sites where there is minimum demand and draw on specialist skill sets. Such deployment represents over 95% of manned guarding, which gets locally fulfilled by the unorganized players at low price points on low margins. The organized and accredited players have to compete amongst themselves for the balance 5% of market segmented on price, compliances, service quality standards, skills and training, management and ethics. Such stringent competition for prized contracts again gets defeated on the L1 factor.

The Statutory and Regulatory bodies can reach out to only this small block of organized players whose individual priorities of sustainability and profitability weigh over collective objective of the PSI.

Market dynamics dictate businesses; regulations and regulators can postulate but cannot dictate business decisions or results. Facilitators can facilitate those who seek facilitation. Within all these dynamics, the PSI finds its neutral equilibrium and a state of rest. Many Industry participants suggest that CAPSI engage with markets to enforce service standardization, mandatory skill parameters and pricing policies including statutory compliances and other employee welfare to the betterment of the Industry as such, however; in reality the stakeholders in question promptly embrace their position of limited comfort, hence all regulatory and sectorial development initiatives remain non starters.

Aspirations Of An Industry

The PSI aspires greater cohesiveness amongst its' proponents. The PSAs, which are greatly fragmented and scattered in vision and mission as articulated by CAPSI and PSARA; are not able to get themselves onboard with a simple majority. Instead of large representations of PSAs adapting the Swarm Theory of facing collective risks and achieving collective victories, they seek individualistic positions of comfort, running the lone wolf beat. This trend can be reversed if the Swarms see tangible incentives and real benefits of flying together. Numerous other Industry Associations and Bodies have evolved promotional mechanisms in this direction for their members. Through thoughtful and strategic maneuvering for best execution of the doctrine(s) prescribed within PSARA and CAPSI guidelines; all stakeholders would collectively alleviate the angst of their Industry.

Empowering The Working Class

Notwithstanding the above, this author is of the opinion, to instead turn the entire narrative on its head by creating an antithesis to the status quo; that is to adopt the bottom-up employee empowerment approach whilst replacing the topdown institutional indoctrination process. The contrarian adaptation is to supremely empower the weakest stakeholder i.e. the Security Guard. When he has the awareness, aspiration, ways and means, a clear direction to his legitimate livelihood and welfare, then he will be spurred to rise up to the expectations of the Industry. Bringing up the weakest and smallest stake unit(s) i.e. the security guard, collectively enmass can bring dividends in small measures but in huge volumes. I am not referring to skilling and up-skilling alone, I suggest the Industry and Government may take a good hard look into the entire gamut of socio-economic empowerment and development of the humble security guard, as a national mission.

His social security should honestly and genuinely be accrued to him, without short charging him on his legitimate wages, benefits, leave and family welfare, EPF and ESIC benefits and a plethora of other social benefits that the Government entitles employees in this bracket. When employees (beneficiaries) demand better lives and livelihood, better social status and aspire their mainstreaming in society, they will, to the best of my wish and desire, strive to deliver superlative service with pride and dignity. This would be a transformational strategy for the PSI.

Empowering The Security Guard

Security Guards, and millions of workers and employees in this category face employment, skilling, financial and social problems, which crave to be solved or at least be mitigated to alleviate their socio-economic and employability conditions. The systemic problems and individual problems face by this category of workers/employees are:

Issues of discrepancies and disputes faced by workers at Employer end

- Attendance
- Salary
- Leave
- Deductions
- Benefits

Issues of discrepancies and disputes faced by workers at Scheme Implementing Agency end

- EPF
- ESI
- P Tax
- Bonus
- Gratuity
- Others

Other Issues of discrepancies and disputes faced by workers:

- Other Social welfare benefit schemes
- Direct benefit transfers
- Jan Dhan
- Aadhaar
- Mobile

Issues of discrepancies and disputes faced by workers pertaining to Skill Development

- Awareness and sensitization
- Basic skilling of in area of core employability
- Reskilling and up skilling to upgrade his employment, sustainability and earnings
- Life skills
- Money skills
- HSE (health safety and environment) skills

Understand the need for the solution

Perceived Barriers Impeding The Working Class Mainstream Inclusiveness

Four critical "access" barriers currently constrain the aspirations of the working class in India.

- Constrained physical connectivity or outreach i.e. access into 'The System"
- Lack of digital connectivity or digital savvy
- Limited financial inclusion, life skills, money skills

• Inability to fathom the labyrinth and working of "The System", the corporate or business functionalities, the various welfare scheme eco-system.

Perceived Barriers Impeding The Delivery of Social and Financial Inclusiveness Programs By The Government and Industry.

The executives of these schemes at the functional level are completely overwhelmed and lacking in delivery of these schemes to the working class. The working class remains deprived of all the benefits entitled. This prompts the need for making the working class aware of their entitlements and the existence of such schemes. The working class should be empowering with knowledge, confidence and desire to avail of their entitlements. This needs end-to-end handholding of the working class across the entire process flow of each such entitlement until fulfillment is achieved.

The time is ripe for these stakeholders to come together and address head-on the most pressing societal challenges facing India today – skilling and job creation, socio-economic inclusion of rural India, and building a healthy and sustainable future for its citizens amid shameless corruption, greed, apathy, civic and professional callousness, lack of ethics and profiteering, etc. Collaborative efforts to address these challenges will unlock the full potential of a young, aspiring and thriving working class and establish India as a model for fast-growing economies under a mature democracy of the world.

The AI Solution

A DeepTech supported platform, which joins all the dots of Indian social security domain; it's services flow like the blood stream of the system providing life and fulfillment of the schemes. SkillX leverages large number of technologies and management tools and business strategies to fulfill any and every task a beneficiary may need to routinely undertake or solve issues that hamper the normal fulfillment of his socioeconomic entitlement.

The mission, vision and objective of SkillX is to supremely empower the entire working class in India and make them strong, resilient, self reliant and highly aspirational to a better life and livelihood.

"Security is a fundamental need of humanity hence security service is a recession free business. We shall overcome and survive all the tribulations of times".

Sources and References !

- FICCI- E and Y- Private Security Industry !
- Govt of India, Ministry of Skill Development and
- Entrepreneurship and NSDC Private Security Industry

Overview

- World economic forum
- The Code on Social Security, 2019 (Draft)
- India: The Code On Social Security, 2019 by AZB and Partners
- "How effective are social security and welfare in India? Anumeha Yadav, 2015"
- Future of Consumption in Fast Growth Consumer Markets:India", published in January 2019 by the World Economic Forum in collaboration with Bain and Company.
- Open source

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Jun 2020