Sardar Vallabhbhai Patel
National Police Academy
Journal

ABOUT THE ACADEMY

Sardar Vallabhbhai Patel National Police Academy is a premier training institute of the country which trains officers of the Indian Police Service. The Academy conducts Basic Training, mandatory Mid Career Training Programmes & a host of In-Service Courses.

The Academy trains officers of other Central Services i.e., IRS, IFoS, etc., as well as Police Officers of friendly neighboring countries. The Academy also promotes research in Police subjects.

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Opening the Doors
(Practices and Innovations in MP Police Training)

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"Yours (Police) is the responsibility to maintain the prestige of the Government and protect the honour of the citizens. It is not enough if you only detect crime and bring offenders to book. You must also try to win the affection of the people. A police officer or policeman who loses his head in handling a situation is not fit to be a member of the police force." These words of Sardar Vallabhbhai Patel are a prescription. Taken phrase by phrase, all the guiding principles of Public Service through Law are laid out: responsibility towards the Government, respect for the citizenry, balanced perspective, accountability.

Madhya Pradesh has a history of striving towards this vision with its approachable leadership and constructive solutions to challenges. About a decade ago, the leadership sought to examine its efforts through the lens of research, based on the principles of Evidence Based Policing (EBP). We must admit that in our rigid structures of governance within which there is minimal exogamy, this required some courage. However, the then DGP who later went on to lead the CBI, was in consonance with academically inclined colleagues that policing should not be based on anecdotal evidence so there was no harm in opening up to scrutiny and suggestions informed by empirical data driven research. This resulted in the formation of the DGP's Research and Policy Cell which later developed into the Pracademic Action Research Initiative for Multi-

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agency Approach Lab better known as PARIMAL and was registered as an advisory Society open to police personnel and related researchers with the DGP as its ex-officio Chair. It has partnered with academia in India and abroad including J-PAL, Helena Kennedy Centre at Sheffield Hallam University, TISS, IIM Indore, NLU Delhi etc. It was supervised by the Administration Branch under the aegis of the DGP before it was shifted to the training branch as Covid challenges burdened the system and it was difficult for the Admin branch to oversee it closely.

The partnership with J-PAL has largely focussed on public perception and response to policing particularly among women. Through their established RCT tools they have conducted rigorous research combining data analysis with practical interventions through the URJA Help Desks. The outcomes of the study were published in leading research journals. The J-PAL-PARIMAL partnership is quite dynamic and conversational. A young RA suggests the problem of attrition among women constables and a well crafted study of the problem begins with strategic mentoring and review, such is the fluidity of ideation and implementation.

With the HKC at Sheffield a couple of exchange visits of officers resulted in Gulmohar, a one-stop centre for distressed women, a well received training for middle level officers in the UK which combined classroom work with field visits in communication with local officers in the Midlands, and continued engagement on gender roles particularly women in police.

With TISS Mumbai, NLU Delhi, IIM Indore, NFSU, RSU Gujarat, JLU Bhopal and SPA Bhopal the engagement has been on various levels. A lot of micro research has been taken up involving many institutions, student interns and academically minded constabulary and other ranks. This unique experiment drew the attention of UNICEF and UN Women who have also supported various initiatives.

This approach has helped not only with introspective research and analytical techniques but also with continuous assessments of what works. A ready reckoner of the salient initiatives would help summarise the many ways in which MP Police has worked towards walking with the times.

Preparatory:

TNA- Training Needs Analysis has been a forte of MP Police for years, its experts are consulted by outside institutions including the SVP National Police Academy off and on. With the new regimen, it was done at every level with inputs from a variety of stakeholders. For example, the TNA done with UNICEF and TISS to design the syllabus for a dedicated module on Child Protection for the basic training of DSP, SI and Constable trainees, was done in consultation with all practitioners from police, health department, civil society and even children from the most vulnerable communities. This resulted in a comprehensive course appreciated by the Juvenile Justice Committee of Hon. Supreme Court of India.

CONSULTATION- Surveys and conversations with relevant ranks on expectations and needs have been developed which may be used to identify issues particularly relevant to personnel management. This resulted in many new approaches. A couple of young IPS officers heard the plaint of women recruit constables and decided to build a unique structure in PTC Indore for mothers. Vatsalya as it is called, is a happy space with little children playing around while their mothers go through a rigorous training process. A female relative is allowed in to look after the little ones. It has drastically improved the attitude of women who have had serious domestic problems joining the police ranks. This has now developed into a general policy of allowing children to join their mothers during any training if they are accompanied by a female caregiver. Motherhood is thus no liability or limitation.

CONTEMPORISATION- Syllabuses of various courses have been redesigned guided by the structure laid down by BPR&D, examined for local reality check by subject experts and peer reviewed by field level practitioners for effective learning. Besides updating professional development programmes, this has also led to Convergence with many departments whose work intersects police. Suicide prevention programmes with School Education Department, Interactive training of Anganwadi workers and police with Women and Child Development Department, CPR training with Health Department, Interactive learning

with Tourism Department etc are a result of these consultations. An important initiative has been the Cyber Security course conducted by PTS Ujjain in partnership with the local University. A large number of recruit constables took the rigorous course taught by experts and won proficiency certificates. Similar initiatives are being implemented at other schools now.

TRAINING OF TRAINERS- This has also historically been a strength of MP Police due to a strong relationship with BPR&D that has given a certain heft to T.o.T. courses. However, the Covid crisis shifted the emphasis to Digital Pedagogy and Hybrid Classrooms. MP Police was a pioneer in conducting online T.o.T. conducted as early as March 2020 on the BOPPPS model by an in-house trainer fresh from the UN-SPC. This model was further developed to ensure best practices for physical space were integrated into the virtual environment. Even after the pandemic passed, it is being used for greater reach.

A constant grievance of the personnel was lack of awareness about injury and stress during outdoor trainings. Through the good offices of a later DGP who had also helmed the BSF, physical trainers have been trained at the Sports Performance Enhancement Centre SDG-HQ Western Command BSF Chandigarh with personal attention from the resident sports doctor. The Injury Prevention Course as our trainers like to call it, has been a game changer for outdoor training.

COVID ERA LOGISTICS- While Smart Classes were still being mulled over by the leadership, all training institutions and most district headquarters established Relay Studios by June 2020. In truth, they were cobbled together with available camera mounted screens, computers, speakers and a web-based meeting platform subscribed to at the Headquarters level. This jugaad became the most convenient method for communication which has not been given up as a contingency despite the formal shift to smart classrooms.

A YouTube Channel (https://youtu.be/o2G3v00aId0) was launched in April 2020 which became an interesting tool for sharing information. With a well known satirist on the rolls of MP SPS, a series of stories entertained harried cops on Covid duties while in-house experts posted

relevant material on wide ranging topics from language skills to technology in Hindi. Later, it became a platform for live streaming major events and training sessions.

Training (Basic/In-Service):

PEDAGOGY- As expected, the methodology has eased into Hybrid and Digital (Online) modes with interactive group work environments rather than traditional techniques of lectures and one way courses. All in-service courses are now hybrid.

When Covid struck, thousands of recruit constables were undergoing training at different centres across the state. They were sent back to their respective units during lockdown. This posed a tough challenge due to the fixed timelines for return of trained staff. No one knew when the pandemic would end. So fully online basic training of indoor subjects was begun through the makeshift studios and quizzes were conducted through google forms etc. When the recruits returned later in the year, there were only projects and outdoor trainings to be completed. This kept everyone engaged and honed the digital pedagogical skills of the trainers. The basic training of clerical staff was also conducted online, parallel to this.

Virtual platforms opened up the possibility of involving experts from all over the world. It was particularly encouraging to find other states participating in the in-service courses curated by MP Police. Soon the trainers got skilled enough to conduct group work and projects online. Frequent quizzes and online tests required a huge question bank which was then prepared by a team led by an erstwhile head of a training school. These were randomised to be used as and when required.

This acclimatisation to virtual learning stood MP Police in good stead when large scale training had to be done whether related to some court decisions or to the New Criminal Laws.

PRACADEMICS- Field work has been integrated with all training since long in MP. A close collaboration with Academia has resulted in continuous improvement in current practices. Regular courses for recruit Dy. SP in Advanced Law and Victimology at NLU Delhi have been

prescient in the light of victim focussed New Criminal Laws. Regular courses on Emotional Intelligence conducted by TISS Mumbai have changed mindsets beyond what any well-meaning departmental intervention could.

A little before the pandemic, Mentorship was added to the programmes. During their District Practical Training, every recruit Dy.SP and SI is assigned to an Additional SP or Dy.SP respectively. They pick a topic relevant to the local realities in consultation with the MP Police Academy and conduct active surveys and research on them while on the job. The final presentation of these Projects with focus on developing analytical skills and critical thinking have been appreciated by every contemporary DGP who have eagerly participated in the final viva voce.

Trainees at every level have found their own unique skills through SWOT analyses which have been built into their courses.

PHYSICAL- New methodology for Outdoors learned in the Injury Prevention Course at SPEC BSF Chandigarh has changed the entire approach of the outdoor training programmes. Fitness and sensitivity of the trainers got better, steering them away from their earlier punitive approach.

Online courses conducted by the NPA have added finesse to physical fitness training while widening the audience.

Every unit has been participating in Health and Nutrition courses conducted by medical professionals.

CPR training has been imparted to nearly all personnel at the cutting edge. There have been many lauded instances of field officers saving lives by giving timely CPR to affected individuals.

MCTP for SPS- A senior colleague whose spouse went to South Korea as a mentor for Mid Career Trainee State Administrative Service officers, planted the idea of a similar programme for State Police Service officers. It took a few years to develop and convince the government that Dy. SP needed this exposure and skill development as they were the feeder cadre of senior leadership. The government approved a four to five week course for SPS officers of 12 years service or more.

After a briefing at the MP Police Academy where groups were formed and topics for projects were to be discussed, the First week was to be at the Academy of Administration, Bhopal, focused on Social Legislations, Leadership, Coordination with other Departments, Psychometrics and Work-Life Balance. Second week would be at North Eastern Police Academy, Umsaw Meghalaya or any National Training Academy or National Law University focused on Cyber Challenges, Economic Offences, Latest Trends in Investigation, Technology tools etc. Third week would be at Tata Institute of Social Sciences, Mumbai or any National Institute focused on Emotional Intelligence and soft skills. Fourth week would be in UK due to the similarity of our criminal justice system.

The UK module has been curated by Sheffield Hallam University which includes fieldwork and live exchange with South Yorkshire police focused on Community Policing and Contemporary Developments. It is essential to keep Praxis as the core of this visit. Classroom activities can easily be held online so sending two dozen officers to a foreign land by expensive flights, arranging their transport and accommodation costs for mere lectures and discussions would be a criminal waste of taxpayer's money. Therefore, live participatory activities were built into all visits.
The officers were also to be given exposure to Metropolitan Policing by incorporating a few days in London. They were to visit other locations in the Midlands and found the common ground of policing in pluralistic communities.

They would then return to the MP Police Academy and present their learnings and observations from all modules to the DGP. An excess of a hundred officers have been sent on this MCTP since it began in 2019. Their project reports and presentations have enriched the archives of MP Police Academy.

Annual Conferences/ Seminars:

Cyber Intelligence and Investigation Summit (CIIS)- In a unique initiative, MP Police partnered annually with ClearTrail from the IT

Industry, SoftClicks an NGO working for Digital Awareness, and UNICEF, to host ten days of intense deliberations on latest developments in the field, since 2020. Top experts from US, UK and India present online and offline research in interactive sessions. Attendees cross over six thousand police officers, prosecutors and judges from across India in the hybrid format. In its last edition an exhibition of the latest tools and technology in the field was also held.

Justice, Inclusion and Victim's Access (JIVA)- Curated jointly by MP Police Academy and PARIMAL, three days of consultation on Gender Issues have been held annually since 2021. A major part of the conference is felicitating Police personnel who have conducted research or study on rights of vulnerable genders. The rest is dedicated to presentation of papers by researchers from a wide spectrum. An upshot of the first JIVA conference was the formation of a Gender Resource Centre for continuous learning.

Fairness, Understanding, Liberty at Work, Access To Rights, Initiative (FULWARI)- This exclusive hybrid event is organised by PTS Pachmarhi. Three days of vertical interaction of Women in MP Police bring together all ranks from Constabulary to DG who spend time together to discuss, deliberate, brainstorm and put forth a vision document for the department and government for equity and equality resulting in some progressive policies like extra casual leave for women in recognition of their challenges during the difficult days of the month. The Helena Kennedy Centre for Justice for Women and Girls, SHU, Sheffield, UK is a partner in this programme. Experts from across the board share their wisdom with focus on Financial Literacy, Health and Nutrition and Work-Life Balance.

MASSk- Management and Soft Skills programme for DSP/ASP and SI/Inspectors is another annual workshop held at PTS Pachmarhi with experts steering discussions in the salubrious environment of the prime hill station of Central India.

In-Service Courses:

An annual course calendar is disseminated in December, based on feedback from training institutions and other police units. The Academies and Training College/Schools conduct specialised courses which need expertise beyond local availability in hybrid mode. These courses are offered to all police personnel who can understand Hindi so quite a number join on the online platform from other states too. Induction courses for junior officers are offered at the district level, overseen by the training school in the region. These are in-person as they include medical examination and fitness classes.

Evaluation:

The most important aspect of training is reality check. As the poet Burns said, "the best-laid schemes of Mice and Men/go oft awry…" it is imperative that every course/training has a built-in feedback system not only through trainees and trainers but third party auditors. MP police has tried to put in place a Feedback-based evaluation of training according to the Kirkpatrick model which includes Outcome analysis and course correction, designed by our in-house UN-SPC veteran. An annual cumulative assessment and review of entire training activities across all institutions has been conducted and published by an internal team based at PTS Pachmarhi since 2020.

Third party audits have also been carried out from time to time, including a very telling report on Dy. SP basic training by the IDFC Institute, Bangalore. The learnings from these were passed on to BPR&D as suggestions for their deliberations on new syllabuses of relevant ranks.

Challenges:

The permanent lack of adequate resources is a ubiquitous gripe of the police anywhere in the world. MP is no exception. Training is a permanent priority in political speeches but lacks the lustre for employees as it appears relatively unimportant in the workplace scheme of things. With no incentives or extra allowances, it is heartening to still find

personnel who are willing to work as trainers due to academic interest or as a temporary respite from gruelling field work. These willing people must be given priority in positions at the training institutes. They do try their best to run the show to its designed capacity. However, due to the constant lag in recruitment, all trainees get included in the headcount for law and order duties which abound beyond the capacity of district police. Even basic training gets disrupted and the best schemes of contemporary upgrading are set back, if not brought to nought.

All training institutes run at minimal capacity, some precariously so. Training schools in the unattractive regions of the state, with capacities of hundreds or even over a thousand students, remain without a deputy or teachers for months. Quite a number of those that come are not oriented towards training and are preoccupied with their own schemes of leaving the institution. Incentivising the tenure in training institutes would solve this problem to a large extent. A consonance of departmental and political will is required to ensure such incentives. A colleague once said that the police department is like a rubber band, it can stretch beyond its observable limits but one must desist before it reaches the breaking point.

The biggest challenge in any progressive programme is continuity, without which the best ideas can get aborted before any meaningful change can be achieved. MP Police have been fortunate in their Heads of Police who have all been facilitators. They have been personally interested and involved in guiding the training tweaks and turns. They have been professionally invested in learning to upgrade skills and carried forward their inherited legacy with humility. As a leader, it is vital not to have an attitude that reflects what Dante Alighieri in his Inferno imagines as written on the gates of Hell, "…Before me there were no created things…"

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Restructuring Police Training: Insights from the Science of Learning for Training Administrators

Avichal[*]

Abstract:

When did we last review our training methods closely and restructure the whole training programme? In most likelihood, its answer is never! Maybe, we did not need such a wholesale overhaul of training system. On the other hand, we have routinely felt the urge to change, believing somehow that all things were not alright and some things could surely be improved. As a result, changes have often been introduced but in a piecemeal manner, here and there, now and then, without a comprehensive review done ever in the light of science of learning. Maybe, it is desirable to take a close and critical, even adversarial, look every ten or twenty years to see if we need to redesign our training system to adapt it better to a changed world, taking the full advantage of scientific research accumulated since it was designed last. But such a complex and challenging project cannot be conceived and managed by trainers, who are overly relied on by administrators; only training administrators can do it, if at all. Drawing upon the current understanding of learning science, this paper is written to enable and guide training administrators for restructuring police training.

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Serious training administrators need to know the theory of learning and use scientific knowledge derived from various research studies to structure and programme the enterprise of training they are responsible for managing. Our discussion here is not about training as such but about gaining insights for designing the effective organisation and administration of training.

We perceive the world through our senses—eyes, ears, skin, nose, and tongue. In other words, our perception is based on what we see, hear, feel, smell, or taste. But this process is not simply of an input producing an output in our consciousness; it instead is mediated by the experience and knowledge of a person already accumulated in life and stored in brain. Actual output that a person would get from an input, then, would depend on a variable—personal bank of information and experience—so much so that the same object and event may be perceived differently and have different meanings for different individuals. German-American psychologist Ulric Neisser calls these pre-existing structures of knowledge and information in brain *schemata*, "which direct perceptual activity and are modified as it occurs." Perceiving, he writes, "is an activity in which both the immediate past and the remote past are brought to bear upon the present." Perception, therefore, "depends on the skill and experience of the perceiver—on what he knows in advance." Or, to put it simply, "we can see only what we know how to look for."

Learning is an outcome of perception. We learn by perceiving, interpreting, and predicting the world by means of our schemas and mental models which are built by our experiences and modified as we experience and learn more. Implications of this theoretical understanding are quite crucial for training and learning. If we want our students to draw the correct meaning of objects and events, we must strive for creating the elaborate schemas and appropriate mental models of the world which are employed to make sense of objects and events in a novel situation. If we want our students to draw the same meaning of objects and events, we must strive for them to have similar and shared schemas and mental models that are used for interpreting operational and social

artefacts, human behaviours, and unfolding events. And, to achieve this is one of the fundamental objectives of training and post-training activities of organisation.

Much research has been conducted since Neisser laid the foundation of cognitive psychology but his theoretical insights still remain on firm ground and the importance of modelling in perceiving and interpreting the world has since been only validated and underlined by different researchers repeatedly. For example, a contemporary French cognitive neuroscientist Stanislas Dehaene gives a broad definition of learning based on the idea of mental model and the whole body of research that exists to support it. "To learn," he says, "is to form an internal model of the external world." Further, he highlights the absolute role of mental models in making sense of the world—so much so that "in the absence of an internal model, raw sensory inputs would remain meaningless." Learning, he asserts, is an outcome of synaptic reorganisation in brain, a consequence of synaptic plasticity. "Millions of synapses undergo plastic changes every time we acquire new knowledge." Such recursive and corrective reorganisation of neuronal pathways brought about by the new and disconfirming pieces of information provide us our refined and reliable schemas and mental models acquired after the years and decades of experience. These neuronal structures are our tools for understanding and predicting the world with confidence and the purpose of organised learning or structured training is to rapidly and systematically build domain specific mental structures, that is, schemas and models for handling and solving real-life problems.

Learning is possible only if new information is available for processing and assimilation. If we are exposed to the same information which we already have in our brains, no learning can occur. Without new information, learning is neither possible nor purposeful. In other words, the novelty of experience is a necessary precondition for learning. Dutch psychologist Addie Johnson and American psychologist Robert Proctor write, "Technically, information is available whenever there is some uncertainty about what will occur…. If no reduction of uncertainty has

taken place, no information has been transmitted." Availability of information, however, is only a necessary condition for learning; it is possible that learning does not take place despite information. If information available is partially processed or wrongly represented in brain, there will be incomplete or incorrect learning. According to Dehaene, learning is an outcome of four different processes, all of which must come together for successful learning. He writes, "Attention, active engagement, error feedback, and consolidation are the secret ingredients of successful learning… Each of us should therefore learn to master them."

Let us begin with *attention* which is fundamental and paramount to learning. Human sensory systems are autonomous and human brain keeps receiving information transmitted by sensory organs all the time. Such gargantuan magnitude of information processing is far beyond the handling capacity of human brain—so much so that if processed, information overload would crash an individual's cognitive system in no time and render that person miserably dysfunctional in the busy world. But humans have survived, and thrived too, not because we have an unparalleled brain but because we also have limited attentional resource for making brain a functional and productive cognitive system. And, humans are not alone in possessing this ability; other animal species also process information selectively as we do. This *ability* of living beings is a function of *selective attention*. Johnson and Proctor also make this point. They write, "To produce coherent behavior in the face of competing and distracting sources of stimulation in the environment, some things must be selected and others ignored. If we *were* able to attend to everything going on around us, we would be constantly distracted and unable to carry out any action at all. In this sense, it is a useful adaptation that we are aware of only a small portion of our surroundings at a given moment, and that only a limited range of objects can be attended to and acted upon at any one time."

While attention cannot be defined easily, it can be described easily. There are various forms of attention such as *cognitive* and *sensory*, *focal*

and *peripheral*, and *endogenous* and *exogenous*. There is also something called *cross-modal* attention in which different sensory modalities such as visual and auditory modalities are attended together and multisensory information is processed and integrated for a decision. For learning, however, we are more concerned with cognitive attention directed to or attracted by environment. Attention can be endogenously or consciously directed by an individual to a particular object, space, or event existing or occurring in environment or an individual's attention can be exogenously attracted or captured by objects present or events happening in environment.

Attention is difficult to define but easy to understand. Johnson and Proctor explain the mechanics of attention, "A popular metaphor of attention is that it is like a spotlight, highlighting selected information and leaving information outside the focus in the dark. Like a spotlight, attention can be moved to different regions of space in order to 'illuminate' anything that might be present there…. Many studies have shown that the spotlight of attention can be adjusted to focus on a relatively small region or on a larger region of space." Spotlight analogy makes it easier to grasp the way attention works but it does not convincingly explain its workings. They explain, "The implication of the spotlight metaphor—that everything within the focus of the attentional spotlight is attended—may not be correct. For instance, regions of space that contain objects may be processed differently than empty regions of space" or "objects in space might be attended to differently than the regions of space that they occupy…. It has been suggested that a better metaphor of selective visual attention is that of a gradient of resources that is allocated to a region in space rather than a spotlight that can be moved from place to place. Such a gradient may vary in size, and resources are assumed to fall off from the centre of the gradient to the edges. A more substantial difference between a spotlight and a gradient metaphor is that the gradient may reflect not only the current focus of attention, but also the results of previous attentional allocation. That is, activation in the gradient can build up (and decay) over time and across more than one attentional fixation."

A critical and complementary aspect of attention is its inhibition. Attention inhibition is the phenomenon of suppression of information. This property is called *inattentional blindness*—our inability to 'see' a part of the reality for want of attention, which is known more for its negative effect or dysfunctional side and price that we pay in the form of making errors. While it causes errors in decision-making in real life, in learning it is desirable and essential for its positive role in filtering out unwanted and irrelevant information. *Inattention*, then, is the other side of selective attention which facilitates learning and both are required at the same time for deploying maximal attentional resource on useful information, the effect of which we see in a person immersed in learning and ignoring the whole wide world around. Johnson and Proctor agree, "In most cases, attention is used to select information. When we 'pay attention' to what we are doing, we actively attempt to attend to task-relevant information and to monitor our actions to be sure that appropriate responses are made. Equally important for successful task performance, however, is the shutting out of irrelevant information and the exclusion of inappropriate actions." Dehaene comments similarly, "Paying attention also involves choosing what to ignore. For an object to come into the spotlight, thousands of others must remain in the shadows. To direct attention is to choose, filter, and select: this is why cognitive scientists speak of selective attention. This form of attention amplifies the signal which is selected, but it also dramatically reduces those that are deemed irrelevant. The technical term for this mechanism is 'biased competition': at any given moment, many sensory inputs compete for our brain's resources, and attention biases this competition by strengthening the representation of the selected item while squashing the others."

Attention is a primary resource for learning. "Attention plays a prominent role in determining what, and how well, information is learned," write Johnson, Proctor, and Dutch psychologist Mark Nieuwenstein. But in reality, the workings of brain are indeed mysterious and there is always more to it than meets the eye. Unbeknownst to you, your brain works and much more happens in it than what you are aware of through attention, for a large part of brain lies beyond the reach of

your consciousness. Various experimental studies suggest "that inattention does not always prevent the acquisition of information, and that the failure to recall information at will does not necessarily imply that the information has not been stored in memory," they write. We often use and confuse 'memory' with what we can remember and recall when required, which is not how it is understood in sciences. Although memory resides in brain, not everything that is stored in memory is accessible for recall, in that it can be necessarily retrieved and brought to awareness at will. In the scientific world, they clarify, memory "refers to various kinds of representations of information that are retained in different formats and processed in different stores."

Dehaene imparts a neurological perspective to attention and learning. We learn because of "the extraordinary amplification that occurs in our brain whenever we pay attention to an object and become aware of it. With conscious attention, the discharges of the sensory and conceptual neurons that code for an object are massively amplified and prolonged, and their messages propagate into the prefrontal cortex, where whole populations of neurons ignite and fire for a long time, well beyond the original duration of the image. Such a strong surge of neural firing is exactly what synapses need in order to change their strength—what neuroscientists call 'long-term potentiation.'" He further explains, "The orienting of attention amplifies whatever lies in its spotlight. The neurons that encode the attended information increase their firing, while the noisy chattering of other neurons is squashed. The impact is twofold: attention makes the attended neurons more sensitive to the information that we consider relevant, but, above all, it increases their influence on the rest of the brain. Downstream neural circuits echo the stimulus to which we lend our eyes, ears, or mind. Ultimately, vast expanses of cortex reorient to encode whatever information lies at the centre of our attention. Attention acts as an amplifier and a selective filter…. This is why every student should learn to pay attention—and also why teachers should pay more attention to attention!" An efficient teacher is one who "pays close attention to his pupils' mental states."

Active engagement, a second driver of learning, means continuing association with and repetitive exposure to the subject matter of learning, which is planned with foresight and pursued with interest as against occasional, casual, and disinterested pursuit. Active engagement is effortful, directed, and organised. It is characterised by the routine and regularity of practice, of recurrent reflection and imagination, of enquiry and exploration, of scrutiny and doubt, of a burning desire to know and learn more. It is a constructive, fruitful, and fulfilling activity for its pursuer. Its origin is intrinsic and it is driven by self. Dehaene explains the mechanics of active engagement and how it promotes learning. He writes, "To learn, our brain must first form a hypothetical mental model of the outside world, which it then projects onto its environment and puts to a test by comparing its predictions to what it receives from the senses. This algorithm implies an active, engaged, and attentive posture. Motivation is essential: we learn well only if we have a clear goal and we fully commit to reaching it…. The brain learns efficiently only if it is attentive, focussed, and active in generating mental models. To better digest new concepts, active students constantly rephrase them into words or thoughts of their own. Passive or, worse, distracted students will not benefit from any lesson, because their brains do not update their mental models of the world…. Efficient learning means refusing passivity, engaging, exploring, and actively generating hypotheses and testing them on the outside world."

Interest, curiosity, passion, and motivation are the hallmarks of active engagement and they are most effective when they are intrinsic and internal to a person. More than a quarter and a century ago, American psychologist William James wrote, "Millions of items of the outward order are present to my senses which never properly enter into my experience. Why? Because they have no *interest* for me. *My experience is what I agree to attend to*. Only those items which I *notice* shape my mind—without selective interest, experience is an utter chaos. Interest alone gives accent and emphasis, light and shade, background and foreground—intelligible perspective, in a word." Dehaene communicates this fact in the language of neuroscience: "By allowing cortical maps to

massively reshape themselves, passion breeds talent." Given the crucial role of enquiry and inquisitiveness in learning, he repeatedly underlines it: "To be curious is to want to know, and that implies knowing what you don't already know…. Memory and curiosity are linked—the more curious you are about something, the more likely you are to remember it…. Curiosity guides us to what we think we can learn. Its opposite, boredom, turns us away from what we already know, or from areas that, according to our past experience, are unlikely to have anything left to teach us."

We learn only when it comes or brought to our attention that we do not know about something in the world or what we know about something is not correct. In other words, for learning it is a prerequisite that you realise yourself or made to realise by others that the world is not what you know it to be and there is a gap between your knowledge of the world and the world as it is. Only, then, information is generated and made available for you to process and assimilate in your brain that reorganises your mental model or representation of the world to match with the reality. *Error feedback* is a mechanism that makes you aware of your knowledge gap and opens you up for learning. Error feedback can be provided internally or externally. Internal error feedback is provided by self as a result of self-monitoring of practice and post-practice reflection. It is delivered both in real time and also afterwards, sometimes even at night or over the course of next few days after a practice session. External error feedback, on the other hand, is provided by others, mainly teachers or team mates who observe and monitor your practice. It is typically given in real time or soon after a practice session and only occasionally after a significant time has elapsed since practice session.

That the errors of action and prediction facilitate learning has been widely studied and firmly established. We are invariably surprised when the actual world does not turn out to be what we had expected it to be, which leads to a mental remodelling of the reality through new experience, follow-up reflection, forced research, and more practice. Errors and mistakes, therefore, are necessary setbacks for learning.

Dehaene argues, "It would be practically impossible to progress if we did not start off by failing. Errors always recede as long as we receive feedback that tells us how to improve…. The quality and accuracy of the feedback we receive determines how quickly we learn." He asserts that *no surprise*, *no learning* is a basic rule that has been validated for all organisms and explains, "The brain tries to predict the inputs it receives and adjusts these predictions according to the degree of surprise, improbability, or error. To learn is to curtail the unpredictable."

Teachers should give a precise and timely error feedback which not only describes an error but also prescribes ways to overcome it. Its communication should be done dispassionately and matter-of-factly, without generating anxiety and fear, shame or guilt in a learner for failing. In behavioural and emotional terms, then, the approach of teachers should be objective and composed, encouraging and motivating. And, in temporal terms, error feedback should be supplied quickly after its occurrence; delayed feedback is low in its productivity. Dehaene writes, "Learning is faster and easier when students receive detailed error feedback that tells them precisely where they stumbled and what they should have done instead. By providing rapid and precise feedback on errors, teachers can considerably enrich the information available to their students to correct themselves…. Setting a clear goal for learning and allowing students to approach it gradually, without dramatizing their inevitable mistakes, are the keys to success." He enumerates the qualities of good teachers and their way of approaching errors and addressing mistakes made by their students: "Good teachers are already well aware of these ideas. Every day, they witness the Roman dictum *errare humanum est*: to err is human. With a compassionate eye, they look kindly upon their students' mistakes, because they realize that no one learns without making errors. They know that they should diagnose, as dispassionately as possible, the exact areas of difficulty for their students and help them find the best solutions. With experience, these teachers build up a catalog of errors, because all students repeatedly fall into the same old traps. These teachers find the right words to console, reassure, and restore the self-confidence of their students, all the while allowing

them to amend their erroneous mental representations. They are here to tell the truth, not to judge." Bad teachers, in contrast, discourage and demotivate their students and impede and inhibit learning by their judgemental and temperamental approach which generates a sense of incompetence in their students. "Numerous studies, both in humans and animals, confirm that stress and anxiety can dramatically hinder the ability to learn…. Conversely, being immersed in a fear-free, stimulating environment can reopen synaptic plasticity, thus freeing the neurons and returning their synaptic contacts to their childlike motility—a fountain of youth," notes Dehaene.

Frequent testing is another powerful means of receiving error feedback. Tests can be given by self or by others, both teachers and team mates, using different formats. On the efficacy of testing in learning, Dehaene writes, "Dozens of scientific publications demonstrate its effectiveness…. Regular testing maximizes long-term learning. The mere act of putting your memory to the test makes it stronger. It is a direct reflection of the principle of active engagement and error feedback. Taking a test forces you to face reality head-on, to strengthen what you know, and to realize what you don't know."

Learning has a purpose: To be able to respond to the world and achieve a desired outcome. Learning, then, is not enough if we are not able to retrieve our knowledge timely and act appropriately when required in the future; it must be consolidated for long-term retention. *Consolidation* of information is what makes learning durable and knowledge available for use in times of need. It makes the rapid recall of target information and the correct execution of required action possible by a successful activation of memory. It also makes it possible to activate mental models stored in brain for projecting, predicting, and applying our knowledge to the real world in order to prepare us to deal with it successfully.

While the durability of memory and its use in the real world is the final objective of training, usually trainers are more concerned with near-term performance for qualification and validation at the end of training

course. An elaborate body of research done over many decades in various fields of knowledge and skills suggests that processes and methods employed in training for quick learning, good memory, and superior performance in acquisition phase may just be good for short-term gains made at the expense of long-term retention of knowledge and skill and its effective transfer and application in the altered situations of real life. Goal of training is not to maximise learning during training period and its application in controlled environment but to maximise the retention of knowledge and skills and its maximal transfer to real life. This problem was first highlighted over three decades ago by American psychologists Richard Schmidt and Robert Bjork in a very influential analytical paper on the paradigms of training and prevailing misconceptions on learning. They wrote, "We argue herein that typical training procedures are far from optimal. The goal of training in real-world settings is, or should be, to support two aspects of posttraining performance: (a) the level of performance in the long term and (b) the capability to transfer that training to related tasks and altered contexts. The implicit or explicit assumption of those persons responsible for training is that the procedures that enhance performance and speed improvement during training will necessarily achieve these two goals. However, a variety of experiments on motor and verbal learning indicate that this assumption is often incorrect. Manipulations that maximize performance during training can be detrimental in the long term; conversely, manipulations that degrade the speed of acquisition can support the long-term goals of training. The fact that there are parallel findings in the motor and verbal domains suggests that principles of considerable generality can be deduced to upgrade training procedures." They further clarified, "We have repeatedly encountered research findings that seem to violate some basic assumptions about how to optimize learning in real-world settings. For example, increasing the frequency of information presented to learners about performance errors during practice improves performance during training, yet can degrade performance on a test of long-term retention or transfer. Increasing the amount of task variability required during practice, in contrast, depresses performance during training, yet

facilitates performance on later tests of the ability to generalize training to altered conditions…. Taken together, however, these findings suggest that certain conceptualizations about how and when to practice are at best incomplete, and at worst incorrect." Schmidt and Bjork, however, exonerated trainers for behaving the way they do by stating that "trainers might easily assume that maximizing performance during training is their major goal; trainers may themselves even be evaluated in terms of their trainees' performance during training." It, then, becomes the responsibility of training administration and organisational leadership to fix training system by bringing desirable structural and policy changes to facilitate long-lasting learning.

Much research has been conducted since Schmidt and Bjork flagged the problem of learning in training and many doubts on the scheduling of practice and the effects of spacing on learning have since been answered by experimental research. American psychologists Nicholas Cepeda, Harold Pashler, Edward Vul, John Wixted, and Doug Rohrer did a meta-analysis by reviewing "839 assessments of distributed practice in 317 experiments located in 184 articles." They concluded, "More than 100 years of distributed practice research have demonstrated that learning is powerfully affected by the temporal distribution of study time. More specifically, spaced (vs. massed) learning of items consistently shows benefits, regardless of retention interval, and learning benefits increase with increased time lags between learning presentations…. Distributing learning across different days (instead of grouping learning episodes within a single day) greatly improves the amount of material retained for sizable periods of time." Cepeda, Rohrer, Wixted, and Pashler conducted experiments with fellow psychologists Michael Mozer and Noriko Coburn on optimising distributed practice for practical purposes. They concluded, "To efficiently promote truly long-lasting memory, the data presented here suggest that very substantial temporal gaps between learning sessions should be introduced – gaps on the order of months, rather than days or weeks." American psychologists Sean Kang, Robert Lindsey, Michael Mozer, and Harold Pashler concluded after conducting an experiment over an extended time scale, "Spaced retrieval practice has

been shown to benefit long-term retention, but the best way to schedule or distribute the retrieval attempts when there are multiple opportunities to practice retrieval has been subject to long-running debate. Two contenders have emerged: In an expanding schedule, retrieval is attempted soon after initial study, followed by subsequent retrieval attempts that occur after progressively longer delays; in an equal-interval schedule, the first retrieval attempt occurs only after some delay, and the interval between successive retrieval attempts is uniform…. Our findings suggest that when retrieval practice is spread out over days or weeks, scheduling the review sessions in an expanding fashion produces better average performance than does equal-interval spacing over the training period. Expanding practice not only produces faster acquisition and greater access to the material over the training period, it was even observed to slightly retard forgetting over the long term, too." In all, it has been found that spaced and mixed practice that we may call *distributed shuffled practice* is superior to massed and block-wise practice that we may call *crammed continuous practice*. Empirical evidence suggests that not only the same lesson and concept of a subject should be spaced or distributed instead of massed or concentrated for better learning but various lessons and concepts of a subject could also be introduced in parallel instead of just one lesson or concept of that subject until it is finished, which is a standard practice. Dividing the whole syllabus of a subject into various blocks and finishing one block before starting the next for a logical progression of learning based on a predetermined rank-ordering of blocks and lessons, then, may not be as effective for actual learning and long-term retention as attractive it intuitively seems to us.

Sleep is another crucial factor in the consolidation of learning and memory. Dehaene writes, "Every night, our brain consolidates what it has learned during the day…. While we sleep, our brain remains active; it runs a specific algorithm that replays the important events it recorded during the previous day and gradually transfers them into a more efficient compartment of our memory…. Brain imaging shows that during sleep, the neural circuits that we used during the preceding day get

reactivated…. Experiment after experiment gives convergent results: after sleeping, brain activity shifts around, and a portion of the knowledge acquired during the day is strengthened and transferred to more automatic and specialized circuits."

While sleep as such helps the consolidation of memory, the quality of sleep determines how good consolidation actually occurs. Israeli neuroscientists Avi Karni, David Tanne, Barton Rubenstein, Jean Askenasy, and Dov Sagi conducted experimental research on the consolidation of memory during sleep. They reported, "These results indicate that a process of human memory consolidation, active during sleep, is strongly dependent on REM sleep." Their findings also suggest that memory consolidation is not as much dependent on non-rapid eye movement slow-wave sleep as it is on rapid eye movement sleep. Many scientists found corroborating results and brought new facts to light; Dehaene sums them up, "Sleep and learning are strongly linked. Numerous experiments show that spontaneous variations in the depth of sleep correlate with variations in performance on the next day…. Both the duration and the depth of sleep predict a person's performance improvement upon waking." Good sleep is required for more than this reason, though, but for now, this much is enough to know.

Understanding the science of learning is only half the battle. Once acquired, these scientific insights must be translated successfully and usefully into the practical problems of training. That will depend on the knowledge and experience, creativity and imagination of person leading and managing the process of change. Will and determination would also play a crucial role, for many evidence-based changes would seem quite unconventional and unsettling, making most people nervous and get cold feet. For example, it may sound bizarre but attention research calls into question the now universal practice of using PowerPoint slide presentations in classrooms. Johnson and Proctor explain, "The relationship between processing in the visual and auditory modalities is asymmetric: Auditory and visual stimuli do not, in general, have an equal influence on each other. In many cases, the visual information gets the

upper hand and a phenomenon called visual dominance is observed. *Visual dominance* refers to situations in which, given competing visual and other (e.g., auditory or proprioceptive) stimulation, the visual information captures, as it were, perception. . . . Visual dominance is not universal, and it should be noted that auditory stimuli have a stronger natural tendency to 'draw attention to themselves' than do visual stimuli. However, when visual stimuli have equal importance and provide at least as much information as other stimuli present at the time, a bias toward the visual information is likely." Since slide presentations in classroom evidently cause visual dominance and impair learning by drawing attention to limited visual information provided on screen at the expense of detailed verbal information provided by teacher, the use of slides for the presentation of information in classroom should to be reconsidered carefully. Only those things which cannot be described verbally such as pictures, graphs, diagrams, tables, and films should be projected on screen. Cue slides could be used by teacher but they should be visible only to teacher, not to students; index cards are better than computer slides for such a limited purpose. Practice of slide presentation must be seriously questioned because projected information inexorably attracts and divides attention and instead of paying undivided attention to what is being told, students often start to reading and writing what is being shown. Similarly, taking notes in real time in classroom should be best avoided and must be minimised, if necessary. By diverting attention, it creates unhealthy and avoidable gaps between information transmission and reception. Ironically, all this is science but a decision to use scientific research for improved learning in the real world would be influenced less by knowledge and more by the moral character of training administrator. [Adapted from *Dignity of Life: Moral Philosophy, Organisational Theory, and Hostage Rescue* by Avichal, published 2023.]

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Safety and Empowerment of Migrant Children: The Last Mile

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Abstract:

With the onset of urbanization, migration has been a burgeoning phenomenon. India has approximately 45.36 crore internal migrants, accounting for 37% of the population (Census 2011). The mass, distress movement of migrant workers during the Covid lockdown threw up questions such as: Have the sheer number of migrants been captured accurately by existing data sets? What are the plausible reasons for migration of workers? Are job opportunities the only narrative defining internal migration or does the causality lie elsewhere? Ample literature exists, capturing the socioeconomic outcomes emerging from migration. However, one weakest demographic for which there is scant research, is the number of children who are the most severely affected. The most vulnerable section of the migrant population are these children, who get emotionally and socially displaced. This displacement has several ramifications, the most severe being the vast pool of minors who, by virtue of being out of the ambit of education and thus also out of any adult supervision (mostly both parents work), fall prey to drug, begging and human trafficking rackets.

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While making a humble attempt to delve deeply into the outcomes for children of migrated families that belong to the bottom of the pyramid, this paper seeks to provide answers and solutions by reviewing the available government schemes that can insulate the children, and further proposes a model that empowers and protects children of migrant workers who have been displaced.

Key Words:
Slums, Migrant, Education, Primary education, Secondary education, Children, Crime, Govt. schemes

Introduction:
The trajectory of urbanization in India is exponential and is fast outpacing that of developed countries. Between 1901 and 2011, the number of migrants in India have gone up from 25.85 million to 377.11 million (World Bank, 2018). By 2036, India's towns and cities will be home to 600 million people, or 40 percent of the population (World Bank 2024). This trajectory provides a compelling backdrop for examining the migration patterns of slum dwellers and their socio-economic consequences. Within this urban landscape, slums emerge as hubs of poverty and deprivation, characterized by inadequate housing, limited access to basic services, and marginalized living conditions [1]. Approximately 65 million people reside in slums across the country (NSSO: National Sample Survey Organization). A high concentration of poverty-stricken slums means poor levels of education and greater vulnerability of children.

  As per one study, slum areas in major Indian cities experience disproportionately high rates of crime, including incidents of theft, violence, substance abuse and sex offences (TISS: Tata Institute of Social Sciences). The reasons are many, the chief being higher levels of poverty, lack of employment opportunities, poor housing and lack of infrastructure. The spatial interrelationship among slum demographics, unemployment and crime rates are of cardinal importance. A spate of articles reflecting upon the correlation between

crime rates and urban design have been undertaken {Sadeek, Ahmed et al. (2019), and Entorf and Spengler (2000)}. The socio-economic vulnerabilities prevalent in slum communities, such as unemployment, inadequate infrastructure, and social exclusion, contribute to an environment that fosters criminal activity [3].

Migrant children from urban slums face significant barriers to accessing quality education, and if they do manage to enter school, the experience is afflicted with limited school infrastructure, inadequate teaching resources, and cultural marginalization UNICEF [4]. Beyond India, similar trends are observed in other countries grappling with rapid urbanization and slum proliferation. In Brazil, for instance, research conducted by the Institute for Applied Economic Research (IPEA) underscores the link between slum migration and crime rates, with favelas (Brazilian slums) experiencing heightened levels of violence and criminality [5]. In order to arrest organized crime in slums, countries of Latin America, such as, Colombia and Brazil among many others, orchestrated policy actions have been attempted (Vanda Felbab-Brown 2011). Likewise, studies in sub-Saharan African countries such as Nigeria and Kenya highlight the adverse impact of slum migration on educational outcomes, with migrant children facing barriers to enrollment, retention, and academic achievement. Consequently, migrant children often experience lower educational attainment levels and higher dropout rates compared to their non-migrant counterparts, thus, perpetuating cycles of poverty, social exclusion and therefore, vulnerability to crime.

An examination of existing models of education reveals that while there is appropriate legislation and an exhaustive array of schemes for education, nowhere have these functions had a positive impact on crime against children; and in fact, sexual offences against children have only seen an alarming graph. That education is a tool for empowerment is a pithy phrase, but when translated into ground reality, it reveals the urgent need for innovative interventions, that, at the very least, keep the children empowered—and safe.

Data:

Spatio-temporal data on migrants in India is scant and is derived from Census 2011, Periodic Labour Force Survey 2021, and Centre for labour Survey Estimates of 2023. The 2011 Census states that the number of internal migrants (both inter-state and within state) in India is 45.36 crore, making up 37% of the country's population. Migration in India, 2020-21, based on Periodic Labour Force Survey (PLFS) 2020-21, released by Ministry of Statistics and Programme Implementation (MoSPI), pegs the total migration rate at 28.9% and in rural areas, at 26.5%.

A study of the Centre for Labour Research and Action (November 2023) observed that almost 70% of migrants were dropouts and at least 83% of them migrated from rural parts of India. Half of this population left their villages in search of employment. Other motives were agricultural failures, natural disasters and poverty.

Analysis of census data by India Migration Now, a migration research and advocacy organization, puts the number of child migrants at 63 million in 2011. There is no publicly available data for seasonal child migrants. According to the UNESCO Global Education Monitoring Report 2019, in India, approximately 40% of children of seasonal migrant households are likely to end up joining work and are most likely to drop out of school. Among the young people who have grown up in a rural household which has among its members, a seasonal migrant, 28% were identified as illiterate or receivers of an incomplete primary education. Further, a report published by the International Labour Organization (ILO) revealed that the conditions of migration from villages are highly exploitative for children, fraught with abuse, irrespective of who they moved out with. Studies indicate (Economic and Political Weekly 2022) that migrant children in India between the age group of 6-18-years-old is the target group, vulnerable to child trafficking with no educational opportunities. Almost 22.1% of migrant children in this age bracket were not enrolled in any education institution (in the year 2011).

Government Legislation and Schemes:

The Government has provided a robust regulatory framework by introducing labour codes that would subsume the 29 central laws. This includes the Interstate Migrant Workmen (Regulation of Employment and Service) Act 1979; this Act had been framed to protect the interests of migrant workers. The entire Act has now been subsumed into the Occupational Safety, Health and Working Conditions (OSH) Code 2020.

The National Education Policy 2020 is cognizant of the social chasm that exists between the socio-economically disadvantaged groups such as migrant communities vis a vis the rest. It opines that despite these, it seeks to put in place, innovative education centers in cooperation with civil society to ensure that children of migrant laborers and other children who are dropping out of school are brought back into mainstream education.

The alarming statistics on the exodus of child migrants being higher than the growth of childrens' population, i.e., 18.5%, between 1991-2001 and 6.3% between 2001-2011, is a cause of concern. However fresh and recent data on migrant children has not been published since then. While, in 2021, the Supreme Court has pushed the Government of India to furnish details about migrant children, there has been negligible advancement. Even so, in the past five years, there has been an array of solutions for migrant children. The Right of children to Free and compulsory Education Act of 2009 (RTE), passed in 2009, mandates that every child in the age group 6 to 14, must get free and compulsory education. As per the Act, any child in this age group has the right to get education in any neighborhood school and discrimination on the grounds of gender, caste, religion and disability are strictly prohibited. The RTE Act has been instrumental in expanding access to and improving the quality of education in government schools. However, challenges remain, such as, inadequate infrastructure, shortage of teachers and a lack of monitoring. Other initiatives include Sarva Shiksha Abhiyan (SSA) and Integrated Child

Development Services (ICDS). Both promote education and child development, particularly for marginalized and vulnerable populations, including migrant children. Under Poshan 2.0, the government is currently emphasizing Anganwadi services to all, including migrant families, by facilitating network of centers for the holistic development of children. For instance, SSA has developed special modules on migration and education, providing training to teachers on addressing the needs of migrant children in the country. Some other schemes instituted by the Govt of India are the Mid-Day Meal Scheme (MDMS) and Rashtriya Madhyamik Shiksha Abhiyan (RMSA). MDMS aims to address malnutrition and increase school attendance by providing healthy meals to children in government and government-aided schools free of cost while the RMSA, launched in 2009, focuses on improving access to secondary education and enhancing its quality. It includes initiatives to upgrade infrastructure, provide vocational education, and train teachers to meet the diverse needs of students. Finally, Beti Bachao, Beti Padhao (BBBP), launched in 2015, aims to address gender disparities in education and promote the education of girls. It includes initiatives to improve access to education, prevent gender-based discrimination, and empower girls through scholarships and incentives.

Education Gap and Vulnerability to Crime:

One out of every five migrants is a child, contributing to an estimated count of 92.95 million migrant children [6]. Children, whose parents migrate, either accompany them to work sites or remain in the source village, left behind without one or both parents. The schooling system poses challenges for children to sustain their education during their movements to and from work sites, as well as during their stays there. This results in the children missing regular schooling for a long period of time. While away from home, these children are often enrolled in school as per school records despite not having attended school for many months.

Moreover, educational facilities at these destination sites are typically not readily accessible, leading to low enrollment and reduced participation in schooling among migrant children. As a result, the migration of people has a significant adverse effect on the education of their children, which, in turn, increases their vulnerability to criminal offences.

We often tend to immediately associate illiteracy with crime and vice versa. However, there are two aspects to consider: one, not all criminals are uneducated, and two, the absence of education contributes to a more extensive issue that significantly impacts crime rates, namely, exposure to violence, abuse, and child labor, all of which has a corrosive impact on childrens' learning potential and outcomes. Therefore, safeguarding young children from violence and exploitation is integral to broader educational priorities. However, due to the complexities and sensitivities involved in measuring and monitoring child protection violations, there is limited data coverage in this domain. As such, data collation and analysis with delineation of appropriate indicators is a formidable challenge to policymaking.

On a global scale, an estimated 150 million children aged 5–14 are engaged in child labor, resulting in these children missing out on education opportunities and thus, widening the pool of juvenile delinquents.

The following tables and charts illustrate the correlation of Crime Against Children and Education Level of the Victims and Criminal

Crime Committed by Juvenile (IPC+SLL) - 2018-2020 [7]

Figure 1: This table provides an overview of the reported crimes against children in different states, and union territories for the specified years. It helps in understanding trends and patterns related to crimes against children across various regions and at the national level.

- Actual Population of Children as per the Population Census 2011 (RGI).
- Non-availability of figures for the year 2020.
- Crime Rate is calculated as Crime Incidence per one lakh of the population.
- Combined data of erstwhile Dadra Nagar Haveli UT and Daman and Diu UT
- Data of erstwhile Jammu and Kashmir State including Ladakh.

Education Level of Juveniles Apprehended - 2020 [8]
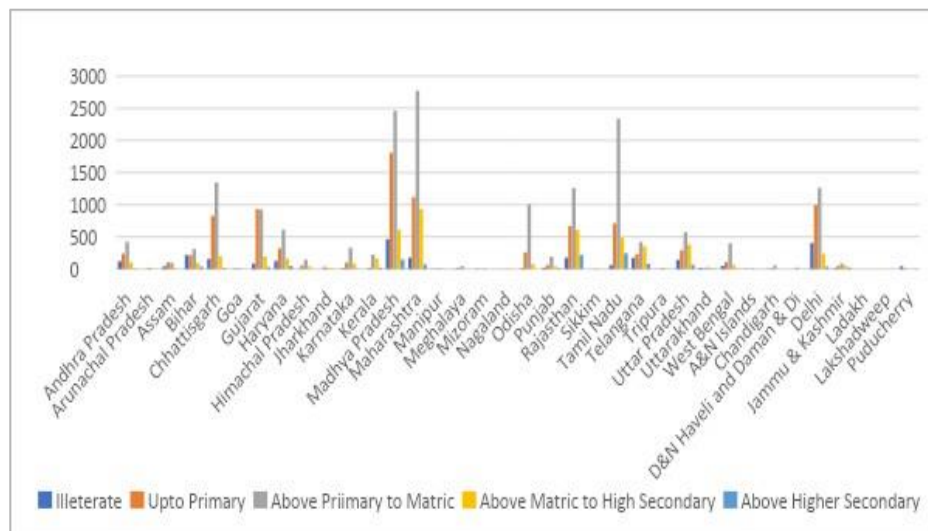
Figure 2: This data provides insight into the educational background of juveniles who have been apprehended.
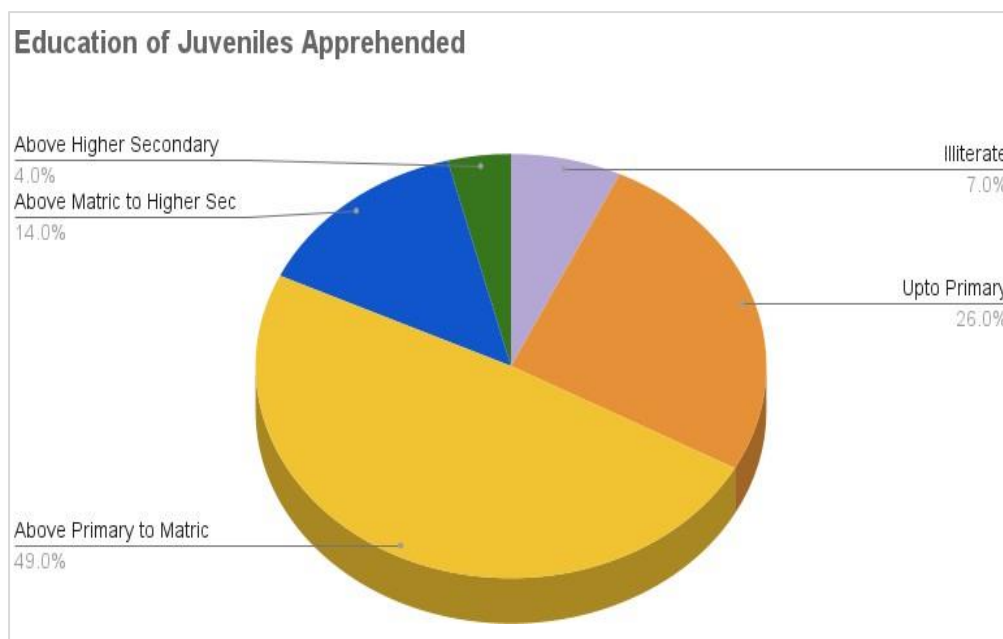
Analysis:

- **Illiterate (7%)**: This category indicates that 7% of the apprehended juveniles have not received any formal education. They lack basic reading and writing skills.
- **Up to Primary (26%)**: Among the apprehended juveniles, 26% have received education up to the primary level. This suggests that they might have basic literacy skills but have not progressed beyond the early stage of education.
- **Above Primary to Matric (50%)**: The majority, 50%, have education ranging from above primary to matriculation level (up to 10th grade). This indicates a significant portion of apprehended juveniles have received a moderate level of education but haven't completed their high school education.
- **Above Matric to High Secondary (14%)**: Around 14% of the apprehended juveniles have education ranging from above matriculation to high secondary level (11th to 12th grade). This suggests that a small percentage of the apprehended juveniles have pursued education beyond the basic levels, potentially indicating slightly higher educational aspirations.
- **Above Higher Secondary (3%)**: The smallest proportion, 3%, have education above the higher secondary level. This indicates that only a very small fraction of the apprehended juveniles has completed education beyond high school.

In summary, the data reveals that a significant portion of apprehended juveniles have received education up to the primary or matriculation level. While a small percentage have progressed to higher levels of education, the majority seem to have education limited to the early or intermediate stages of their academic journey.
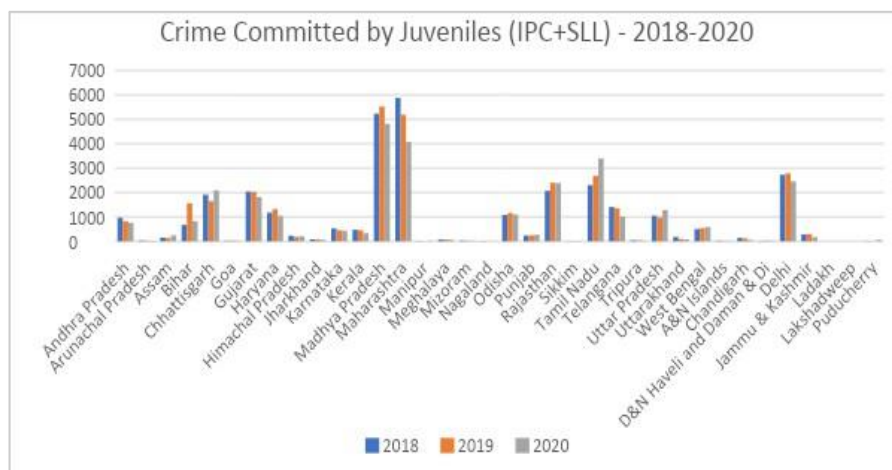
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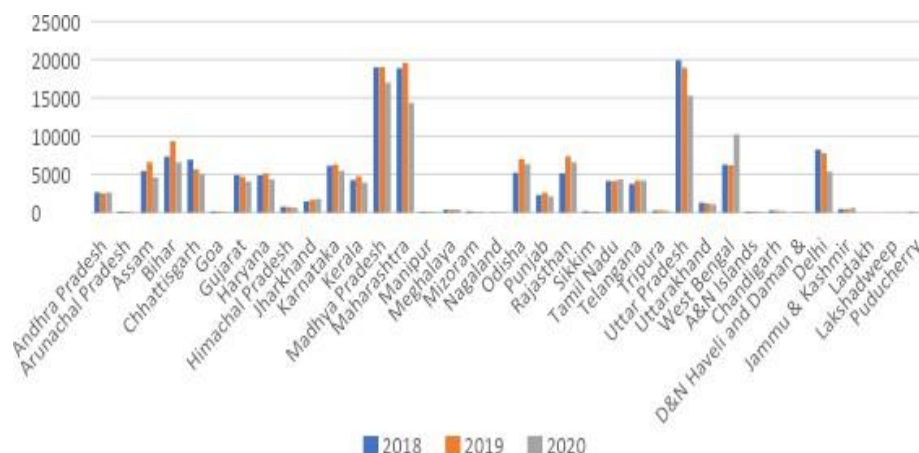
- Actual Population of Children as per the Population Census 2011 (RGI).
- States may not be compared purely based on crime figures.
- Crime Rate is calculated as per one lakh of the population Sources: ncrb.gov.in [9]

The number of cases registered under the POCSO Act according to the National Crime Records Bureau (NCRB) across India from 2016 to 2022.
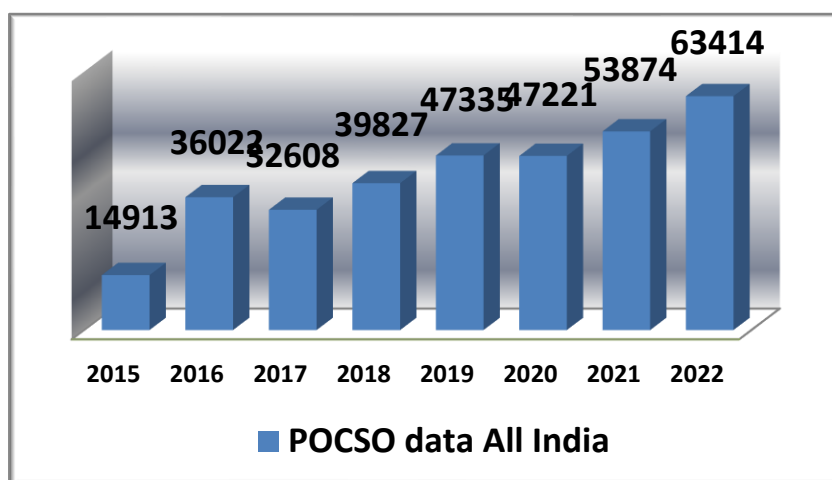
Correlation between Education and Crime:

Analyzing the example of the State of Uttar Pradesh (UP) where education levels are comparatively lower, and the incidence of crime against children is relatively high, some key findings that emerge are:

- The education levels of the population, including children, are relatively low compared to other states. This could be due to factors such as inadequate infrastructure, limited access to quality education, economic challenges, and cultural factors.
- The high number of reported crimes against children in UP might be attributed to a combination of factors, however, sub optimal access to quality education is significant.
- Low education levels could contribute to a lack of awareness among families about child protection measures and legal rights.
- Limited access to quality education might lead to vulnerable situations where children are exposed to risks due to a lack of supervision or engagement.
- Economic challenges might result in children being engaged in labor or activities that expose them to different types of exploitation.
- Inadequate awareness about legal provisions and child rights could lead to underreporting of crimes or delays in legal action.
- Many of the govt. schemes are yet to be given full effect through the actual implementation of concrete measures.

Challenges In Reaching the Last Mile:

A formidable obstacle to educational attainment by migrant children is cultural difference, most exemplified by language barriers. Ernst Georg Ravenstein's laws on migration (1885) reveals that migration has a wide-ranging impact on children whether they are left behind by one or both migrating parents, move with their parents, are born abroad, or migrate alone; the educational performance of children is

highly compromised when migrating. As such, many children suffer from depression, abandonment, low self-esteem and several behavioral disorders (Virupaksha et al., 2014). It is more important than ever to focus on and develop a research agenda, using both quantitative and qualitative techniques to understand the plight of child migrants and provide solutions. First and foremost, we must enumerate the child migrants in India in order for them to be protected from any form of vulnerability, such as kidnapping, trafficking, etc. Eventually, research, policy and advocacy efforts need to highlight the accessibility to quality education in a safe environment *(Dr. Nupur Pattanaik:*

https://blogs.lse.ac.uk/humanrights/2023/06/08/emerging-issues-and-concerns-in-providing-education-to-migrant-children-in-india/)

Against the above backdrop, The Right of Children to Free and Compulsory Education (RTE) Act, 2009, represents a significant step towards realizing the fundamental right to education in India and fostering inclusive and equitable education systems. However, taking the Right to Education (RTE) to urban migrant laborers poses several formidable challenges due to the transient nature of their lifestyles and the socio-economic barriers they face. Some of the key challenges include:

1. Access to Documentation: Migrant families often lack the necessary documentation, such as proof of residence or birth certificates, required for enrolling their children in schools.
2. Mobility and Transience: The transient nature of migrant laborers' lives makes it challenging for their children to attend school regularly. Migrant families frequently move from one location to another in search of employment opportunities, disrupting their children's education and making it difficult for them to enroll and remain in school consistently.
3. Lack of Awareness: Many migrant laborers are unaware of their rights under the RTE Act or the availability of educational opportunities for their children in urban areas. They may face

language barriers or limited access to information about local schools and educational resources, hindering their ability to enroll their children in school.

4. Financial Constraints: Migrant families often struggle with financial constraints, making it difficult for them to afford additional expenses associated with education, such as school uniforms, textbooks, and transportation. Even though RTE mandates free education, incidental costs can still be prohibitive for migrant families, given their limited financial resources.

5. Discrimination and Social Exclusion: Migrant children encounter language barriers, cultural differences, and prejudice from local communities and school authorities, leading to their marginalization and exclusion from educational opportunities.

6. Lack of Adequate Infrastructure: In many urban areas, there is a shortage of schools near the settlements and slum areas where migrant laborers often reside. The lack of adequate infrastructure, including classrooms, sanitation facilities, and teaching resources, further impedes migrant children's access to quality education.

7. Coffey (2013) conducted a research study on child migration in the districts of Rajasthan and Madhya Pradesh. A total of 1,980 children aged 0-13 years were covered in the study. She found that the children who accompany adult household members also work but are paid little or remain unpaid. She concluded that while all the children in this age group who migrate with one or both parents, may not be put to do paid work, however, all of them face educational disadvantages as compared to the children who do not migrate. A study conducted by the International Labour Organisation in Bihar, Madhya Pradesh and Gujarat threw up the fact that children older than 10 years are frequently put to work along with their parents in brick kilns, construction sites, hawking and the like, without any social protection, much less access to education.

It is important to note an interesting intervention by the Government under the Samagra Shiksha Scheme: the provision of

seasonal hostels and residential camps in villages as also residential and non-residential special training centres for out-of-school and dropout children. Also, while, the Government has approved the setting up of 2.04 lakh primary and 1.59 lakh upper primary schools across the country, it is important to realize that a space-centric traditional schooling model, keeps out many children. These 'access-centric' initiatives remain inadequate as they remain out of the purview of the 'equitable education' framework (Dr S. Irudaya Rajan Kuldeep Singh Rajput, June 5, 2023).

The National Education Policy (NEP) 2020 of India emphasizes equitable education, but fails to recognize migrating children as a separate category. Also, the policy is passive in suggesting specific measures and strategies for migrant children who have a substantial sociocultural, economic and regional diversity among them. Due to unique challenges stemming from their migration pattern, spatial context and socioeconomic conditions, these children remain 'invisible'. Therefore, the first and foremost step should be making them visible by enumerating them, creating demographic profiles, understanding their migration pattern and disaggregating the collected data. Insufficient data is a critical impediment in the inclusion policy and aggravates several vulnerabilities to criminal intent.

Doorstep School—Last Mile Accessibility:
There is enough empirical evidence to prove that a great proportion of children drop out before completing five years of primary education. Three primary obstacles—non-enrollment, school dropout, and failure to attain expected learning levels—hinder India's literacy progress.

To solve this crisis, there is no way but to set oneself a mission to make education universally accessible and achieve a 100% literacy rate. The aim is to bring education right to the doorstep of children who are unable to attend school due to the various reasons delineated in the last few pages of this paper.

Currently, some individuals and organizations are already working towards this goal, but it necessitates scaling up these efforts. Volunteers linked with organizations venture to wherever these children are and establish classes. These sessions take place in makeshift classrooms, on pavements, construction sites, near markets, railway stations, or even through mobile schools if necessary.

These are just a few examples of countries implementing doorstep education initiatives to educate students living in slum areas. These programs employ a variety of approaches, including mobile schools, community learning centers, and outreach programs, to overcome barriers to access and provide quality education to marginalized communities. Some examples include:

- Brazil - Mobile Education Program (Program Brasil Alfabetizado) targets marginalized communities, including slum areas, with mobile units equipped with educational materials and trained teachers. These units travel to different locations, providing literacy and basic education to adults and children who may not have access to formal schooling.
- Kenya: The Mully Children's Family organization in Kenya operates mobile schools to provide education to children living in slums areas. These programs offer basic education, vocational training, and life skills education to children and youth, empowering them to break the cycle of poverty and crime.
- South Africa: The Isibindi program in South Africa deploys community-based caregivers to provide doorstep education and support services to vulnerable children, including those living in slum areas. These caregivers offer educational activities, mentorship, and psychosocial support to children and families, promoting their holistic development and well-being.
- Philippines: The Alternative Learning System (ALS) in the Philippines offers flexible education programs tailored to the needs of marginalized groups, including slum dwellers. ALS provides mobile learning centers, community-based classes, and

distance-education options to reach out-of-school youth and adults, offering them a second chance at education.

In India too, there are examples of Doorstep School initiatives, whereby individuals and/or organizations operate mobile classrooms and community learning centers to provide education to children who are have habitations in slums or in streets. India Migration Now's Interstate Migrant Policy Index, which assessed 28 States and the National Capital Territory of Delhi in 2019, found that Kerala, Goa, Rajasthan and Andhra Pradesh were the most successful in integrating migrants. Kerala was ranked first on three of eight indicators: child rights, education, and health and sanitation. These initiatives offer flexible learning opportunities, remedial classes, and vocational training to empower slum children with respect to their safety and educational outcomes. Some examples:

1. The Tamil Nadu government introduced a project called "Illam Thedi Kalvi" (Education at Doorstep) in 2021. This project addresses the learning gap that emerged among students due to school closures during pandemic-induced lockdowns. It was initially launched as a pilot project in 12 districts of the State.

2. Kerala's Project Roshni is helping bridge the language gap in accessing education for migrant children by using multiple languages as a medium of instruction in select government and government-aided schools. Such was the impact of this program that during the Covid-19 lockdown from March 2020, there was a mass reverse migration. Yet the program covered 90% of the migrating families as per a recent report of 2020.

3. In Gujarat, there are semi-governmental centers that run 70 seasonal hostels for children of migrant workers who are 11 to 14 years old—since 2003, this program coverage is across five districts of the State. Children can stay back in their villages in these hostels and continue their education when their parents migrate. There are also 100 support schools at work sites, one of which had teachers teaching in six languages to cater to migrant

children from West Bengal, Chhattisgarh, Odisha, Rajasthan, Madhya Pradesh and Gujarat.

Comprehensive Doorstep Education in the Context of Crime Against Children: Policy Recommendations

The Supreme Court, has, in recent years highlighted the alarming rise in cases of sexual crimes against children; even calling for consultations on the issue, and in a recent judgement, made it clear that watching and storing child porn is an offence under the POCSO Act. Against the backdrop of inaccessibility to a school and vulnerability to crime, what is needed is a Pan-India programme, such that a child is rarely left unattended and simultaneously, occupied in educational/productive activity. Such a programme will bring civil society and government departments together to provide education at the doorstep of a child who is unable to attend school, which, as has been seen is more the case with children of migrant laborer parents. The objective is to empower them and thus, prevent and protect them from criminality especially, sexual offences. Further, such a programme will ensure sensitization of society in general, and parents in particular, on the rights of children. The lack of data is an accepted fact, however, an encouraging statistic, gleaned from the Internet, is that, with doorstep education policies, Uzbekistan has raised its preschool enrolment from 27% to 67% in a matter of five years.

The broad contours of the programme will involve the following:

1. A nodal officer will be appointed across all levels-village/slum level to block level, district level, and State-to oversee coordination of different departments and effective implementation of the programme. The nodal officers will also ensure ongoing improvements and assessment and adoption of best practices from around the world.
2. A mobile van, equipped with learning materials or a space designated in every slum cluster (for example, Anganwadi Centre or community Centre or temporary shelters) where

classes can be held.

3. A supervision and discipline committee to be drawn up from among parents of the children, local persons, CSR (Corporate Social Responsibility) bodies, philanthropic persons, youth panchayats, and child-friendly committees. All of these are invited to assess the quality of teaching and the safety of the child.

4. Organization of awareness programs by police officers as part of community policing. Awareness and sensitization on safety and a host of other threats such as cyber stalking, trafficking, child labour, drugs etc. through innovative means (videos, talks, interactive sessions, nukkad natak and experience sharing).

5. Awareness and sensitisation programmes also be conducted through the vast network of Anganwadi and ASHA workers. Focus on SHOR MACHAO, BACHON KO BACHAO.

6. District Child Protection Units be brought within the ambit of the nodal officers too.

7. Festivals be organized, whereby every parent, and every citizen takes a pledge to educate the children.

8. DLSAS stands for (District Legal Services Authorities) may be called upon to conduct awareness programmes to differentiate between Good Touch and Bad Touch, such that children are able to sense potential POCSO offenders and report them early. Also, panel advocates from DLSA would conduct visitations, counselling and feedback sessions.

9. In order to facilitate the involvement of civil volunteers and NGOs, an app can be developed to connect the nearest vulnerable child to the nearest civil volunteer and/or NGO.

10. A space nearest to the slum cluster may be identified for the development of sports and self-defense activities.

11. All relevant government departments to come together for basic needs to ensure an enabling, safe environment for education. This ranges from sanitation to deaddiction to safe access to in-situ toilets (since women and children going for open defecation

in the odd hours renders them vulnerable to sex offenders)

12. As a further measure of empowerment, recreational and co-curricular activities like music, film, art, dance etc. may be promoted and talent spotted.

13. Existing government school infrastructure may be utilized for examinations and coaching. For example, school buses may be utilized to ferry the children to and from exam centres, be they government schools or NOS centres.

14. Health and nutrition to be emphasized so as to ensure overall development of children and balanced nutrition. Health checks and vaccinations to be in situ. Quarterly blood tests must be conducted to identify endemic problems such as anemia among girl children, and sexually transmitted diseases among adults.

15. Special training and sensitisation of staff and teachers of the mobile schools to be conducted in order to deal with sensitivity with POCSO victims and to prevent and identify sexual abuse within families. Further, rehabilitation is to be ensured by means of education and vocational training and skill development. The earning of livelihood in a respectable manner will restore their self-respect.

16. Children with special needs or disabilities are particularly vulnerable to sexual offences. As such, a separate section for their recreation and lessons be created and additional volunteers be deployed for their safety.

17. For extremely young children to have a safe play area, crèches may be set up for staff and young children of migrant labour, especially those at construction sites. Extensive coverage of CCTV cameras at these locations must be ensured.

18. Scholarships be instituted for children, who despite being victims of POCSO, are extraordinary performers in sports and studies.

19. Community service be institutionalized in schools and colleges such that every school and college goer take the responsibility of tutoring a younger child (under the supervision of an adult).

20. To address the multiple challenges facing migrant workers and their families, including children, there should be a Migrant Desk in every block of the country.

21. Language is a formidable barrier in the education of migrant children. Catching those young and creating a pool of English speaking can have linkages with service sector jobs. Given that manufacturing, foreign investment and agriculture has crashed in past decade, this thought merits deeper investigation.

22. Residential schools for both boys and girls up to the secondary level be established in the rural areas in all the states of the country, especially the source states of migrant workers. Migrant workers were found to have a preference for residential schools like 'Jawahar Navodaya Vidyalaya' over non-residential schools (12) and in fact, 55% of the children accompanying parents to the destination are likely to drop out of school and among those who stay back in the source village, only 25% report not attending school.

23. The Unorganized Workers' Social Security Act, 2008 be implemented in its entirety at the earliest including formulation of schemes for education of children of unorganized workers including migrant workers.

24. A National Policy for Welfare of Migrant Workers be formulated to cater to their various physical needs such as housing in destination cities, education of children, free and universal health care, access to food grains under the PDS, old age pension, etc.

Conclusion:

Overall, establishing policies to mandatorily implement doorstep education in India is crucial for ensuring education for all children, irrespective of their socio-economic background, geographic location, or individual circumstances. By bringing education directly to the doorsteps of children and communities, these policies can prevent the children falling victim to crime, ensure equitable education and

contribute to the overall development and well-being of the nation. Migration in pursuit of improved opportunities, and as a consequence of climate change, is likely to persist in the future; albeit it bears adverse consequences for the education of children hailing from migrant families. Despite multiple endeavors to enhance the educational inclusion of the children, the existing efforts fall short of meeting their requirements. The government must innovate novel approaches to ensure that accessible schemes are available to all segments of society. Policies aimed at enhancing the educational circumstances of children from migrant families should be tailored to address their distinct needs. There is a significant urgency to provide education for these children, contributing not only to their personal prospects but given their sheer numbers, also to the holistic development of a safe and secure society.

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Philosophy of Outdoor Training

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Abstract:

This article is based on my experience as a probationer (2007 to 2009) and later as a training instructor (2019 to 2023) at the Sardar Vallabhbhai Patel National Police Academy. The insights gained during the discussions and deliberations on the Training Needs Analysis exercise undertaken by the National Police Academy (2020) have been incorporated in the article. In addition, insights have been drawn from numerous books and articles, and from associations with professional coaches, doctors, physiotherapists, nutritionists and a whole lot of experts in the field of sports, science and medicine. The article aims to outline the philosophy of outdoor training and to serve as a guide to all the stakeholders of police training i.e. trainers, trainees and the training administrators.

1. Introduction:

The basic objective of training at police academies is to create a suitable training ecosystem to maximize learning and to ensure that the trainee officers realize their true potential and get molded into competent, confident and professional police officers. Michelangelo was once asked, 'How do you produce statues that are so full of life?'. He replied, 'The rough marble already contains the statues, it is just a matter of extracting

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them'. The Sardar Vallabhbhai Patel National Police Academy has recognized this as the central theme of police training unequivocally, stating that, 'There is already a fine officer in you, help us chisel it out'. The National Police Academy has been conceived on the lines of a traditional Gurukul System where the Guru (trainers) and the disciples (trainees) are living together in the Gurukul (Academy), and the requisite training is imparted to prepare the officers to take on the real-world challenges. The Academy acts as a cocoon, providing an ideal ecosystem, for the IPS probationers to metamorphose into young police officers.

The outdoor training at the Police Academy aims to equip the trainees with the requisite knowledge, skills and attitude. The outdoor ustads (trainers) play a key role in aiding the process of metamorphosis thereby ensuring the highest standards of integrity, discipline and professionalism in every officer passing out of the portals of the Academy. The outdoor training curriculum at the National Police Academy has been continuously evolving over the past 75 years to adapt to the changing requirements of police training and the ever-evolving internal security landscape of the country.

2. Training Philosophy:

Training is an ever-evolving field where new techniques, skills and processes are developed on a continuous basis. It is the prime duty of training administrators to identify and evaluate these developments and incorporate them in the training ecosystem, if found suitable. This article aims to delve into the philosophy behind various approaches, processes and methods adopted by the National Police Academy in response to the first ever nationwide Training Needs Analysis (TNA) conducted by the Academy. (SVPNPA, Training Need Analysis for IPS Training, Report 2024)

2.1 Physical Training:

Physical training is one of the most important aspects of police training as it lays the foundation for acquiring all the other skills.

Sharira madhyam khalu dharmasadhanam (Sarga 5:33 of Kumarasambhava by Mahakavi Kalidasa) meaning "*the body is surely the foremost instrument of doing [good] deeds*".

Traditionally, physical training curricula at the Police Academies have been adopted from the practices followed in the Armed Forces and Paramilitary Forces. Some of these have been continuing for years/decades without much change. The art and science of fitness have evolved drastically over the past couple of decades, and we should adopt these modern scientific principles of physical training to get optimal results and to minimize injuries. The TNA Sub-Committee on Outdoor Training strongly urged for a more scientific approach to physical training encompassing endurance, strength, flexibility and emphasizing the need for gradual progression and injury prevention. (SVPNPA, TNA, 2020)

2.1.1 Scientific Principles of Physical Training:

The modern physical training curriculum should be based on the following ten scientific principles:

(i) **Readiness**: The effectiveness of training depends upon the physical and psychological readiness of the trainees. Physical training should start slow, with low intensity exercises to prevent injuries and to establish a foundation of general fitness. The idea is to build the trainees up and not break them down. Conditioning Exercises for a period of 8 to 10 weeks prior to the more intense training phase will help in preparing the body for the ensuing physical training activities. (Henning, Paul, et al 2011)

(ii) **Adaptation**: Training induces subtle changes as the body adapts to the new demands. The increase in the level of difficulty should be slow and gradual to give sufficient time to the body to adapt itself to the new demands.

(iii) **Overload and Progression**: Training must place a demand on the various muscles, beyond their current capacity, to achieve the desired improvement. A system of progressive overloading should be adopted, where the frequency, intensity and duration of exercises are gradually and progressively increased over a

weekly/fortnightly cycle. Each progressive overload should not be more than 10% of the previous load. (Peterson, Mark, et al 2010)

(iv) **Warm Up and Cool Down**: Every workout session should start with general and specific warm up and mobility exercises and should end with cooling down and stretching exercises. Yoga and Meditation should preferably be integrated with the cooling down process.

(v) **80:20 Principle**: Not more than 20% of the overall activities should be high intensity activities and the remaining 80% of the activities should be moderate/low intensity activities for optimal training results. (Matt Fitzgerald, David Warden, 2018)

(vi) **Focus on Technique:** It has been observed that the trainers (*Ustaads*) sometimes focus on the number of repetitions and on speed rather than on the correct form, posture, and techniques. Bad form can be injurious and less effective. Hence the focus should be on correct form, posture and technique.

(vii) **Variation**: To avoid boredom and to sustain interest in training activities, variations in exercise should be incorporated at appropriate times.

(viii) **Regularity and Continuity**: The training adaptations will reverse if training is discontinued; hence the trainees should continue fitness exercises and training, in some form or the other, even when they are on attachments. It takes longer to gain fitness than to lose it.

(ix) **Hydration, Diet and Nutrition**: Adequate importance should be given to regular hydration and healthy nutrition. Without proper nutrition we will not be able to achieve the desired training outcomes.

(x) **Rest, Recovery and Sleep**: Rest and recovery needs to be given importance for enhancement of performance.

2.1.2 Philosophy of Physical Training:

On one hand the physical training at the police academies should aim to develop endurance, strength, flexibility, agility and balance in the body thereby enabling the trainees to achieve the physical performance

benchmarks. On the other hand, the training curriculum should be designed in such a manner to inculcate in them (trainees) the habit of health and fitness as part of their lifestyle. This approach will require a three-prong strategy for physical training which will include Pre-Training, Basic Course Training and Post-Training.

(i) **Pre-Training**: It is found that the candidates who clear the Civil Service Exams are not in the best of their physical fitness when they join the National Police Academy for the Basic Course Training. Many of them are overweight/obese and have vitamin/mineral deficiencies due to inactivity and an imbalanced diet during the civil service preparatory days/years. Traditionally the probationers are briefed at the Lal Bahadur Shastri National Academy of Administration (LBSNAA), Mussoorie while they are undergoing Foundation Course Training. Retrospective analysis of the recent batches shows that a good number of probationers take Extra Ordinary Leave and do not join LBSNAA for Foundation Course and hence they are left out. NPA has started the practice of addressing these probationers online during which they are guided to undergo medical examination for identifying deficiencies, and for making dietary changes and for starting on supplements, as required. The candidates are also guided to start with conditioning exercises and regular fitness activities in a progressive manner. Those who are overweight are advised to start working on weight management. In addition to this the probationers who are on Extra Ordinary Leave are given an option to join online PT/Aerobic/Yoga classes which are specially scheduled for them. These pre-training activities have helped in conditioning the probationers prior to their arrival at NPA, which has substantially reduced training injuries.

(ii) **Basic Course Training (BCT)**: The training program at the police academies should start with a Baseline Assessment consisting of a battery of tests to evaluate the trainee's current level of fitness and medical conditions, if any. The physical

training schedule should be ideally divided into conditioning phase, progression phase and peaking phase. A continuous and comprehensive evaluation system should be adapted to evaluate the progress of the trainees at regular intervals of time, based on predefined benchmarks. Conducting such evaluations will help the trainees to improve their performance, and the trainers, an opportunity to check and correct the trainees at regular intervals. The physical training curriculum should be based on the scientific principles as mentioned above in this article.

(iii) **Post-Training**: At the end of the basic course training at the Academy, the trainees achieve their peak level of fitness and performance. Police officers need to be physically fit throughout their career and as police leaders they need to be role models for the rest of the police force. This will not happen automatically as atrophy sets in and the health/fitness parameters start deteriorating. The only way forward is to inculcate fitness habits in the trainees while undergoing training which will translate into lifestyle changes. To help its alumni to remain fit the academies need to innovate and create a physical training ecosystem that supports and fosters habit formation and celebrates small wins when the officers are undergoing training in the Academy. In essence, the training experience at the Academy should be enjoyable and memorable. In addition, the academies can endeavor to organize endurance events like marathons, cyclethons & triathlons; sports & games championships; etc. thereby creating opportunities for the officers to pursue their fitness goals.

2.1.3 Key aspects of Physical Training in BCT:

(i) **Baseline Evaluation:**

During the 1st week (Orientation week) of basic course training at SVPNPA the trainees are made to undergo a baseline evaluation of their physical fitness through a battery of tests. This includes a test for Endurance (VO_2 Max), preferably the Yo-Yo Test (Bangsbo, Krustrup, et al 2008)/Beep Test; Strength (Upper Body, Core &

Lower Body); Flexibility; Agility; and Balance. In addition, a Body Mass Index (BMI) test, Waist to Hip Ratio (WHR) test and a Body Composition Analysis (BCA) test are done for each trainee. The Battery test also includes Medical Examination (Blood & Urine) to check for vitamin and mineral deficiencies and other abnormalities in the body functioning.

(ii) **Formation of PT Groups:**

The progress of physical fitness in each trainee will depend on the quantum of overloading, the rate of progression and how each trainee's body adapts to the training overload. Traditionally PT classes are conducted in Squad/Platoon formations as is the practice for other outdoor subjects. In these formations, the trainees are clubbed together into heterogeneous groups thereby making it ideal for skill training, developing team spirit and esprit-de-corps and for conducting various competitions. But when it comes to physical training, the loading pattern for each trainee must be decided based on the current fitness level of each trainee. Since the Squads/Platoons are heterogenous in nature the loading is done which will suit the middle segment whereas the weaker segment is overloaded leading to injuries and the stronger segment is under-loaded thereby not reaching the optimal potential. Hence this system of heterogeneous grouping into Squads is not suitable for scheduling PT classes and we need to look for alternatives.

The quantum of overloading for strength and endurance training for each trainee should be based on the current level of fitness of each trainee. The ideal approach will be to have an individual training schedule for each trainee. But this is neither practically possible nor administratively feasible. Hence a good solution is to initially form PT Groups which are homogeneous, consisting of trainees with similar levels of fitness. These PT Groups can be created based on the results of Yo-Yo/ Beep Test conducted during the initial week. This will help the Training Administrators to scientifically plan and implement the PT schedules based on each group's current levels of fitness.

(iii) Scheduling of PT Classes:

Scheduling of PT classes is a major challenge for the Training Administrators. During the initial weeks, PT classes should be scheduled on a regular basis for at least an hour duration on all working days. Ideally PT classes should be continued on a regular basis till the end of the course but owing to other commitments (scheduling of other subjects such as Firing, field visits, exams etc.) it will not be practically possible to have PT classes daily. Hence, a suitable strategy could be devised to cater to the requirements of other subjects without affecting the continuity and regularity of physical training.

Scheduling of endurance training and strength training is again an area of concern for the Training Administrators. Considering the scientific fact that a minimum of 48 hrs. of rest is required between two strength training sessions of the same muscle group, it is prudent to have strength training sessions for a particular muscle group on alternate days. Hence the strategy will be to have endurance training and strength training either on alternate days or to have strength training of different muscle groups on alternate days. For example, Strength Training on Monday, Wednesday, Friday and Endurance Training on Tuesday, Thursday and Saturday. Or alternate between Day-1 (endurance and lower body strength training) and Day-2 (core and upper body strength training). A sample plan of the PT sessions is given below:

Day-1: Cardio-Endurance and Lower Body Strength Training: The focus is on Cardiovascular Endurance and Lower Body Strength. The workout for a PT session (60 minutes) is suggested to be divided into four parts as shown below:

Warm-up	Workout (Run) (Cardio)	Workout (Lower Body Exercises)	Stretching and Cooling Down
10 Minutes	25 Minutes	15 Minutes	10 Minutes

Day-2: Core and Upper Body Strength Training: The focus is on Core and Upper Body Strength. The workout for a PT session (60 minutes) is suggested to be divided into four parts as shown below:

Warm – Up	Work Out (Cardio)	Work Out (Core & Upper Body)	Stretching and Cooling Down
05 Minutes	10 Minutes	30 Minutes	15 Minutes

A long duration cardio activity can be scheduled for Saturday mornings, such as a long run (slowly building up to a 10 Km run), long distance cycling, Zumba etc., followed by extensive stretching / flexibility.

(iv) Learning the right style and technique of running:

Running is an integral part of basic course training and police academies rely heavily on running for endurance training. Over the years it has been found that teaching the right style and technique to the trainees is the most challenging task for the outdoor training staff. Over and above, it is worth mentioning that running is the major cause of many injuries owing to incorrect posture, technique and style. (Henning, Paul, et al 2011). Therefore, in the initial weeks, for developing a good running style, more focus can be given to body posture, soft mid-foot landing, hand movements, breathing rhythm and systematic increase in the cadence, stride length, run time and distance. The cadence should gradually be increased to 170-180 beats per minute by playing music or by using a metronome. Similarly, the stride should be kept very short to ensure mid-foot landing and the trainees should preferably be made to run on soft surfaces i.e. grass, mud track, synthetic track and later graduate to hard surface. The running schedule should gradually progress from walk-run, run-walk to run-run with gradual increase in the quantum of time. Experience of good running instructors should invariably be utilized for training of trainers and to brief the trainees. Emphasis should be given on Injury free running forms. The trainers need to be trained to inculcate an injuri-free running style in the trainees so that running becomes part of their lifestyle. For example, during the last 2 decades '*Chi Running*'

has revolutionized the approach to running by making it energy efficient, effortless and injury-free. (Danny Dreyer, 2004)

(v) Compensatory PT classes:

Traditionally academies follow the practice of scheduling extra classes in lieu of missed classes after regular training hours on working days or on Saturdays/Sundays/Holidays. This would cause extra physical stress for the trainees, and they would not be getting adequate rest and recovery time, leading to injuries. Considering the scientific fact that a minimum of 48 hrs. of rest is required between two strength training sessions and the hectic schedule at the academies it is neither practically possible nor scientifically prudent to keep PT extra classes either after the training hours or on Saturdays/Sundays/Holidays. Other options may be considered like. (i) If someone is physically fit, compensatory classes may be scheduled in those subjects where he/she is lagging. If unfit, some extra work can be scheduled, scientifically designed, which will help in active recovery. (ii) If because of any injury or long illness, the trainee misses out on achieving the Progressive Benchmark Assessments successively in a row, for 2 or more times, the training can be deferred, and he/she can join with the next batch.

2.2 Evaluation System – A Modern Scientific Approach:

Traditional evaluation system consisted of Periodical Exams/ Semester exams and Final Exams. This has been followed across the board, be it schools, colleges, universities or training institutes. These exams always carried marks, had high stakes, and hence caused a lot of stress for the students/trainees. In addition, many times Periodical Exams/Semester Exams fail to test the trainees with respect to the progress in learning, especially the skill sets. It has also been observed that for many of the outdoor subjects, the standards for Periodical Exams/ Semester Exams are at par with the Final Exams. One of the key observations received during the TNA exercise was that '*the training is more exam-oriented and less learning oriented*'.

To ease the stress of exams on the trainees and to test them based on the progress made during a particular training period, it is most suited to

adopt the Progressive Benchmark Assessment (PBA) system in tune with the Continuous and Comprehensive Evaluation [CCE] (Yagnamurthy, 2017) pattern as adopted by CBSE.

2.2.1 Progressive Benchmarks Assessments: This system consists of multiple evaluations at regular intervals of time, based on predefined benchmarks. These benchmarks would give the trainees a comparison standard for self-evaluation and the need for addressing the weak areas, if any. The objective is not to evaluate for marks but to check the progress in terms of improvement in skills, thereby giving an opportunity for course corrections at every stage. This also aligns with the objective of '*testing for learning*' rather than '*testing of learning*'. This mechanism is very effective, especially for slow learners, as it provides extra classes and focused attention. Conducting such evaluations will help the trainees to improve their performance, and the Ustaads, an opportunity to check and correct the trainees at regular intervals. It has been observed that with the PBA system in place, trainees better understand what they need to improve upon and start taking initiatives on their own making the process more transparent and trainee driven. The Progressive Benchmarks should be reviewed every few years after taking the historic performance data into account, to fine-tune the benchmarks. Sample of Progressive Benchmark Assessment table adopted by SVPNPA for IPS probationers is shown below:

(i) Progressive Benchmark for PT (Gentlemen Probationers)

Sl. No	Event	Week 6	Week 12	Week 20	Week 28	Week 36
1	Half Squats (in 01 Minute)	10	16	24	32	36
2	Push Ups (in 01 Minute)	10	16	24	32	36
3	Sit Ups (in 01 Minute)	10	16	24	32	36
4	Chin Ups	01	02	04	06	08

5	1 Mile Run (Min: Sec)	08.15 min	07.45 min	07.15 min	06.45 min	06.00 min
6	5m Shuttle Run (in 01 Minute)	12	14	15	16	17
7	Vertical Rope Climbing (3rd Class)	-	-	06 feet	09 feet	12 feet
8	110 m PT Obstacle Course	-	-	75 sec	60 sec	50 sec
9	Road Run	03 km	05 km	08 km	12 km	16 km
10	BOAC	-	10 (obstacles)	-	17 (obstacles)	17 (obstacles with time)

(ii) Progressive Benchmark for Swimming

Sl. No	Progression	Time Period (No. of periods completed)					
		6	10	16	20	30	36
1	Floating	✓					
2	Swimming -5m		✓				
3	Swimming -21m (with stops)			✓			
4	Swimming -21m (Non – stop)				✓		
5	Swimming -50m (with stops)					✓	
6	Swimming -50m (Non – stop)						✓
7	Jump – Edge				✓		
8	Jump – 1m					✓	
9	Jump – 3m						✓

2.3 Modular Training – The Game Changer:

Modular learning is a teaching and learning approach that breaks down a course/subject into smaller, self-contained units known as

modules. Each module focuses on a specific topic or skill, allowing trainees to study and master one concept at a time before moving on to the next. This modular structure provides flexibility and customization, enabling trainees to progress at their own pace and revisit specific modules as needed and supporting trainers to assess the progress of each trainee. Based on the experiences of the past it has been found that Modular Training is best suited for skill development. Hence, it has been the endeavor of the National Police Academy to have modular training for most of the outdoor subjects. The TNA Sub-Committee on Outdoor Training in its report advocated for a modular approach to outdoor training, integrating advances in training methodologies across the globe. Currently the National Police Academy follows a modular approach of training for Unarmed Combat, Firing, Field Craft & Tactics, Swimming, First Aid & Ambulance Drill and Riot Control Module Drill.

2.4 Use of Technology – The Way Forward:

Technology helps in capturing different types of data points and analyzing them to provide insights into the various aspects of training. It is a great tool for training administrators to leverage upon.

2.4.1 Heart Rate (HR) Monitoring:

Using fitness trackers is one of the most important developments in the field of fitness tracking. The National Police Academy had introduced a fitness tracker to monitor the HR of IPS probationers during physical training at the Academy. The centralized dashboard at the Academy captures the data and helps the outdoor team to monitor the HR of each probationer during physical activities and ensure that the HR is maintained in the training zone. The wellness and fitness levels of each probationer including sleep patterns and Resting Heart Rate (RHR) is captured in the dashboard thus providing an insight into the critical health of each probationer. Measures that check for signs of burn out are particularly useful for preventing injuries. Heart Rate Variability, VO2 max etc. are emerging as promising measures, though they need more rigorous validation.

2.4.2 Digital Performance Dashboard has been set up at the National Police Academy for digitizing and monitoring all data related to performance of the probationers during outdoor training. The dashboard acts as a platform which will have all the relevant information regarding outdoor training at one place. The dashboard has information like profile of the probationer, outdoor timetable, attendance, health and fitness statistics, benchmark performance scores, etc. The dashboard is utilized by the trainees, the trainers and the training administrators.

2.5 Focus on Trainers:

Even with the best of curriculum, infrastructure and intentions, quality of training would remain as good as the quality and mindset of trainers. Since trainers are the medium through which all training inputs are delivered to the trainees, we need to select the best trainers who would be role models worth emulating. It is important that officers posted to training institutes should be developed as trainers. Many-a-times officers with good field experience may not become good trainers since their communication and teaching skills are inadequate. Therefore, it is important that all officers/personnel who get selected for posting to training institutes as trainers should undergo a Training of Trainers (ToT) course. This should build upon their domain, functional and behavioral competencies. Trainers should be motivated with rewards and appreciation on successful completion of major events / training phases.

The National Police Academy follows a very stringent system of selection for induction of Ustaads (Drill Instructors and Assistant Drill Instructors) to the Outdoor Section. The candidate should have served in his/her parent academies as a trainer for minimum 4 years in addition to the mandatory courses he/she would have successfully completed, the age profile, current levels of fitness and professional competence among other things. Once inducted the Ustaads are oriented to the NPA system of training and are under probation for a period of one year before he/she is allotted a training Squad. ToT Courses are conducted every year to upgrade the skills and competencies of the Ustaads. The Ustaads are assessed on a

quarterly/half yearly basis on various parameters like physical fitness, body composition, skill sets, etc.

2.6 Motivating Trainees – A case study:

The Personal Target Sheets, with fortnightly/ monthly/ annual targets, introduced at the National Police Academy during 73 RR batch was a driving force motivating them to achieve the targets set by the probationers themselves. During the period 2021-2023 various challenges were introduced in the academy and the IPS probationers were encouraged to take part in these open challenges on a voluntary basis. The challenges included Swimming (500m, 1 Km, 1.5 Km and 2 Km), Cycling (40 Km, 50 Km, 60 Km and 100 Km), Running (Half Marathon), Fitness Challenge and Triathlon (NPA Triathlon & Olympic Distance Triathlon). The results were encouraging. In October 2021, 43 IPS probationers of 73 RR batch completed the NPA Triathlon (consisting of 1 Km Swim, 40 Km Cycle and 10 Km Run). In October 2022, from 74 RR batch, 86 probationers completed the NPA Triathlon, and 50 probationers completed the Olympic Distance Triathlon.

2.7 Dovetailing Outdoor Training with Indoor Training:

It is important that training should not be imparted in the silos of indoors and outdoors but as a continuum across both, for effective delivery. A classic example of integrated approach is of public order maintenance where joint planning between indoor and outdoor faculty can lead to theoretical understanding of unlawful assembly, rioting, crowd psychology, etc. along with legal provisions on one hand; and practical application in form of crowd/riot control drill on the other. Similarly, the firing range can be used for teaching them forensic ballistics. A regular system of coordination needs to be put in place to ensure this.

2.8 Balanced Approach:

Balance or equilibrium is fundamental to all living and nonliving things from the macrocosm to the microcosm. It is equally important for institutions and individuals. In police training the training administrators are bestowed with the task of allocating the marks and training time for

each subject. This invariably reflects the importance given to each subject. It is important to strike a balance between indoor and outdoor training; between different outdoor subjects; between training time and rest & recovery time in outdoor training; between endurance, strength, flexibility, agility and mobility in physical training; between upper body, core and lower body in strength training; between individual excellence and group learning; etc. The training administrators should develop a feedback system involving trainees, trainers and external agents. It is imperative that the senior faculty members interact regularly with the trainees. This will ensure they get immediate feedback about the conduct of the training. The trainees should be encouraged to give genuine feedback on a regular and systematic basis (weekly/fortnightly/monthly) which will provide opportunities for course corrections at each stage of the training.

3. Conclusion: Realizing Full Potential of the Trainees

It should be the endeavor of the Academy to provide adequate opportunities and a suitable ecosystem for the officer trainees to achieve their full potential. This can be achieved by incorporating the modern scientific principles; system of continuous and comprehensive evaluation; use of latest technology; focus on trainees and trainers; having a balanced approach; and finally, by making the training enjoyable and memorable.

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Bridging the Gap: Best Practices from National Police Training Institution for State-Level Adaptation

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Abstract:

Training is a force multiplier and for challenging work like policing, it can be a panacea for many of the problems. With over 1.4 billion population, the challenges for policing are increasing with every passing year. Technology is facilitating criminals with anonymous communication, anonymous payments and borderless world. In such scenario, the force in which over 80 % of the force is constabulary, it is high time that due importance is given to training of this force in effective handling of contemporary challenges. The author is serving the Academy for last six years and this article is an effort to crystalize the learning on training into words. The article delves into the most important aspects of human resources and its capacity building. Best practices in indoor training, outdoor training, use of technology for training, police tactics etc. are discussed in detail so that other police training institutions may find it useful to replicate. Two very important aspects of 'Training Needs Analysis' and 'Design of Training' are also discussed at length based on first-hand experience of the Academy. Many of the IPS trainees find running even 400 m very difficult when they join Academy after years of preparation for UPSC. In 2022, 136 IPS trainees completed triathlon. It speaks volumes about the transformational training in Academy.

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Keywords:

Indoor training, outdoor training, use of technology, infrastructure, TNA

1) Introduction:

Policing is among the most challenging professions globally. Despite 75 years of independence, the Indian Police continues to face significant hurdles in building trust and goodwill with the public. Transformative police training holds the potential to not only improve operational efficiency but also to enhance the perception of the police among citizens. Protagonist has served in the Academy at posts of Assistant Director and Deputy Director and drawing on over six years of experience at Sardar Vallabhbhai Patel National Police Academy, Hyderabad from 2018-2024, this case study aims to distill key insights and provides actionable recommendations for police training institutions across the nation. This case study offers practical, and resource-efficient suggestions that can be readily implemented, even within constrained budgets.

Policing in India is a highly challenging job due to a unique combination of diverse and complex social, cultural, and legal dynamics. Officers often face an immense workload, dealing with a large and diverse population spread across urban and rural areas with varying levels of economic and social disparity. The job is further complicated by limited resources and infrastructure, which can hinder effective law enforcement and crime prevention efforts. Additionally, police personnel are frequently exposed to high-stress situations, including communal tensions, interference from various quarters, and threats to personal safety. Managing public expectations and maintaining law and order in a country with a wide range of languages, religions, and customs adds to the difficulty of the profession, making resilience and adaptability essential for officers on duty.

Every State/UT usually have a State Police Academy that trains DSP/SI rank officers, and one or more Police Training School/ College are there for training constable rank. The primary task of these

institutions is to train newly inducted officers/staff and conduct in-service courses. The DSP batch size may vary from 20 to 100 depending on the size of the cadre. The Batch size of SI gets in hundreds and that of constabulary goes in thousands. The training resources availability varies from State to State but usually the biggest chunk of constabulary receives lesser resources for training. One of the biggest strengths of any organization is its human resources. These human resources, if trained well, can speed up the process of achieving the organization goals.

Training for police personnel is of paramount importance, as it equips them with the knowledge, skills, and judgment necessary to handle the myriad challenges they face in line of duty. Comprehensive training programs cover not only physical fitness and tactical skills but also emphasize communication, crisis management, and cultural sensitivity, which are crucial for effective community policing. Regular and specialized training ensures that officers are prepared to handle evolving threats such as cybercrime, terrorism, and organized crime, while also instilling a strong understanding of human rights and ethical behavior. Continuous professional development fosters better decision-making, enhances public trust, and improves officers' ability to de-escalate potentially volatile situations, contributing to a safer and more cohesive society.

2. Objective of the Case Study:

It often happens at organizational level that wheel is reinvented again and again. The endeavor of this work is to document the replicable practices of National Police Training Institution so that it may assist sister police training institutions in the States. Resources constraints in State Police Training Institutions are kept in mind while writing the case study and it is hoped that this will be useful.

3. Key features of National Police Training Institution:

SVPNPA is the premier training institution of the country responsible for training of newly inducted IPS trainees as well as training of in-service

IPS officers. With its existence of over 75 years, the institution has standardised training practices and the institution always tries to excel in every aspect of training.

This institution has a long tradition of interactions with sister training institutions like Lal Bahadur Shastri National Academy of Administration, National Academy of Direct Taxes, National Academy of Customs, Indirect Taxes & Narcotics, Indian Institutes of Management etc. The police officers from USA, UK, Australia, Singapore have imparted training to IPS officers, and it has given a perspective of police training in other countries.

In terms of resources availability, the Ministry of Home Affairs is the parent ministry, and sufficient budget is provided to maintain world class training standards. The faculty at all ranks is selected through a process and it is a matter of pride for anyone serving in this institution.

The institution actively promotes all the faculty members in their professional growth so that the learnings can be useful in their training activities. Academy hosts a huge library in physical as well as in digital format. Academy promotes research in various aspects of policing, and it helps to keep the training content relevant and contemporary.

All the above-mentioned facilities and resources may or may not be available in State Police Training Institutions.

4. Identification of replicable Practices:
a. Human Resources:
Efficacy as well as efficiency of any training institution depends far more on the trainers viz-a-viz any other resource of that institution. The age-old management principle of "Right Man for the Right Job" is far more desired in any police training institution. One unique challenge that only police training institutions face is outdoor activities. As the rigor of outdoor activities increases, it starts reflecting in indoor sessions and the trainer needs to pull all the tricks of the trade to keep the trainee awake first and then to

train him/her. Some thoughts on desired skill sets in outdoor as well as indoor trainers are given below:

1) The trainer must be eager to learn first and then to impart training. The "Know-it-all" category of people are more harmful to any training institutions.

2) The trainer must be a positive person and not the one who is punishment oriented.

3) No organization gets all the people with desired skill sets. But among the given lot, if person is "know-it-all" and "punishment oriented", such officers/staff may be deployed in other administrative works and never for any training activity.

4) Annual schedule of "Faculty Development Program (FDP)" is a must for every police training institution. At the National Police Academy, we have seen that Director himself sits in all the sessions of FDP. This is the right example of leading from the front. Howsoever accomplished/ senior is the Director/ Principal/ In-Charge of Police Training Institution is, his/her participation in daily training activities gives direct signal to entire formation that **training is the core business** here.

5) At SVPNPA, the Director has been part in design of training, session design, training needs analysis, evaluation of training, outdoor activities, cycling, route marches, visiting hospital to meet injured trainees, athletic meet, aquatic meet and even in cultural program of trainees for events like dance and skit to indicate that there is **nothing more important than the trainee** for the Academy. This active participation from the highest authority automatically leads to equal amount of engagement from all other faculty members and training staff of the Academy.

6) As compared to the field, any Academy PTS-Police Training School / PTC-Police Training College is a very small place geographically and hosts many officers in one place.

Sometimes, it may lead to differences of opinion among the senior formation, and it has potential to break the harmony in training activities. Informal activities like festivals, cultural programs, treks, cycling etc. bring all the team members together and foster bond of camaraderie.

7) To attract the best talent to the Academy, incentives like opportunities for higher education, promoting specialization, better housing and campus, medals, monetary incentives etc. can be considered.

8) To groom the faculty, a good starting point can be an online course "Faculty Development Program" designed by ISB Hyderabad and hosted on iGOT Karmayogi Platform. [https://portal.igotkarmayogi.gov.in/app/toc/do_1140768117 304033281523/overview?batchId=0141017466916700168].

9) Every year various institutions conduct various training programs for Trainers like
   a. Training Needs Analysis
   b. Design of Training
   c. Evaluation of Training
   d. Training Skills and Methodology
   e. Training of Trainers

These institutions are
   i) Sardar Vallabhbhai Patel National Police Academy, Hyderabad [svpnpa.gov.in]
   ii) Yashwantrao Chavan Academy of Development Administration, Pune [https://www.yashada.org]
   iii) Institute of Secretariat Training & Management, New Delhi [https://www.istm.gov.in/]

The training timetables are available on the websites mentioned above.

a. **Training Needs Analysis**

Training Needs Analysis (TNA) is a systematic process used by organizations to identify the gaps in employees' knowledge, skills, and abilities and determine what training is necessary to bridge those gaps.

The primary goal of TNA is to align the training efforts with organizational goals and improve employee performance effectively. Here's a breakdown of the steps in a typical TNA:

1. Identify Organizational Goals and Objectives: Understanding the organization's goals is the first step, as training should directly support these objectives.
2. Analyze Current Skills and Competencies: Assess the current knowledge and skills of employees.
3. Identify Skill Gaps: Compare the current skills with the required skills to identify gaps. These are areas where employees lack the knowledge or skills needed to meet the organization's goals.
4. Determine Training Requirements: Decide which gaps can be closed through training and identify specific areas where training will be beneficial.
5. Prioritize Training Needs: Since resources are often limited, prioritize the skills and competencies that are most crucial to achieving organizational goals.
6. Develop Training Objectives and Plan: Based on the prioritized needs, create specific, measurable objectives for the training. Develop a plan that outlines the type, scope, and delivery method of training.
7. Evaluate Training Effectiveness: After training, evaluate its effectiveness to see if it meets the objectives and closes the identified skill gaps. This step helps improve future training efforts.

By conducting a TNA, organizations ensure that they invest in training that directly contributes to productivity, efficiency, and overall employee satisfaction, maximizing the return on investment for training programs.

Conducting TNA – There are various ways of collecting data for TNA like survey, questionnaire, interview, observation, skill tests etc. Based on Academy's experience, digital questionnaires and interviews of important stakeholders can be a quick way of getting this exercise done.

Google form or any similar technology can be used to create questionnaires. The sample of questionnaires used by Academy are available in book "Training Needs Analysis for IPS trainees" published by SVPNPA.

These questionnaires can be given to:
i) Officers/staff trained by institutions in last five years.
ii) Their supervisory officers in the last five years in field.
iii) The senior officers/staff who visit the institution for training.
iv) Present and former faculty of the institution.
v) Other stakeholders like judiciary, FSL, Prisons, Public representatives, media, NGO's etc.

Collection of data is an easy task due to technology, but the real challenge lies in data analytics. It needs to be carefully done as the further course of action completely depends on data analysis. At this stage, the experts from within the Academy and from outside the Academy may be engaged. Changes need to be brought in content, delivery and methodology. Once TNA is over and changes have been brought in training, institutions also need to identify the parameters on which the impact assessment of TNA can be made. Any police institution interested in TNA may contact Academy to know more about the nuances for conducting same.

b) Design of Training – This comprehensive course covers following aspects:

1. **Introduction to Training Design**
   o Definition and purpose
   o Importance of well-designed training
   o Current trends in learning and development

2. **Understanding Training Needs**
   o Conducting Training Needs Analysis (TNA)
   o Identifying performance gaps
   o Setting clear learning objectives

3. **Adult Learning Principles**
   o Andragogy vs. pedagogy

- o   Characteristics of adult learners
- o   Applying adult learning principles in training

4. Training Design Frameworks

- ADDIE Model (Analysis, Design, Development, Implementation, Evaluation)
- SAM (Successive Approximation Model)
- Selecting the right framework

5. Target Audience Analysis

- o   Understanding learner profiles
- o   Tailoring content to different learning styles
- o   Addressing diversity in learning preferences

6. Creating Learning Objectives

- o   SMART (Specific, Measurable, Achievable, Relevant, Time-bound) objectives
- o   Linking objectives to outcomes

7. Developing Training Content

- o   Structuring content for clarity and engagement
- o   Storyboarding and lesson planning
- o   Integrating multimedia and interactive elements

8. Methods and Modalities

- Instructor-led training (ILT)
- E-learning and virtual training
- Hybrid/blended learning approaches

9. Designing Training Materials

- o   Participant guides, handouts, and slides
- o   Practical activities and case studies
- o   Gamification and simulations in training

10. Facilitation Skills

- o   Role of the trainer
- o   Engaging and managing participants
- o   Handling challenging situations in training sessions

11. Pilot Testing the Training

- o   Importance of pilot tests
- o   Gathering feedback and refining content

o Ensuring training logistics

12. Evaluating Training Effectiveness

- Kirkpatrick's Four Levels of Evaluation
  - o Reaction, Learning, Behavior, Results
- Tools for measuring impact

13. Continuous Improvement

  - o Feedback loops for ongoing enhancements
  - o Keeping training relevant to changing needs
  - o Leveraging technology for data-driven insights

Interactive Elements to be used during the training

- Group discussions and brainstorming sessions
- Case studies and real-world examples
- Role-playing and simulation exercises
- Hands-on practice in designing small training modules
- Peer feedback and collaborative improvement

Outcome expected from the course.

Participants should be able to:

1. Conduct a training needs analysis.
2. Design effective training programs tailored to specific audiences.
3. Develop engaging training materials.
4. Evaluate the effectiveness of training and implement improvements.

Every State has an Administrative Training Institute which is involved in training civil servants. Many of their trainers on common topics like management, procurement, soft skills, government procedures, conduct rules etc. can be used. Besides, DoPT maintains a list of Master Trainers on various topics. Such list can be used for selection of right faculty for training activities in the institution.

10. At SVPNPA, during FDP, video of faculty, PPT made by faculty, and other study material are studied by faculty conducting FDP and every faculty member gets individual feedback on following

- o   Body language
- o   Voice modulation
- o   Eye contact
- o   Use of images in PPT
- o   Use of too much text in PPT etc.

Such individual feedback helps to improve performance. The number of years spent in Academy is no excuse. Every year, every faculty member has to undergo FDP so that there is a continuous improvement in their session delivery. To conduct such FDP, not much cost is involved but a lot of commitment is expected from the trainers as well as participants.

11. In-house faculty is never sufficient to cover the entire syllabus. Field experts and specialists should always be called for taking the sessions. It keeps learning contemporary and realistic. SVPNPA maintains a data of 7,192 speakers who have taken sessions in last 10 years and same is shared in "Knowledge Management System" platform of the Academy. This data is available for sharing with all other police training institutions. Also, the Academy has a policy to try new speakers in every courses so that new talent is identified and used for training activities. This process is worth replicating.

12. Covid 2019 was one of the worst tragedies of our time, but it had a silver lining. It forced us to make faster adaptation of technology. Sessions using Video conference became a norm which is in use even today. Some learnings from video conferences conducted so far are mentioned below-
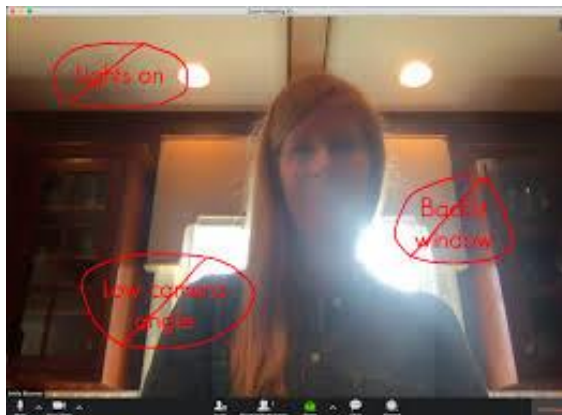
Light Should not be behind the speaker

Speaker may be requested to arrange lights in front of him for brightness on his/her face
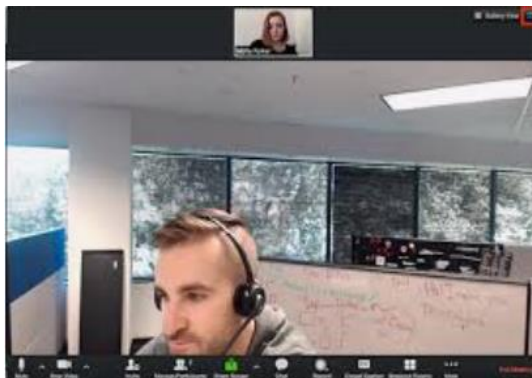
Speaker should occupy maximum portion of screen and there should be minimum distraction in background.

This is an ideal scenario. Speaker face is occupying 60% screen and background is blurred.

Academy uses two screens or three screens format in which one screen is used to show the speaker, and one screen is used to show the PPT of the speaker as shown below.

13. Ensuring the quality of the training is essential and it can be achieved by taking session feedback on a regular basis. The feedback from IPS trainees is taken on a weekly basis using Learning Management System. In the case of Mid-Career Training Programs and other Senior Courses, the feedback is taken on a digital basis. All this feedback is taken in digital format and also give an option of anonymity to the trainee. The format is simple and less time consuming as given below:

As soon as feedback is taken, it is compiled and conveyed to the speaker so that necessary corrections/ changes can be made by the speaker. Session ratings are taken on the Likert scale. Participants are encouraged to give comments on sessions also so that the next session of the same speaker can be made better. All such feedback is part of the course report.

Any session getting rating less than 4.5 out of 5 is scrutinized for reasons of less rating and necessary action is taken to improve the rating.

Some simple actions taken to improve the quality of sessions are mentioned below:

- Use of images using AI
- Use of activity-based methodology
- Use of Videos in the sessions
- Use of interactive platforms like Kahoot.it, clickr, mentimeter etc. to conduct quizzes etc. in the classroom

14. Sometimes, a google form is circulated among the participants in senior courses to know their expectations from a given course and from each session. The feedback obtained is shared with the speakers well in advance so that they prepare their session to cover the expectations of learners.

b) Outdoor Training Ideas:

Outdoor training is a crucial part of police training, teaching essential life skills, instilling discipline, and building the practical skills needed for effective policing. Every year, the Academy trains outdoor staff to understand the impact of physical activities on the body, including common injuries and prevention methods.

At the start of each training cycle, trainees undergo medical evaluations to check levels of Vitamin D, B12, calcium, and iron, with supplements provided as needed to prevent injuries. Gym trainers guide trainees through strength-building exercises, preparing them for demanding tasks like rope climbing.

This approach has led to fewer injuries and improved outdoor performance. In 2022, around 136 IPS trainees completed a triathlon (1/1.5 km swim, 40 km cycling, and 10 km run)—an impressive feat, considering many have had limited physical activity due to UPSC preparation.

Identifying physically weaker trainees early on and gradually conditioning them has further minimized injuries. Reported pains or injuries are assessed with X-rays and MRIs to pinpoint issues like ligament or muscle tears, swelling, or bone problems. This data helps

physiotherapists and trainers design modified activities for injured trainees, ensuring they are never pressured to participate with an injury. For example, if a trainee has a leg injury, they focus on upper-body skills like weapon handling rather than running.

Running intensity is increased by 10% each week, allowing those struggling to build endurance gradually. The Academy also collaborates with strength and conditioning experts from the Sports Authority of India (SAI) for scientific injury supervision, which can be replicated in other states with SAI units.

The biggest challenge for State Police Training Academies is managing large numbers of trainees, but injury prevention can be achieved through quality training and attitudinal development among outdoor trainers.

Numerous open-source videos are also available to support outdoor training efforts.

1. Riot Control Demo by Rapid Action Force
   https://www.youtube.com/watch?v=L5XAx3A8OU8
2. The Basics of Gun Handling
   https://www.youtube.com/watch?v=r6Nv74nvEWg
3. Handgun Aiming & Sight Picture
   https://www.youtube.com/watch?v=KCa6jcfTlys
4. 9mm Pistol full Detail Review !! How to Pistol Open and Close
   https://www.youtube.com/watch?v=96kkoysyMpc
5. इंसास राइफल के फायदे! –
   https://www.youtube.com/watch?v=2_6oJKDLBWQ
6. 5.56mm Insas Rifal All Parts Name And Work
   https://www.youtube.com/watch?v=yvwfkV66As0
7. 5.56 Insas Rifle Salute-
   https://www.youtube.com/watch?v=tbkf3kl_M_g
8. BOAC training TSpolice –
   https://www.youtube.com/watch?v=Rl10QtqMDuU
9. Section Formation In Field Craft
   https://www.youtube.com/watch?v=rORA_M0X7BY

10. SECTION FORMATION-
    https://www.youtube.com/watch?v=ZX3J24YLL_E
11. PT || AR 2024 BATCH || TS POLICE –
    https://www.youtube.com/watch?v=e3BQJ8YJP3Y

[Protagonist does not endorse/support any of the above-mentioned videos and its use may be done after due verification of accuracy of the content. These are just indicative in nature.]

C) Indoor Training Ideas:

Indoor training of police officers as well as staff mainly focuses on laws, forensics, investigation and management topics.

i) **Learning Management System** –
   SVPNPA is using the Learning Management System to host entire training content digitally available to the trainees. It includes precis, PPT of session, video of session, study material, book review, assignment submission, evaluation etc.
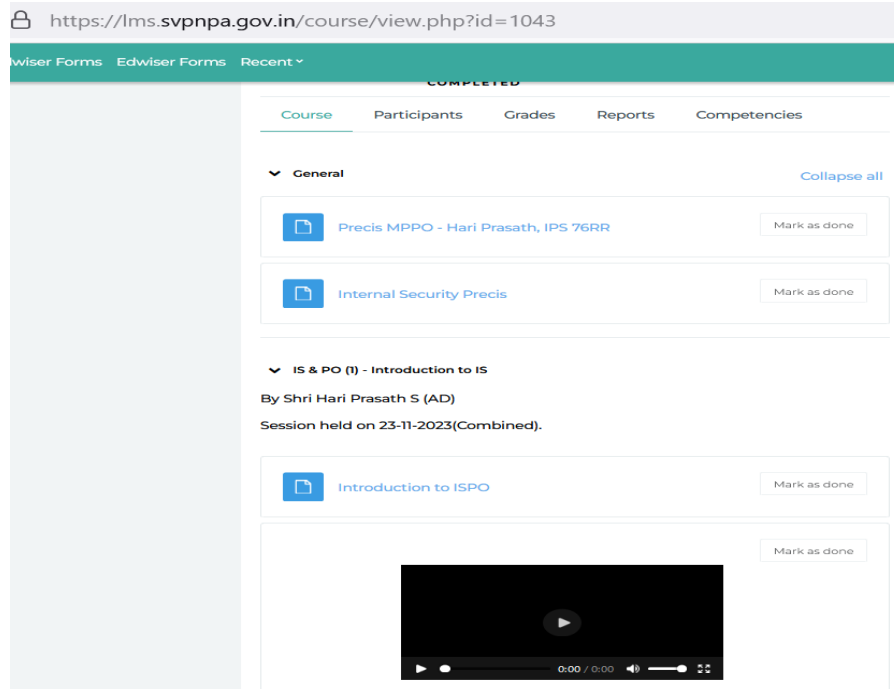
The LMS is based on Moodle which is a free and open-source learning management system. One needs to hire an agency to make LMS tailor made to the institution's requirements and a minimum trained person is needed to upload the content on daily basis. Some LMS sources that can be used by Police Training Institutions at reasonable costs are mentioned below:

ii) **Session design lab** – Every week, the faculty meets once to discuss about the topics that will be taught to the trainees and exchange ideas on improving the sessions. This way, cumulative wisdom goes in design and execution of the sessions.

iii) **Class size** – Academy since 2020 has adopted the policy that class size for basic course should be maximum 50. A batch of 200 trainees is now divided into four sections and a faculty has to take the same session in all four sections. Though the workload of faculty has increased, there is visible difference in quality of training. The small classroom leads to better attention to the trainees and better engagement. This will be a challenge for Academies handling trainees in thousands. But wherever possible, this benchmark may be applied.

iv) **Blended Learning** – The subject of law is not taught in isolation, but faculty narrates a scenario and then law faculty of BNS-Bharatiya Nyaya Sanhita mentions about sections of law applicable, faculty of BNSS-Bharatiya Nagarik Suraksha Sanhita mentions the different procedures that need to be followed and finally faculty of BNS-Bharatiya Nyaya Sanhita narrates the appreciation of different types of evidence in given case. The principle of sequential learning is also followed. Investigation sessions start only after law sessions covering different aspects are over so that the trainee appreciates the processes in a better way. These things appear to be simple, but they do have a major impact on the efficacy and efficiency of the training.

v) **Simulations** – Academy lays tremendous importance on simulations. Every batch is doing at least five simulations for different crime scenarios from FIR to Chargesheet so that there is a experiential learning of investigation process.

vi) **Field visits** – Trainees visit field to see bandobast, election, prison, places of cultural importance etc. to get the field perspective. Briefing before the visit and debriefing after the visit are essential to crystalize the learning.

vii) **Moot Court** – The Courts are most important part of criminal justice system and hence a moot court is organized for every batch so that they get a firsthand experience in court processes.

viii) **Public speaking module** – Policing is a job that requires continuous engagement with public. In recent years, a lot of emphasis is placed on communication modules with special emphasis on public speaking. This module can be taken from the Academy by all police training institutions and can be replicated. It gives them the required skill set to address a gathering – friendly as well as hostile one.

D) Use of Technology in Training:
Technology is a force multiplier and has been used extensively by Academy.

i) E-learning - National Training Policy 2012 mandates that all civil servants need to be provided with training to equip them with competencies for their current job as well as future jobs.

For a nation with more than 21 lakhs civil police force and more than 10 lakhs paramilitary force, catering to the training requirement of each officer/staff, every year, by calling them to the training institutions for various courses has limitations in terms of logistics, time and availability of the officer/staff from hectic work schedules.

In such scenarios, e-content becomes a very viable solution. Traditionally, in physical set up of classroom, a speaker takes a session. Trainers' inputs are limited to his/her wisdom. In e-content, we have the option to engage more than one subject matter expert for content

creation. The content so made is then sent for review by another senior officer who has proven expertise in given domain and then the content is finalized. This way the content is more focused and filtered to cater the needs of learners. The content design is made in such a way that after every 15-20 minutes, there is an activity like quiz to keep the learner engaged. iGOT Karmayogi platform of GoI is hosting all the e-content developed by government bodies. This way, the e-content is available to any official, any time and anywhere with no restriction on the number of times it can be accessed. It has huge potential to bridge the training gaps in many training institutions that are struggling to find good trainers. Academy, as part of outreach program, is making e-content that is understandable by all the ranks. Content is available in English and Hindi languages and same can be shared with due permissions for translation in vernacular language.

The Academy has created over 80 hours of e-content. The details of the same are given below -

Sl. No.	Content Name	Duration	Enrolment	Completions
1	Social Legislations	01:29:15	20347	14222
2	Bharatiya Nyaya Sanhita	00:50:00	11582	3973
3	Bharatiya Sakshya Adhiniyam	00:49:00	4656	1815
4	BNSS- Bharatiya Nagarik Suraksha Sanhita	01:25:00	8019	1775
5	Cyber Crime Investigation -	05:37:00	4682	391
6	Forensic science for IO's	01:34:53	1063	252
7	साइबर अपराध जांच	05:37:00	5344	174

8	Substantive (Criminal) Laws	03:25:00	2778	734
9	Procedural Laws (Criminal)	04:12:14	2987	697
10	Special Acts	07:17:52	939	346
11	Marathi language course	11:44:00	3548	1151
12	Bengali language course	12:34:00	367	36
13	Gujarati Course Language	12:08:00	448	27
14	Odia Language	11:37:00	207	19
	Total	80:20:14	66967	25612

Content from sl.no 2-7 was made and uploaded just 4 months ago and it shows that more than 10000 police personnel have already enrolled for same. It shows the magical reach of e-content. Other Police Training Institutions can make use of this content for their training. Academy has started "Virtual Training Wing" in 2023 that is responsible for e-content creation. Academy can share the experience with any other police training institution that want to start similar unit.

ii) Use of Smart Classrooms – Wherever possible, use of smart classrooms equipped with Digital display and mike systems so that the two-way communication is possible.

iii) **Use of Kahoot.it, Clickr or Mentimeter** – These tools allow to take opinion of the participants or to conduct the quiz. It adds energy in class as everyone feels that they are contributing, and the results are available on screen.

iv) Knowledge Management System

– Academy has started this web-based portal that stores all training materials of IPS training, case studies submitted by MCTP-Mid Career Training Programme and ITC participants, study material on new criminal laws, study material shared by other police training institutions, list of speakers, publications by IPS officers and general study material
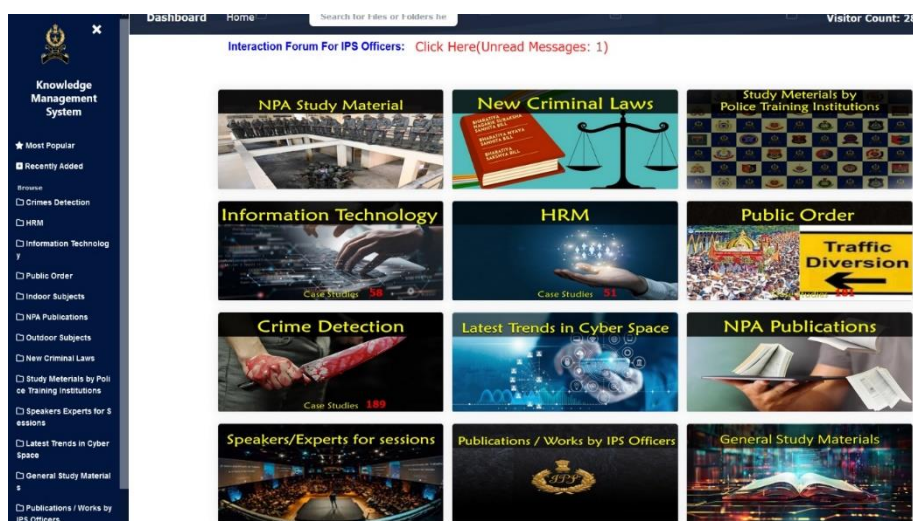
on policing.

v) Training Information and Management System – This web portal is used for following activities

1) Record of Biodata of IPS trainees.
2) Indoor and outdoor marks of IPS trainees
3) Counselor's remarks

4) Leave, EOL, Medical leave records
5) Attachments attended/ not attended
6) Assessments records

E) Police Tactics – Good knowledge of these tactics is very essential in daily police activities like duties on check posts, arresting aggressive accused, search operations at odd hours, patrolling, raid and search operations in hostile areas and so on. A casual approach to any of the above activities may lead to embarrassment for the department and sometimes it may even cause loss of life. Special Tactics Wing of the Academy maintains good SOP's, case studies and videos on the subject. All details cannot be shared in digital format, but any police training institution can approach the Academy through proper channel and ask for these study materials. Some open-source materials related to subjects like Urban Ops, Explosives, Police Tactics, Jungle Ops etc. for reference purposes are mentioned below

S.No	Topic	URL link	Remarks
1.	Explosion and Explosives: Introduction	https://www.youtube.com/watch?v=E9Wz9jT0Ahc	Mechanical Explosion video (19 Sec)
		https://www.youtube.com/watch?v=OOWcTV2nEkU	Difference between Low Explosive and High Explosive. (4 min 21 sec)
		https://www.youtube.com/watch?v=jgOoeOPhDWY	Satellite image showing scale of Beirut Explosion for explaining how dangerous Ammonium Nitrate can be. (44 Sec)
2.	Action on detection on recovery of an IED	https://www.youtube.com/watch?v=SpG5OvJLNw8	Brief video regarding role of BDDS (Army's BDDS team) (5 min 30 sec)
3.	Urban Ops	https://www.youtube.com/watch?v=Y7ELFq_O-8U	To discuss shortcomings of tactics used in situations in Urban Ops. (3 min)

		(1:12:56 to 1:16:00)	
4.	Police Tactics	https://www.youtube.com/watch?v=ehHcEep7GtA	To explain the search technique of suspect. However, some variations are also explained in the sessions. (2 min 31 Sec)
5.	Jungle Tactics	https://www.youtube.com/watch?v=Tv6XPO7l90w	Naxal training video (42 sec)
6.	Drone and Anti Drone Technology	https://www.youtube.com/watch?v=NdSnWnCiAo0	Drone attack on Venezuelan President
7.		https://www.youtube.com/watch?v=WcFiMCMbUHo	German Chancellor faced Drone incident
8.		https://www.youtube.com/watch?v=xShI_a7TA7Q	Drone threat on Borders (2 min 05 Sec)
9.		https://www.youtube.com/watch?v=gVM9FAlJ4Zc	Use of Drone for Crowd control (BSF) (2 min 33 sec)
10.		https://www.youtube.com/watch?v=zepmZ574Wjw	Drone catcher (Hard Kill) (2 min 08 sec)

F) Other General activities – Academy maintains Website that is useful for dissemination of Training Calendar and other training related information. General training and awareness material is also shared on the Academy website for larger benefit of the police fraternity. E-office, E-leave, E-library etc. are the other general digital resources that assist in transparent administration.

G) Infrastructure

In most of the training institutions the classrooms are having linear pattern. Our visits to the few best training institutions in the country have

made us realize that horse-shoe-shaped classrooms with steps can have better eye-contact and engagements. In future, wherever possible, such
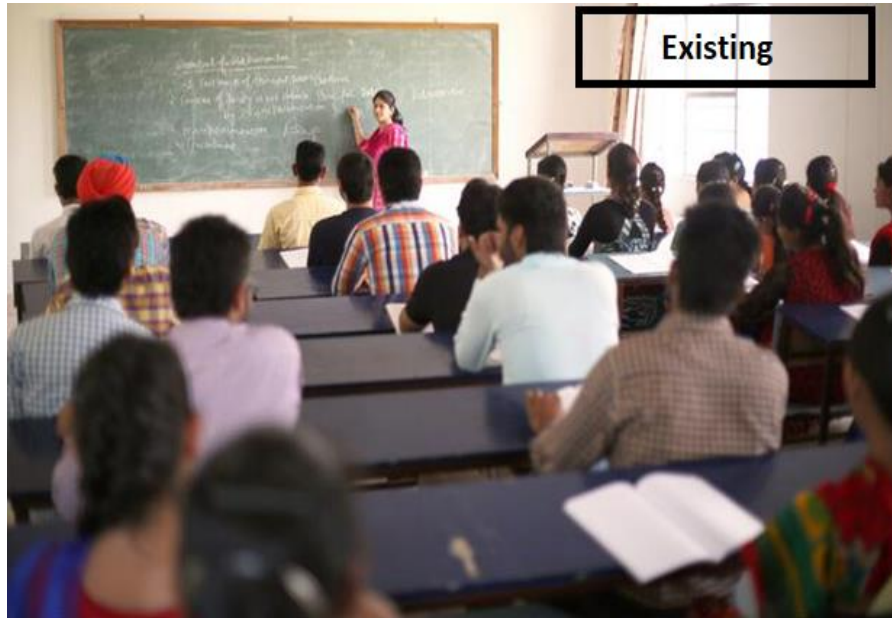
structures may be considered for the design and construction of new classrooms as shown below.
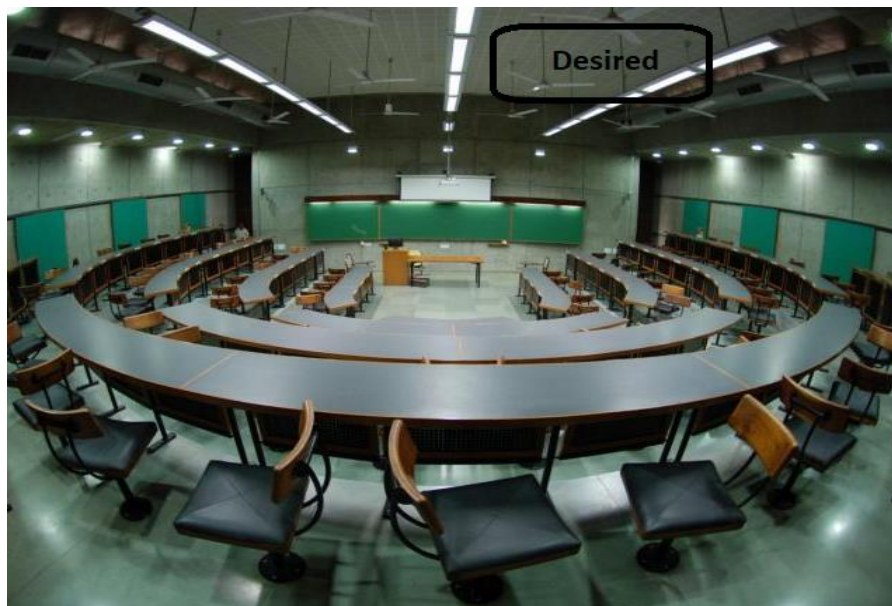
5. Implementation framework:

Many ideas shared on the above pages may be useful fully or partly for other police training institutions.

Studying of this case study is just a first step towards learning from SVPNPA. Any Police Training Institutions wants to learn from SVPNPA, following are the suggested steps

1. Formal communication to Director SVPNPA asking for knowledge sharing.
2. A video conference with any faculty of Academy nominated by Director.
3. Actual visit to Basic Course Section, MCTP Section, Senior Course Section and Computer Section to learn about the best practices and see firsthand its delivery and utility.
4. Taking a decision on implementable ideas.
5. Seeking continuous guidance from SVPNPA till the practice is completely stabilized in State Police Training Institution.
6. SVPNPA is a very open organization to ideas and best policing practices from across the country as well as from across the world. If any institution is keen in sharing their best practices with Academy, they may bring same for discussion.

6) Reflections & Recommendations:

In these fast-changing times, the tasks of police personnel are getting more challenging. Expectations of people, the media and all sections of society are also very high when it comes to service delivery. When the country is aspiring to be a global superpower by 2047, policing services also need to be of that standard. On many occasions, Hon'ble Home Minister has expressed the need of unform police service across the country. This can be achieved through training and retraining of all ranks of police systems. In the last 75 years of its existence, SVPNPA has evolved in training and standardised many training services. It's high time that all police training institutions of the country interact with each other in a formal way every year and standardize the training activities to the highest possible extent.

This case study is an attempt to share some of the practices that can be used by other sister police training institutions.

The purpose of sharing the best outdoor practices was to reduce the injuries during training. A great deal of science is involved in ensuring that the training goes injury free.

The purpose of sharing the best indoor practices is to enhance the efficacy of training. The role of institution does not end in making a timetable, delivering the sessions and conducting a passing out parade. It starts with understanding the needs of the field by conducting the "Training Needs Analysis" and ends with getting effective feedback of every batch that has joined the field for its service delivery. Kirk Patrick model of training evaluation is a global benchmark that mentions evaluation of training as feedback, assessment, learning, behavioral change and benefit to the organization by the behavioral change. The role of every training institution is completed when the last goal of achieving the organization's objectives is achieved.

The purpose of sharing use of technology for training is to enhance the speed, efficacy of training and reduce the costs.

E-learning is the future of training and worldwide it is being adopted. Thankfully the iGOT Karmayogi platform of the GoI is hosting a large number of courses useful for all government organizations including police. E-content created by Academy is also hosted on the same platform.

Some of the general ideas about infrastructure and administrative works are shared that the protagonist has learned over the tenure in Academy.

The views expressed in the case study are personal and shared with a motive of being useful to the fraternity.

References:

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Integrating Child and Child-Related Gender Rights into Police Training: A comprehensive Curriculum for addressing Vulnerabilities

Ruchi Sinha* & Roshni Nair-Shaikh**

Abstract:

This paper presents a unique collaborative initiative by an International Funding organisation whose core focus is children, a State Police Training Academy, and a prominent Social Work Institute. These three entities' coming together is a good example of how domain expertise can be collectively shared for a common purpose. The central focus of this initiative was the integration of child and child-related gender rights and protection issues into the foundational training of state front-line police personnel. The primary objective was to align the training curriculum with the Convention on the Rights of the Child (CRC) tenets. A deliberate emphasis on aligning with SDG Goals 5 and 16, i.e. gender equality and peace, justice and strong institutions, further amplifies the initiative's ambition to foster effective, accountable, and inclusive institutions dedicated to ensuring justice for children. This materialised in a meticulously tailored syllabus to foreground child rights and nuanced gender-related issues specific to each rank within the police force. This

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bespoke syllabus is a pioneering model for transformative police training.

The methodology adopted for this initiative involved an intricate conceptual mapping of competencies, an analysis of the current syllabus, the nuanced implementation of relevant laws, collaboration with diverse stakeholders to understand their views and experiences, and the cultivation of efficient communication adapted to children and marginalised genders. The proposed syllabus incorporates cutting-edge techniques such as participatory and dialogical methods with simulations alongside rigorous academic assessments, ensuring the continual evolution of competencies. The glocal syllabus, characterised by its proactive and evidence-based policing emphasis, represents a harmonious alignment of locally relevant content with rigorous global standards and aims to catalyse positive cultural shifts within law enforcement agencies.

Introduction:

Police training is a highly complex field that is comprised of Operational and Tactical skills (inclusive of specialised tactical skills for high-risk operations, forensics and investigative skills, legal knowledge, technology and cybersecurity skills and first aid and emergency medical response); interpersonal and community relations (cultural competency and diversity, communication skills and elements of community relations building); management and ethics (ethics and professionalism, crisis intervention and de-escalation, leadership and supervision). Such a curriculum is seen to be well-rounded. It is expected to prepare officers to handle the complex challenges they face while maintaining strong ties with the community they serve. The current paper focuses on building the capacities of the police to deal with sensitive issues related to gender

and children. Thus, the training curriculum focuses on understanding and addressing the unique vulnerabilities of children, particularly those affected by Gender-based violence (GBV), discrimination and other gender-related challenges. This requires handling the issue/situation with sensitivity, awareness of cultural context and designing appropriate intervention strategies.

The Context:

Women and Children are two groups that often need the support and attention of the Police. Their interface with the Police is mainly in terms of being victims of crimes and in case of conflict with the law. Children and young people come into contact with the police, as mentioned in the Juvenile Justice Act (J.J. Act) 2015, broadly under the Children in Conflict with Law and Children in Need of Care and Protection categories. Along with the J.J. Act, the State has many Local and Special laws and sections in the BNS (Bhartiya Nyaya Sanhita 2023) to safeguard children, supporting the J.J. Act. The police, however, continue to face multiple challenges when they come in contact with children despite a well-intentioned, robust legal framework. At one end, children's diverse backgrounds and varying levels of maturity create barriers for them to navigate their contact and interaction with the police and the justice system; at the other end, the police are constrained by a limited understanding, knowledge and skills required for the child protection mandate, mechanisms and accountability of the State. The relationship between the police and children needs to be addressed, and the capacities of Police personnel must be enhanced to align with the Child Protection frameworks for improved policing outcomes.

Women and children are vulnerable to multiple adversities and risks, the meanings, experiences, and outcomes of which are shaped by the economic and socio-cultural context and their location in that context. It is imperative to understand while all women and children may be vulnerable, some are more vulnerable. For this, the police need to be aware of the intersectional identity of a child and how it impacts child protection.

The concept of intersectionality within a child's context highlights situations where multiple grounds of discrimination operate simultaneously. It sheds light on the complex ways in which children are denied the equal enjoyment of their rights and freedoms because of discrimination against them based on their age in combination with gender, ethnicity, disability, socioeconomic and other grounds. These forms of discrimination can be intentional or unintentional. The intersectional lens distinguishes between the external sphere (State and society) and the internal sphere (family and community), where children experience interrelated forms of discrimination. It shows how this increases the disempowerment of the child. To protect the human dignity of all children and prevent violations against the rights of the child, it is important to target intersectional discrimination in policing directly.

Applying the concept of intersectionality within a children's context describes the situation where multiple grounds of discrimination operate at the same time, for example, when tribal girls experience differential treatment based on their gender and ethnic origin in combination. This intersectional lens helps improve the utilisation of diverse laws and policies to strengthen the police response towards children, thereby maximising legal guarantees, procedural rights, and assistance for children. Another group that requires sensitive handling is women, largely when they approach the Police as victims. With the increase in crimes against women and for the protection of the rights of children, women and girls, police training needs to address the gaps in current knowledge and practice domains of front-line policing staff. This will help enhance the potential of planning meaningful actions to improve their safety and well-being.

Policing is a State system in which officials come in contact/respond to individuals in crisis/distress. The Police face multiple challenges in working with children and women who have complex needs and require strategies to address front-line challenges. The police training provides an opportune ground to build the capacities of police to address the issues of vulnerable populations, in this context, women and children. The

function of police extends across many aspects of civic life, and policing has a much broader role than the traditional understanding of maintaining law and order, crime detection and using force. The powers and the conduct of the police need to be responsive to the principles of democratic order. The tensions between protective values and principles on one hand and police conduct on the other instil doubt and fear on the part of the persons approaching the police. This alienation and distrust between people/citizens and police necessitate a review of police training, to begin with, to enhance the capacities of police functionaries to respect and uphold rights, help protect citizens and perform functions to maintain law and order without compromising the dignity of individuals and efficiency of the police. Protection of the rights of children, women and girls should be at the core of policing and should be an integral part of all police training/capacity-building initiatives. Thus, one needs to be sanguine about the challenges of ensuring that rights protection takes an equal place in policing and maintaining public order in the list of defining police functions.

Strengthening the justice sector response, particularly of front-line police functionaries, has consistently been cited as one of the most challenging issues when responding to violence against women and girls. A positive initial contact experience with police is crucial for survivors of violence. High-quality police and justice response must be available and accessible to all women and girls navigating an often-complex justice system, especially those most marginalised and at greater risk of experiencing violence. Gender-friendly policing is a mandate of the Indian police. While there are a few well-intentioned responses /initiatives, a collective, comprehensive and cohesive effort to make gender-responsive policing a core outcome has somehow not been given adequate attention and space in police training.

Mapping the Competency and Skills:

An ideal police training syllabus should include knowledge of children and related gender issues, understanding and implementation of all laws and rules related to children's and gender-related rights, skills in

interaction and communication with children and gendered persons, their families, and communities, knowledge and application of the rules of ethics and professional conduct, collaboration with all formal and informal stakeholders towards a coordinated intervention and efficient use of working tools adapted to children and marginalised genders and aspects related to self-development.

Competency is the integrated application of knowledge, skills, attitudes, experience, responsibilities, and personal traits to perform a job successfully. A competency framework lens was used to identify a) **professional competencies,** b) **contextual competencies, c**) **social competencies, and** d) **individual competencies** (Details Table 1)

Table 1: Competency Categories and Skills for Gender-Sensitive and Child Protection Policing

Competency Categories	Skills	Training Outcomes
Professional Competencies: Knowledge of child and gender rights and related methods of policing	**Operational and Tactical Skills**:	**Specialised Tactical Skills**: Handling high-risk operations (e.g., trafficking for sexual exploitation). **Forensics and Investigative Skills**: Expertise in investigating crimes involving children and gender-based violence (GBV), including sexual abuse (CSA), trafficking, and exploitation. **Legal Knowledge**: Understanding laws and policies around child protection and gender equality, such as laws protecting children from abuse and laws around human trafficking. **Technology and Cybersecurity Skills**: Addressing issues like cyberstalking and online exploitation, ensuring officers have the skills to identify and investigate online crimes involving children and women. **First Aid and Emergency Medical Response**: Responding to emergencies where children and women may require immediate medical assistance, particularly in cases of abuse or trauma, e.g., One Stop Centres and Emergency Care

Contextual Competencies: Adhering to high ethical standards despite facing external pressures from the media or community	**Management and Ethical Operations Skills**:	**Crisis Intervention and De-escalation Techniques**: Training officers to manage high-tension situations involving children and women, using strategies that defuse potentially violent or confrontational scenarios. **Ethical Decision Making**: Ensuring police officers, particularly at higher levels, maintain ethical standards despite external pressures (e.g., media scrutiny, public opinion, or political influences). **Professional Integrity**: Upholding integrity and transparency in handling sensitive cases, ensuring impartiality in investigations and ensuring that actions always align with ethical and legal standards.
Social Competencies: Being sensitive to cultural and multiple vulnerabilities of children and women	**Interpersonal and Community Relations Skills**:	**Cultural Competency**: Understanding and respecting the cultural, social, and religious backgrounds of the communities served, particularly when engaging with vulnerable groups such as women and children. **Communication Skills**: Ensuring effective communication with diverse groups, building trust within communities, and engaging children, families, and other stakeholders in a supportive manner. **Sensitivity to Vulnerabilities**: Understanding the diverse vulnerabilities of children and women (e.g., GBV, child sexual abuse, discrimination, and exploitation), and responding to these vulnerabilities with compassion, respect, and professional care.
Individual Competencies: Continuous learning, leadership capacities, self-reflection, and personal effectiveness	**Leadership and Self-Development Skills**:	**Leadership Capacity**: Developing leadership skills for officers at all levels, ensuring they can lead by example, especially in sensitive cases involving gender and child protection. **Action Management**: Ability to manage complex cases, prioritise tasks, and take decisive action to protect victims while ensuring legal and ethical protocols are followed. **Child-Centred Service**: Understanding the needs of children involved in policing situations and

		designing interventions that prioritise their protection and well-being. **Personal Effectiveness and Flexibility**: Enhancing officers' ability to adapt to changing circumstances and challenges, especially in fast-moving or complex investigations. **Self-Reflection**: Encouraging officers to reflect on their actions, behaviours, and biases, ensuring they constantly improve their approach to handling sensitive cases. **Analytical, Communicative, and Interpersonal Skills**: Developing skills to analyse complex situations, communicate clearly with colleagues, victims, and the public, and manage interpersonal relationships professionally. **Accountability**: Holding oneself accountable for the actions taken, maintaining responsibility for the outcomes of police work, and ensuring transparency in all dealings. Officers are expected to demonstrate integrity by taking ownership of their actions, particularly in high-stakes cases involving vulnerable individuals such as children and women.

Source: Excerpted from Sinha, R., & Nair-Shaikh, R. (2023) and further developed by authors

The Methodology:

The methodology used in this study included a rapid assessment of a current Police Training syllabus of one State of three cadres under review, i.e. Constable, Sub-Inspector (SI) and Deputy Superintendent of Police (DySp), mainly to understand what is being done. It specifically looked at the focus of the training syllabus of police training institutions, the coverage of child protection and related gender issues and teaching methods and evaluation mechanisms mainly to locate gaps and strengths of policing practices concerning children and related gender issues. This helped identify content, pedagogy and emphasis given to these topics.

Another data source was 57 key informant interviews with stakeholders like Police from each level up to DySp, faculty and functionaries of the Police Training Institute. Also, members of the Juvenile Justice System like the Juvenile Justice Board, Child Welfare Committee, District Child Protection Unit, Non-Government Organisations, parents, guardians of children in institutions, Protection officers, Urja desk staff[1], women cell workers and women who have navigated a Police station. The idea was to obtain the experiences of various stakeholders as they interacted with the Police. This helped capture specific roles and practices of police while dealing with children and related gender issues, roles and training needs of police, building a matrix of situations in which children and women come into contact with the police, the expected level of awareness about children and related gender issues and the specific expectations of protection required based on their intersectional vulnerability.

Data Analysis: Outcomes and Implications

An analysis of the existing syllabus revealed that the core training material has remained the same over the years. With time, different courses have accommodated topics as and when the need seems to have arisen. The inputs were more as topics and did not seem to have an overarching thrust. The courses did not have learners or knowledge outcomes, which makes the teaching of the course dependent on the person delivering the course. This flexibility is both an advantage and a disadvantage. The advantage is that it allows the trainer to adopt different teaching techniques such as role-play, case study, etc. The disadvantage is the non-standardisation of the content delivered. Such flexibility, without adequate feedback and review, can impact training adversely. The time allotted, the sequencing and the pedagogy used also differed across the three levels, thus indicating the need to align the input with the role clarity and subsequent competency aspired for.

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[1] *Urgent Relief for Just Action (URJA), Women's Help Desks in the Police stations of the State where the syllabus development was undertaken*

Insights from the key informant interviews were also very significant, each highlighting and complementing what the analysis from the syllabus indicated. Challenges shared by Police were numerous and included a lack of support, for example, in cases of elopement, where the parents of a girl force the police to register cases against the boy even when the relationship is consensual. Similarly, they are not sure what process to follow when parents are not willing to take custody of a girl child or, conversely, a girl does not want to go back to her parent's home, and yet they are resistant to go to a protective /shelter/children's home. A strong gender bias in policing was seen across ranks as it emerged that male officers believed that 'women and child-related' issues should be dealt with only by women staff. As a result, they avoid dealing with women and children's issues if women colleagues are not available. They also shared how they have no skills to deal with emerging cyber-crime matters related to children and have no separate funds available for providing food and travel allowances for the survivor. Infrastructural problems such as no separate room for Urja desks in some police stations and no child-friendly infrastructure were also highlighted.

Other stakeholder challenges included non-registration/delay in registering cases, mis-recording facts, and trivialising cases while recording complaints. They shared how many cases are registered only after the intervention of NGO/influential persons or with senior police officials' intervention and that the police fail to use the JJ Act provisions in conjunction with other provisions, which goes against the principle of the child's safety. Other instances where the safety of the child is compromised were when police disclose the identity of the child or regular lapses, such as a copy of the FIR not given to the complainant, Police/ Special Juvenile Police Unit (SJPU) dealing with children in uniform were often talked about in the interviews. It was felt that the police themselves were not aware of the function of the Child Welfare Police Officer (CWPO). There were also issues related to a lack of knowledge and skills and the rigid attitude of some front-line police.

Regarding training, the Police who had more than 20 years of experience had a faint memory of their training and felt that they mainly learnt on the job. Some newer recruits remembered topics such as IPC[2], CrPC[3], Criminal Acts, Forensic Science, and Rescue Operations. They did not recall any inputs in counselling but recounted a session on how to talk with women and children. The Sub-Inspectors (SIs) remembered having had a session on soft skills during the training but could not recall the content. Police believed regular refresher training is needed to update them on new legislations, provisions, and case laws and deal with new issues like cyber-crimes. The stakeholders felt that officers are not sent for training regularly, and the ones sent are on the anvil of retirement. They also believed that the training academy did not take police training seriously.

Describing what can be done to strengthen this, some suggestions that emerged were that a ready reckoner of roles and responsibilities for Sub-Inspectors and Constables should be maintained, a compilation of procedures and related documentation for all categories of children and a system where all guidelines are available in one place for ready reference, compiling a matrix of situations that can confront the police in child and gender-related contexts and a compilation of a glossary of words that need to be avoided as they conflict with the dignity of the child. Also, what would help is that clarity should be given to stakeholders about cadre-specific roles so they know what to expect, as NGOs often play a very supportive role in cases of women and children.

The Proposed Syllabus

The proposed syllabus thus was a combination of knowledge, skills and attitudes required to fulfil professional duties involving a child-friendly approach. The descriptive syllabus roadmap focused on an introductory course for constables, sub-inspectors, and Dy. S.P.s, at the pre-service level. It was envisioned as 'glocal,' i.e., locally relevant and globally

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[2] *now Bharatiya Nyaya Sanhita*

[3] *now Bharatiya Nagarik Suraksha Sanhita*

matched with proactive and evidence-based policing. The thrust of this initiative was to match protection principles with policing. The core competencies were matched to the proposed syllabus based on analysing the existing syllabus and triangulation of information from multiple stakeholders. The syllabus maps the topics and core competencies to facilitate the development of measurable indicators to map the changes training should generate in deepening the children's rights protection system. The six broad topics included in the course content were:

1. Understanding children & their intersectionality
2. Contextualising children's interface with Police
3. Understand Child Rights & implementation of children's rights
4. Knowledge and application of the rules of ethics and professional conduct
5. Policing adapted to children
6. Collaboration with all formal and informal stakeholders towards a coordinated intervention

The syllabus factored the distinct roles and responsibilities across the ranks of constables, sub-inspectors and Dy. SPs. The syllabus for constables recognised them as the first point of contact. It thus aimed to sharpen their ability to identify, assess and appropriately respond to such cases as it is foundational in ensuring the rights of children and women are upheld. The sub-inspectors with more authority and a role in supervising initial investigations need capacities to ensure investigative processes are not compromised and legal standards are maintained. Finally, the DySPs, who oversee broader operational strategies and ensure the implementation of the law and departmental policies, are responsible for cultivating a culture of accountability and ethical policing. Thus, they must be equipped with leadership skills and a deep understanding of socio-cultural contexts surrounding child and gender issues to guide their supervisees in responding to the challenges with sensitivity and competence. Tailoring the training to specific roles ensures that each level of policing has the knowledge and skills to handle the complexities of child and gender protection issues, thereby fostering

an organisational culture prioritising rights protection and accountable practices.

The proposed syllabus also suggests the location of these courses should be and their duration. Through this primary course, the aim is to establish a standard in service delivery aimed at protecting the children better, evaluating services, and reforming ways of doing things to put the children's best interests at the core of work and interventions.

Delivering the Syllabus: Training Pedagogy

The syllabus of any training module needs a robust training intent, which includes vetting the trainer who will be delivering the course content. The trainer should be able to integrate experience with the expected ethos and should be a person who can communicate the content non-judgementally, with a rights-based focus and with due dignity to the trainees. The trainer has to understand the trainee, so they must do a quick assessment of the trainee, which could be a quick review of the background (any work experience, subject background, etc.). Based on this, they should prepare a Participant profile and pre-training assessment. This will help map the shift in the trainee's outlook pre/mid and post the training. The profile will also help make groups for group activities based on a healthy mix of identities. The batch size will define the training modalities, so the trainer should have options for effectively training all batch sizes. Identifying resource persons from in-house Police personnel and externals like academicians and NGO personnel as subject experts will help align expertise. This will help strengthen domain expertise and build better collaborations.

The pedagogy of the syllabus is a mix of lectures, practical exercises, simulations, use of self, their understanding of childhood & any experience of a child issue in their social milieu. Field exposure has been emphasised across cadres, and participant feedback will be provided after each session/module is built. The assessment strategy proposed combines analytical assignments, group work, peer assessment, discussion and debates. Using case discussions for procedures, checklists

for common cases, situations for ethical dilemmas and professional development will help strengthen the skill component. The pedagogy for the above syllabi thus was designed to be participatory and dialogical, using simulations and ample practice sessions. The need for continuous and ongoing inputs was emphasised apart from the initial training. Thus, refresher on-the-job training besides special training was proposed. This was to ensure that the course would help participants build on the initial training and imbibe proactive policing methodologies, as well as develop skills to deal with newer challenges that threaten children's well-being.

In conclusion[4]

The syllabus aims to build police capacity in supporting children, emphasising respecting and upholding their rights and addressing gendered issues by recognising the importance of an effective, sustained intersectoral collaboration. The curriculum strengthens both current personnel and recruits, preparing them for their roles in safeguarding vulnerable individuals. A robust and sensitive curriculum enhances police-public engagement and overall law enforcement effectiveness, ensuring a more robust response to the needs of children and generated concerns. It is equally important to acknowledge that creating a safer society for all requires the active involvement of the broader community, and hence, the syllabus emphasises strengthening community policing initiatives to ensure the last mile connect to prevent gendered crimes against children in particular and gendered crimes in general.

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[4] *The submitted syllabi authors were informed that besides being integrated with the basic training module of SI/DSP and Constables with some customisations based on implementation needs at the state level, it was also incorporated as a recommendatory module for the DSP/SI/Constable Training curriculum by the National Committee on Standardization of the Police syllabus at BPRD.*

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The "More for Less" Philosophy in Law Enforcement: Achieving Peak Performance with Efficiency and Discipline

Dr. Rajat Chauhan*

The "more for less" philosophy, a cornerstone of efficient and effective law enforcement, mirrors the wisdom of martial arts legend and philosopher Bruce Lee, who observed, "The height of cultivation should move toward simplicity. It is the half cultivation that leads to ornamentation. The process to simplify is like a sculptor who continuously chisels away all the inessentials until he creates a masterpiece." A student of both Western and Eastern philosophy, Lee understood the importance of efficiency and effectiveness in achieving peak performance. This principle, deeply ingrained in martial arts training, resonates profoundly within the context of police academy fitness. While maximizing physical output with minimal input is crucial for academy recruits and operational readiness, the principles of this philosophy extend to broader aspects of an officer's life and career. The discipline, resilience, and resourcefulness cultivated through efficient training programs translate into valuable life lessons: the ability to overcome challenges with limited resources, to prioritize effectively, and to constantly strive for improvement. These lessons are not merely applicable to physical fitness; they are fundamental to success in policing, where officers often face complex situations with limited time and resources, demanding innovative solutions and strategic decision-

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making. Moreover, the "more for less" principle resonates deeply within the broader context of public service, where agencies are tasked with maximizing their impact on society while operating within budgetary constraints. Furthermore, a fit and active officer serves as a powerful role model, not only for fellow officers but also for the community. By demonstrating dedication to health and well-being, officers can foster a positive image of law enforcement and build stronger bonds with the public. This approachability and commitment to a healthy lifestyle can contribute to a more positive and trusting relationship between the police and the community they serve.

High Intensity Training (HIT):

The concept of "more for less" finds a powerful embodiment in the realm of High Intensity Training (HIT). This training philosophy, pioneered by figures like Arthur Jones, founder of Nautilus, and further popularized by Mike Mentzer and Dorian Yates, revolutionized bodybuilding by emphasizing intense training sessions with minimal volume. Jones, a true innovator, challenged the prevailing bodybuilding dogma of high-volume training, demonstrating that heavy weights, low repetitions, and adequate rest could yield superior results. He recognized that excessive training volume could lead to overtraining, hindering progress and increasing the risk of injury.

An illustrative anecdote highlights Jones's unconventional approach: He famously trained with a small group of dedicated individuals, often in the early hours of the morning. Instead of focusing on endless sets and repetitions, they meticulously executed a small number of exercises with perfect form, emphasizing heavy weights and complete muscle exhaustion. This approach, while unconventional at the time, yielded remarkable results, transforming the physiques of those who adhered to his training principles.

Mentzer, a disciple of Jones, further refined the HIT philosophy, advocating for heavy single sets to failure. He believed that performing a single set to true muscular failure, where no further repetitions could be performed with proper form, was sufficient to stimulate optimal muscle

growth. Mentzer was a meticulous individual who meticulously documented his training and nutrition. He famously adhered to a strict diet and meticulously planned his training sessions, ensuring that each set was performed with maximum intensity and focus. His dedication to the "more for less" principle, coupled with his unwavering commitment to excellence, culminated in his 1978 Mr. Olympia title, solidifying his position as a pioneer of high-intensity training.

Dorian Yates, a subsequent Mr. Olympia champion, successfully applied the principles of HIT to achieve unprecedented levels of muscular development and dominance in the sport. Yates, known for his intense training sessions and meticulous attention to detail, embraced the philosophy of heavy weights and low repetitions. He famously trained with a focused intensity, often performing heavy sets with a grueling intensity. His dedication to the "more for less" principle, coupled with his unwavering commitment to excellence, culminated in six consecutive Mr. Olympia titles, solidifying his position as one of the greatest bodybuilders of all time.

The impact of HIT extended beyond professional bodybuilding, influencing the training regimens of countless amateur fitness enthusiasts seeking to achieve their fitness goals with optimal efficiency. The appeal of HIT lies in its ability to deliver significant results with minimal time investment. This is particularly valuable for individuals with busy schedules, allowing them to achieve their fitness goals without sacrificing other commitments.

The principles of HIT have also found significant application in the field of rehabilitation. Arthur Jones, in his later years, focused on developing specialized equipment and training protocols for rehabilitation purposes. His MedX equipment, designed to isolate and strengthen specific muscle groups, has been successfully used to rehabilitate patients with various musculoskeletal injuries. MedX equipment, with its focus on controlled movements and precise resistance, allows for targeted rehabilitation and minimizes the risk of further injury.

Kieser Training, a German-based fitness chain, has also effectively utilized HIT principles in its rehabilitation programs, achieving remarkable results in improving strength, function, and quality of life for individuals recovering from injuries. Kieser Training emphasizes heavy loads, low repetitions, and proper form, utilizing specialized equipment to ensure safe and effective exercise execution.

A notable anecdote highlights the effectiveness of Kieser Training: A patient recovering from a debilitating back injury, after several months of conventional therapy, experienced little improvement. Upon enrolling in a Kieser Training program, the patient gradually regained strength and function, eventually returning to a full and active lifestyle. This success story exemplifies the power of the "more for less" approach in rehabilitation, demonstrating that focused effort and proper technique can yield remarkable results even in challenging circumstances.

The "more for less" approach to training, as exemplified by HIT, challenges the conventional wisdom that more is always better. In fact, studies have shown that short, intense training sessions, performed 2-3 times per week, can yield significant results in terms of strength, muscle growth, and overall fitness. This approach is particularly valuable for individuals with limited time and resources, such as law enforcement personnel, who may have demanding schedules and limited access to training facilities. By focusing on heavy weights, proper form, and adequate rest, recruits can maximize their training gains while minimizing the time and energy investment.

High-Intensity Interval Training (HIIT) in Police Academy Fitness:

Within the context of a police academy, HIIT offers several compelling advantages.

- **Efficiency:** HIIT workouts, characterized by short bursts of intense exercise followed by brief recovery periods, offer significant fitness gains in shorter durations compared to traditional steady-state cardio. This efficiency is crucial for busy

Academy schedules, allowing recruits to maximize their fitness gains within the constraints of their demanding training program.

- **Versatility:** HIIT can incorporate a wide range of exercises, from burpees and sprints to jump squats and plyometrics, making it adaptable to different fitness levels and available equipment. This adaptability is particularly valuable in an academy setting where resources may be limited.

- **Improved Performance:** HIIT enhances cardiovascular fitness, strength, and power, all of which are essential for law enforcement duties. The explosive power developed through HIIT can be invaluable in situations requiring rapid bursts of energy, such as apprehending suspects or responding to emergencies.

- **Stress Management:** The intense nature of HIIT can also help recruits develop mental resilience and stress tolerance. By pushing themselves to their limits during training, recruits can learn to cope with stress and perform effectively under pressure.

Bodyweight Training: A Complementary Approach

Complementing HIIT, bodyweight training provides a highly effective and accessible approach to fitness development within the police academy. Requiring minimal equipment, bodyweight exercises such as push-ups, squats, lunges, and planks can be performed anywhere, including the academy grounds or dorm rooms. This accessibility is crucial for recruits who may have limited access to gym facilities or face logistical challenges. Moreover, bodyweight training emphasizes functional strength, focusing on building practical strength and functional movement patterns relevant to police work, such as agility, explosive power, and core strength. This focus on functional fitness ensures that recruits develop the strength and power necessary to perform their duties effectively.

- **Agility and Coordination:** Exercises like burpees, mountain climbers, and lateral shuffles enhance agility and coordination,

which are crucial for navigating unpredictable situations and maintaining control in dynamic environments.

- **Core Strength:** Planks, Russian twists, and leg raises develop core strength, which is essential for maintaining stability, balance, and proper body mechanics during physical confrontations and other demanding tasks.
- **Explosive Power:** Plyometric exercises, such as box jumps and depth jumps, can help develop explosive power, which is essential for activities such as tackling, sprinting, and jumping.

Finally, bodyweight workouts can be completed in short bursts, making them ideal for busy schedules and allowing recruits to maximize their training time.

Cross-Training: Enhancing Versatility and Resilience

To further enhance the effectiveness and sustainability of the fitness program, cross-training should be incorporated. Diversifying workouts reduces repetitive stress and the risk of overuse injuries, a common concern among individuals engaged in demanding physical activities. Furthermore, incorporating activities like swimming, martial arts, or obstacle course training enhances agility, coordination, and overall fitness.

- **Swimming:** Improves cardiovascular fitness, builds endurance, and enhances upper body strength.
- **Martial Arts:** Develops self-defense skills, improves coordination, and enhances mental discipline.
- **Obstacle Course Training:** Enhances agility, coordination, and strength while simulating real-world scenarios that law enforcement officers may encounter.

These activities not only improve physical performance but also provide valuable mental and emotional benefits. Cross-training can improve mental resilience, stress management, and overall well-being, all of which are crucial for officers to effectively handle the pressures and demands of their profession.

Technology Integration: Enhancing Efficiency and Motivation

Technology can also play a significant role in optimizing the "more for less" approach to fitness within the Police Academy.

- **Fitness tracking apps:** Can monitor progress, track workouts, and provide personalized feedback and motivation. These apps can help recruits stay on track with their fitness goals, identify areas for improvement, and maintain motivation throughout their training.
- **Online resources:** Provide access to a wealth of workout videos, exercise plans, and expert guidance, allowing recruits to access valuable information and support even outside of formal training sessions.
- **Gamification:** Incorporating gamified elements into fitness routines can increase motivation and engagement. By turning fitness into a game, recruits can stay motivated and make exercise more enjoyable. For example, fitness tracking apps can incorporate gamified elements such as leaderboards, challenges, and reward systems to incentivize consistent effort and progress.

In conclusion, the "more for less" philosophy, deeply rooted in principles of efficiency, discipline, and continuous improvement, is paramount for success in law enforcement. By embracing efficient training methods, prioritizing core principles, and cultivating a mindset of constant refinement, officers can achieve peak physical and mental performance while optimizing their time and resources. As Bruce Lee eloquently stated, "I fear not the man who has practiced 10,000 kicks once, but I fear the man who has practiced one kick 10,000 times." This emphasizes the importance of consistent practice and mastery of fundamental skills, mirroring the "more for less" principle of achieving maximum results with minimal input. Furthermore, Lee's philosophy resonates with the importance of proactive action and a mindset of control, as exemplified by his statement, "To hell with circumstances; I create opportunities." By honing core competencies and developing efficient routines, officers can enhance their physical capabilities, improve their operational effectiveness, and ultimately better serve their

communities. The "more for less" approach, therefore, is not merely a fitness strategy; it is a guiding principle for a successful and fulfilling career in law enforcement.

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Dr. Chauhan founded La Ultra - The High, a globally recognized ultramarathon, ranked among Red Bull's toughest races, testing athletes in extreme Ladakh conditions. With 25 years in sports medicine, including Adidas India, and 40 years as a runner, he excels in strength training for performance and injury management. He mentors runners from beginners to ultra-marathoners, emphasizing achievable "impossible" goals. He bridges medical science with the public through his writing in Hindustan Times and Mint.

Speak the Local Language: AI Tools for All India Service Officers to Master Any Language

A practical guide for All India Service Officers to master local languages with AI

Malika Garg, IPS*

Introduction: The Language Document Challenge

India's strength lies in its incredible diversity, a diversity reflected vividly in its languages. For All India Service officers, this linguistic richness presents both a unique opportunity and a significant challenge. Effective governance, genuine public service, and meaningful connection with local communities hinge on the ability to communicate directly with the people. This often means bridging linguistic gaps and mastering local languages, wherever your service takes you.

As an IPS officer proficient in English and Hindi, now serving in the Andhra Pradesh cadre, I've personally experienced the importance of Telugu in carrying out my duties effectively. Whether it's navigating official documents, understanding citizen petitions, or engaging in daily interactions, language proficiency is not just a desirable skill – it's *essential*. Imagine an officer newly posted to a district where the local language is unfamiliar. The daily work immediately presents linguistic hurdles. Documents are in a script you can't easily read. Public interactions require interpreters. Nuances of local communication are

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easily missed. This language gap, present in varying degrees across India's diverse linguistic landscape, can impact effectiveness and connection.

Scenario 1: Petitions by Post – The "Piled Up Documents" Problem

Imagine your desk piled high with petitions – a daily occurrence. Among them, a significant portion are in the local language of your posting. What happens if that language isn't your strongest? The honest truth is: these petitions might get set aside. Prioritization, driven by workload, can unintentionally lead to documents in less familiar languages being delayed or overlooked. Important grievances and citizen communication risk being missed simply due to a language proficiency gap, regardless of the specific language.

Scenario 2: Public Grievance Day Petitions – Real-Time Pressure

Now picture public grievance day. A petitioner approaches, petition in the local language in hand. The pressure of time and the queue behind might lead to setting aside the written petition and relying on oral narration. While direct interaction is valuable, written details in the local language might be missed, potentially impacting nuanced understanding and petitioner experience. This scenario is replicable across countless linguistic contexts in India.

Scenario 3: The Incomplete Picture – Relying on Translations in Case Diaries

Picture a senior officer reviewing a case file before a critical decision—charges need to be framed, or an important follow-up needs to be ordered. The case diary is thick, with witness statements and crucial details recorded in Part 2, written in the local language. Pressed for time and not fully conversant in reading the language, the officer turns instead to Part 1, which contains a summary prepared by subordinates in English. But translations are not always accurate—key contradictions, emotional nuances, or even crucial leads might be missing. Without direct engagement with the original statements, important follow-ups on potential clues may be overlooked, affecting both supervision and the

direction of the case. The result? Decisions are made based on an incomplete or filtered version of the evidence, with real investigative gaps that could weaken the case.

The Challenge: Bridging the Language Gap – Everywhere in India

These scenarios highlight a widespread challenge: officers across India often face a gap between their general communication skills and their proficiency in reading and understanding *local languages* in their specific postings. This is a systemic issue, not a personal failing. Traditional language learning methods can be daunting amidst demanding schedules. The need for accessible and effective tools to bridge this language gap is universal across the All India Services, regardless of cadre or location.

Introducing AI: Your Intelligent Language Learning Partner

We've seen the challenges are real. The language documents pile up, the nuances get missed, and the pressure mounts. Why? Often, it boils down to reading practice in the local language. We know we *should* read more to improve, but let's be honest – it's *hard*. It feels slow, frustrating, and time-consuming, especially when work demands are already overwhelming. So, the cycle continues: lack of practice, persistent difficulty, and avoidance.

This is where AI changes the game. Think of AI tools like Gemini or ChatGPT not just as translators, but as your intelligent *language learning partners*. They're designed to make practice less daunting, more effective, and dare I say… engaging.

AI helps you break the 'too hard' barrier. Instead of facing a wall of unfamiliar script, you have a tool that can:

- **Break down complex sentences, sentence by sentence:** Suddenly, dense paragraphs become manageable, step-by-step learning opportunities.
- **Explain vocabulary and context instantly:** No more endless dictionary lookups that interrupt your flow. Understand words and phrases *in context*, as you read.

- **Answer your questions, interactively:** Stuck on a nuance? Confused about a phrase? Just ask the AI. It's like having a patient tutor available 24/7.

AI serves a dual purpose:
- **Skill Building for the Long Run:** By making reading practice less painful and more productive, AI *trains* you to become a confident, independent reader of the local language. Each interaction is a learning opportunity, gradually building your proficiency. *This is the primary goal.*
- **Immediate Assistance:** In the short term, AI *assists* you in understanding urgent documents in the local language *right now*, reducing immediate pressure and improving current effectiveness.

The goal isn't to *always* **rely on AI.** It's to use AI *strategically* to build your skills to the point where you *don't need it as much*. Imagine the day when you can pick up a document in the local language and read it directly, efficiently, and with genuine understanding. AI is the accelerator to get you there.

Part 1: Achieve Sentence-by-Sentence Clarity for Complex Texts
One of the biggest hurdles with documents in a new language is often sentence length and complexity. Official language and news writing can pack a lot of information into long, winding sentences that leave you feeling lost. Trying to decipher these behemoths in one go can be exhausting and discouraging. This is where sentence-by-sentence translation becomes a game-changer.

Why Sentence-by-Sentence?
Breaking down a complex text in any language into individual sentences offers several key advantages:
- **Makes Reading Manageable:** Instead of facing a daunting block of text, you tackle it in digestible chunks. Each sentence

becomes a mini-task, making the overall reading process feel less overwhelming and more achievable.

- **Focus and Deeper Processing:** Sentence by sentence reading allows you to focus your attention fully on each unit of meaning. You can process the vocabulary and grammar of one sentence before moving to the next, leading to deeper comprehension.
- **Vocabulary Support at Your Fingertips:** With AI, you can easily get word-for-word translations and explanations *within each sentence*. This eliminates the frustration of constant dictionary lookups and keeps your reading flow going.

Real-World Example: News Article Deciphered with Gemini/ChatGPT - My Experience

Just this morning, I faced a typical scenario. I came across a Telugu news clipping in a local newspaper. Normally, I might have skipped it, feeling too busy to wrestle with the Telugu text. But instead, I decided to try using AI.

I simply took a photo of the clipping and sent it to Gemini [or ChatGPT]. Initially, I asked for a general summary, and it gave me a good overview:

The image shows a newspaper clipping, likely from a Telugu language publication, featuring an article about a lunar lander... [Shortened summary of the initial Gemini output, e.g., mentioning headline, main subject, and key details like launch date and purpose]

This was helpful, but I wanted a *deeper understanding*. So, I then used a simple prompt: **'Help me in sentence by sentence translation.'** The result was transformative. Here are a couple of sentences from the AI's output, showing the level of detail you can get (using Telugu for example):

Sentence 2: చంద్రుడిపై దిగిన రెండో ప్రైవేటు ల్యాండర్‌గా చరిత్ర

- **Translation:** "History as the second private lander to land on the moon."
- **Word-by-word   breakdown:** చంద్రుడిపై (Chandrudipai) means "on the moon." దిగిన (Digina) means "landed." రెండో

(Rendo) means "second." ప్రైవేటు (Private) means "private." ల్యాండర్గా (Landerga) means "as a lander." చరిత్ర (Charitra) means "history."

Sentence 3: జనవరి 15న ప్రయోగించిన అమెరికన్ ప్రైవేటు అంతరిక్ష పరిశోధనల సంస్థ 'ఫైర్ ఫ్లై ఏరోస్పేస్'

- **Translation:** "American private space research organization 'Firefly Aerospace' launched on January 15th."
- **Word-by-word breakdown:** జనవరి 15న (January 15na) means "on January 15th." ప్రయోగించిన(Prayoginchina) means "launched." అమెరికన్ (American) means "American." ప్రైవేటు (Private) means "private." అంతరిక్ష(Antariksha) means "space." పరిశోధనల సంస్థ (Parisodhana Samstha) means "research organization." 'ఫైర్ ఫ్లై ఏరోస్పేస్' (Firefly Aerospace) is the name of the company.

Suddenly, the Telugu text became much less intimidating. The sentence-by-sentence breakdown, combined with the word meanings, made it easy to follow each part and grasp the overall meaning. It wasn't just a translation; it was a guided reading experience.

Sentence-by-sentence translation isn't just about translation – it's about unlocking comprehension and building reading confidence, one sentence at a time, in *any*language.

Part 2: Unlock Deeper Contextual Understanding

Beyond just translating words and sentences, truly understanding documents in a local language often requires grasping the *context* – the unspoken background, the implied meanings, and the larger picture surrounding the text. For All India Service officers, this contextual understanding is not just helpful; it's crucial for effective governance and informed decision-making.

Why Context Matters for Officers

Imagine you come across this news snippet in a local language (using Telugu as an example):

ఏపీలోని చేనేత కార్మికులకు శుభవార్త. రాష్ట్ర ప్రభుత్వం చేనేత కార్మికుల కోసం థ్రిఫ్ట్ ఫండ్ పథకాన్ని మళ్లీ ప్రారంభించింది. గతంలో ఈ పథకం నిలిపివేయబడింది, కానీ ఇప్పుడు ప్రభుత్వం దీనిని పునరుద్ధరించింది. ఈ పథకం కింద, చేనేత సహకార సంఘాలలో సభ్యులుగా ఉన్న కార్మికులు నెలవారీ సంపాదనలో కొంత శాతం పొదుపు చేస్తే, ప్రభుత్వం దానిని ప్రోత్సాహకంగా రెట్టింపు చేస్తుంది. ఈ పథకం అమలు కోసం ప్రభుత్వం నిధులు కేటాయించింది.

You could get a sentence-by-sentence translation of this using AI, as we saw in Section 1. You'd understand the literal meaning and vocabulary. But to truly *understand* this news, you need context. AI can help unlock layers of meaning beyond the words themselves.

Unlocking Context with AI: Going Beyond Literal Translation

AI tools like Gemini or ChatGPT can provide deeper contextual understanding. For this news snippet, AI can help you understand:

- **Type of Document & Purpose:** AI identifies this as a news report about a government initiative.
- **Key Entities & Roles:** AI recognizes "చేనేత కార్మికులు" (handloom weavers), "రాష్ట్ర ప్రభుత్వం" (state government), and "థ్రిఫ్ట్ ఫండ్ పథకం" (Thrift Fund Scheme) within the Telugu example. It can provide background on:
    - **Handloom Weavers in the Region:** Their socio-economic conditions, cultural significance, and need for support.
    - **State Government:** Its role in welfare and economic development.
    - **Thrift Fund Scheme:** The concept of such schemes and their benefits for workers in the informal sector.
- **Policy Context:** AI can highlight phrases like "గతంలో ఈ పథకం నిలిపివేయబడింది, కానీ ఇప్పుడు ప్రభుత్వం దీనిని పునరుద్ధరించింది" (previously discontinued, but now revived). This indicates a policy change and the scheme's on-again, off-again nature, which is important context for understanding its long-term impact and sustainability.

- **Economic Context:** AI can provide information on the economic challenges faced by handloom weavers and the rationale for government support. It can also help understand the significance of "నిధులు కేటాయించింది" (funds allocated) in the context of government budgets and priorities.
- **Implied Meaning & Tone:** The headline "శుభవార్త" (Good news) signals a positive announcement, and AI can help discern this intended positive framing by the government.

Example Prompts for Contextual Understanding

To get this contextual information, you can use prompts like:

- "Provide context on the 'Thrift Fund Scheme' for handloom weavers in Andhra Pradesh, focusing on its socio-economic purpose."
- "Explain the policy context of the revival of the handloom thrift fund scheme in AP."
- "What are the typical economic challenges faced by handloom weavers that make such schemes necessary?"
- "What is the general significance of government fund allocation for such welfare schemes in Andhra Pradesh?"

Context is Key to Effective Action

For All India Service officers, understanding the context behind documents in the local language is essential for informed action and effective governance. AI empowers you to unlock this deeper, richer understanding in *any* language context.

Part 3: Engage Interactively for Active Language Learning

AI isn't just a passive translation tool; it's a dynamic platform for *active language learning*. The real power of AI lies in its interactive capabilities, allowing you to engage with a new language in ways that go far beyond simply reading and translating. Think of AI as your always-available language tutor, ready to help you explore, practice, and deepen your understanding.

Interactive Learning in Action: Examples for Language Proficiency

Here are a few practical ways you can use AI for interactive language learning, directly relevant to your daily work, using Telugu and Police examples for illustration:

1. Vocabulary Expansion – Unlocking Synonyms and Nuances

- **Scenario:** You encounter a common official word in documents – for example, **'విజ్ఞప్తి' (vijnapti - Telugu)**, meaning 'request' or 'appeal'. You want to go beyond a basic dictionary definition and understand its nuances and related vocabulary to use it more effectively yourself.

- **Interactive AI Prompts:** You can ask AI questions like: "What are synonyms for **విజ్ఞప్తి** in Telugu?" "Give me different ways to use **విజ్ఞప్తి** in a sentence related to official communication." "Explain the subtle differences in meaning between **విజ్ఞప్తి**, **అభ్యర్థన** (abhyardhana - request), and **కోరిక** (korika - wish)."

- **Learning Benefit:** AI provides you with a rich exploration of vocabulary, going beyond simple translations. You learn subtle shades of meaning, expand your word choice, and improve your ability to use the local language more precisely and effectively in your own official writing and communication.

2. Grammar Deep Dive – Mastering Sentence Structure

- **Scenario:** You're reviewing internal police communication or directives in the local language and encounter a sentence with complex grammatical construction. For example, consider this Telugu sentence from a hypothetical police order: **'రేపు ఉదయం నుండి అన్ని పోలీస్ స్టేషన్లలో ట్రాఫిక్ నిబంధనలు కఠినంగా అమలు చేయాలని సిఐ గారు సిబ్బందికి ఆదేశించారు.'**

- **Interactive AI Prompts:** Use AI to dissect the grammar and understand the structure: "Explain the grammatical structure of this Telugu sentence: **రేపు ఉదయం నుండి అన్ని పోలీస్ స్టేషన్లలో ట్రాఫిక్ నిబంధనలు కఠినంగా అమలు చేయాలని సిఐ గారు సిబ్బందికి ఆదేశించారు.**'" "Identify the subject, verb, object,

and clauses in this sentence. Who is giving the order? Who is receiving it? What is being ordered?" "Explain the function of **'-లో' (-lo)** in **'పోలీస్ స్టేషన్లలో' (police stationlalo - in police stations)** and **'-నుండి' (-nundi - from)** in **'ఉదయం నుండి' (udayam nundi - from morning)** in this context." "Explain the grammatical role of **'-అని' (-ani)** and **'చేయాలని' (cheyaalani - to implement/do)** in conveying the directive/order in this sentence. How does it link the order to the action?" "Are there alternative sentence structures in Telugu to convey a similar police order? Show examples."

- **Learning Benefit:** With AI, you can perform a detailed grammatical autopsy of sentences in the local language. By pinpointing grammatical functions, understanding verb conjugations, and clause relationships, you move beyond basic translation to a true command of sentence structure. This focused analysis equips you to confidently interpret complex communications, understand nuances in directives, and improve your own writing in a professional context.

3. Vocabulary Flashcard Generation – Active Recall for Retention

- **Scenario:** After working through a document in the local language with AI assistance and identifying new vocabulary, you want a way to actively remember and practice these new words.
- **Interactive AI Prompts:** Turn AI into your flashcard generator: "Create Telugu vocabulary flashcards from this text: [paste Telugu text snippet]." "Generate a vocabulary list from this news article about the Thrift Fund Scheme and create flashcards with the Telugu word, meaning, and an example sentence in Telugu." "Create flashcards for the Telugu words: విజ్ఞప్తి, అభ్యర్థన, ఆదేశం (vijnapti, abhyardhana, aadesham - request, order)."
- **Learning Benefit:** AI transforms vocabulary learning into an active and personalized process. Flashcards aid in active recall and spaced repetition, proven techniques for effective vocabulary retention. You build a personalized vocabulary learning tool directly from the materials you are working with.

Unlock Your Language Learning Potential Through Interaction

These are just a few examples. The key is to see AI not just as a translator, but as an *interactive learning partner*. By asking questions, exploring nuances, and actively practicing with AI, you can transform your language reading from a chore into an engaging and skill-building experience, in *any* language.

Prompt Engineering: Your Key to AI Language Mastery

AI language tools like Gemini or ChatGPT are incredibly powerful, but like any tool, their effectiveness depends on *how* you use them. Think of them as highly capable assistants – to get the best results, you need to give clear and well-structured instructions. In the world of AI, these instructions are called **'prompts.'** Mastering the art of crafting effective prompts – **prompt engineering** – is the key to unlocking the full potential of AI for your language learning journey, no matter the language.

Key Principles of Effective Prompting for Language Learning

Here are a few actionable tips to help you write prompts that will get you the most insightful and helpful responses from AI for language learning tasks:

Tip 1: Be Specific About Your Goal – Tell AI *Exactly* What You Want

- **The Principle:** Vague prompts lead to vague, often less useful answers. Always be precise about what you want the AI to *do* for you. Do you want a translation? A grammatical explanation? Vocabulary synonyms? Contextual background? Tell the AI directly.
- **Less Effective Prompt (Vague):** "Translate this sentence: 'ప్రభుత్వ పథకాలు పారదర్శకంగా అమలు చేయాలని...'" (Just says 'translate' - translate how? In what way?)

- **Good Prompt (Specific):** "Give me a **sentence-by-sentence translation** of this paragraph:" [paste paragraph]. (Clearly specifies sentence-by-sentence translation)
- **Another Good Prompt (Specific):** "Explain the **grammatical structure** of this sentence: 'ప్రభుత్వ పథకాలు పారదర్శకంగా అమలు చేయాలని...' " (Clearly asks for grammatical explanation)

Tip 2: Provide Context – Help AI Understand the Nuances

- **The Principle:** Language is all about context. To get nuanced and accurate understanding, give AI enough surrounding text or information. Don't ask about a word or phrase in isolation if you want a deep explanation.
- **Less Effective Prompt (Lacks Context):** "Meaning of పారదర్శకంగా (paaradarshakangaa - Telugu word)." (Word asked in isolation)
- **Good Prompt (Provides Context):** "Explain the meaning of the word పారదర్శకంగాas used in this sentence from a government circular: 'ప్రభుత్వ పథకాలు పారదర్శకంగా అమలు చేయాలని...' What are its connotations in official Telugu?" (Word in sentence, specifies document type & context)

Tip 3: Ask Direct and Clear Questions – Simplicity is Strength

- **The Principle:** AI responds best to clear, direct questions. Avoid overly complex, convoluted, or indirect phrasing. Get straight to the point about what you want to know.
- **Less Effective Prompt (Too Complex):** "Regarding the sentence structure of the Telugu sentence I previously provided, could you elaborate on the grammatical components and their interrelation, focusing on aspects relevant to formal communication and official directives?" (Too wordy and indirect)
- **Good Prompt (Clear and Direct):** "Break down the grammar of this sentence: [paste sentence]." (Simple, direct, and actionable)
- **Another Good Prompt (Clear Question):** "Who is giving the order and who is receiving it in this police directive: [paste sentence]?" (Directly asks for specific information)

Tip 4: Iterate and Refine – Dialogue is Key to Deeper Answers

- **The Principle:** AI is interactive. If the first answer isn't exactly what you need, don't stop there. Rephrase your prompt, provide more details, or ask follow-up questions. Think of it as a conversation to refine your understanding.
- **Example: Initial Prompt:** "Translate this Telugu news snippet about the Thrift Fund Scheme." **Initial AI Response:** (Provides a basic, literal translation of the snippet) **Refined Prompt (Follow-up for more learning):**"That's helpful. Now, can you also explain the socio-economic context of the Thrift Fund Scheme for handloom weavers in Andhra Pradesh?" **Improved AI Response:** (AI now provides a more detailed answer, explaining the socio-economic context of the scheme).

Tip 5: Focus on Learning, Not Just Quick Answers – Ask "Why?" and "How?"

- **The Principle:** To truly benefit from AI for language learning, frame your prompts to encourage deeper understanding and skill development, not just quick translations. Ask "why" and "how" questions to explore *reasons* and *processes*.
- **Less Effective Prompt (Just Translation):** "Translate this Telugu paragraph about road conditions." (Focuses only on translation output)
- **Good Prompt (Learning-Focused):** "Translate this Telugu paragraph about road conditions sentence-by-sentence AND explain 3 new vocabulary words from this paragraph in detail, with example sentences in Telugu." (Combines translation with vocabulary learning)
- **Another Good Prompt (Understanding Grammar):** "Explain how the passive voice is constructed in Telugu, using examples from this government circular: [paste circular snippet]." (Focuses on understanding grammatical *process*)

Prompting is a Skill – Practice Makes Perfect!

Effective prompting is a skill that improves with practice. Don't be afraid to experiment with different types of prompts, refine your questions, and see how AI responds. The more you practice prompting, the better you'll become at guiding AI to become your ultimate language learning partner, in *any* language. Mastering prompts is mastering the power of AI to unlock language proficiency.

No Language Barrier: Learn Any Language

While this blog post uses Telugu examples to illustrate the techniques, the AI-powered language learning methods we've explored are not limited to just one language. The beauty of AI is its versatility – these methods can be applied to learning *any* language you need to master for your work or personal growth. Whether it's Hindi, Tamil, Bengali, Kannada, Marathi, Odia, or even a foreign language like French or Spanish, AI can be your adaptable language learning companion.

Adapt the Prompts – Change Your Language Focus Instantly

To illustrate this, let's take a simple example. Imagine you want to use the 'Vocabulary Expansion' technique from Section 3, but for **Odia** instead of Telugu. You can easily adapt the prompts. Instead of asking for synonyms in Telugu, simply specify Odia in your prompt:

Prompt for Language Adaptation (Odia Vocabulary):

"What are synonyms for the Odia word **'ଅନୁରୋଧ'** (**anurodh - request/appeal**)' in Odia? Give me different ways to use **'ଅନୁରୋଧ'** in a sentence related to official communication in Odia. Explain the subtle differences in meaning between **'ଅନୁରୋଧ,'** **'ବିନତି** (**binati - request),'** and **'ପ୍ରାର୍ଥନା** (**prarthana - prayer/plea**)' in Odia."

Just by changing the language in your prompt to 'Odia,' you've now instructed the AI to provide vocabulary assistance and explanations *in Odia*. You can do this for *any* of the techniques we've discussed – sentence-by-sentence translation, contextual understanding, grammar

deep dives, vocabulary building – simply by specifying your target language in your prompts.

AI – Your Universal Language Learning Tool

This adaptability is a game-changer. As All India Service officers, you may be required to work in different regions and interact with documents in various languages throughout your careers. AI empowers you to approach *any* new language learning challenge with confidence. The techniques you learn for Telugu are transferable and can be readily applied to build proficiency in any language you need to master. AI truly breaks down the language barrier, making multilingualism more achievable and empowering you to connect and communicate effectively across diverse linguistic landscapes.

Conclusion: Embrace AI, Empower Yourself

The path to proficiency in any local language for busy All India Service officers doesn't have to be a daunting uphill climb. AI tools offer a powerful and accessible bridge to close the language gap, enhance your skills, and ultimately, empower you to serve the people more effectively, wherever your duty takes you.

Key Takeaways: AI as Your Language Ally

- **Sentence-by-Sentence Clarity:** AI makes complex texts manageable, sentence by sentence, unlocking immediate comprehension and building reading confidence.
- **Deeper Contextual Understanding:** AI goes beyond literal translation, helping you grasp the crucial context – political, social, economic, and cultural – embedded within documents in any language.
- **Interactive Learning Partner:** AI is not just a translator; it's an active tutor, ready to answer your questions, explain grammar, expand your vocabulary, and make language learning an engaging process.

- **Prompt Engineering is Your Superpower:** By learning to prompt effectively, you take control of AI's power, guiding it to provide the precise support you need for your language goals, whatever they may be.

Addressing Concerns about Using AI

Some of you might be thinking: 'Will relying on AI make me *less* proficient in the local language in the long run? Shouldn't I just struggle through and learn the 'traditional' way?'

These are valid questions. The answer is: AI is a *tool to accelerate your learning*, not a replacement for it. Think of it like using a fitness tracker to improve your physical health. The tracker *helps* you monitor progress, stay motivated, and optimize your workouts – but you still need to put in the *practice*. AI is your language learning fitness tracker and personal trainer, combined.

By using AI strategically – for sentence clarity, contextual understanding, and interactive practice – you are *actively* building your language skills, faster and more efficiently than you might have thought possible. You are not becoming dependent; you are becoming *empowered*.

Your Call to Action: Start Prompting, Start Learning, Start Connecting

The documents in the local language are waiting. The petitions are piling up. The news is unfolding. Don't let the language gap hold you back any longer.

Take the first step:
- **Choose a document in the local language – a news snippet, a petition sample, a government circular.**
- **Try sentence-by-sentence translation with AI.**
- **Ask AI to explain context and vocabulary.**
- **Experiment with prompting for grammar and deeper understanding.**

Start small, start today. Embrace AI as your language ally. Empower yourself to read, understand, and connect with the people you serve, in *their* language. The journey to language proficiency starts with a single prompt.

Author's Profile:

Smt. Malika Garg, IPS, is a distinguished officer of the 2015 batch of the Indian Police Service (IPS), currently serving as the Commandant, 5th Battalion, APSP, Vizianagaram, Andhra Pradesh.
Belonging to Delhi, she holds a B.Tech in Computer Science from IIT Delhi, bringing a strong technical foundation to her work in law enforcement, particularly in cybercrime investigation and technology-driven policing.

Career Highlights
Over the years, she has held key leadership positions, including:
- Superintendent of Police (SP), Palnadu
- Superintendent of Police (SP), Tirupati
- Superintendent of Police (SP), Prakasam
- Superintendent of Police (SP), Cyber Crime, AP
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Her leadership has been instrumental in cybercrime investigation, traffic safety, law enforcement modernization, and women's security. She has spearheaded several technology-driven initiatives that have enhanced policing effectiveness and citizen safety.

Awards & Recognitions
- Best Electoral Practices Award (2024) for Election Management as SP, Palnadu.
- DGP Commendation Disc (2023) for outstanding contributions to policing.
- Technology Sabha Award (2022) for reducing road accidents through risk assessment and traffic enforcement.
- Governance Now Gold Trophy (2022) for the Jail Released Tracking System.

- SKOCH Silver Award (2023) for mass registrations under the Disha SOS App (Women's Safety).
- SKOCH Order of Merit (2023) for Missing Mobile Tracking System, Mahila Police Task Management System, and Priority Trial Monitoring System.

Chinese Influence Operations in the Age of Generative AI: Worrisome signals for India's Internal Security

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Abstract:

Information warfare has traditionally been used to weaken the adversary from within by sowing dissent and exploiting fautlines in society. Now, advent of new technologies like Generative Artificial Intelligence has put a new tool in the hands of hostile actors to carry out propaganda warfare at speed, scale and scope. This paper explores how People's Republic of China is already deploying such technologies against India and what steps can be taken to regulate such technologies.

Keywords:

Generative AI, Machine Learning, Information/Influence operations, ChatGPT, China, People's Liberation Army, Mis/Disinformation, ABC framework

A cursory survey of India's external environment will reveal the fact that the one country that poses a credible roadblock to India's rise into the league of developed nations by 2047 is the People's Republic of China (PRC). Historical baggage like the long-unsettled boundary question and present Chinese hegemonic aspirations is bound to enhance Chinese interference in our security interests, both internal and external.

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For such interference, the Chinese are most likely to employ 'grey zone' tactics. RAND corporation, defines Chinese grey zone tactics as coercive Chinese government geopolitical, economic, military, and cyber and information operations (cyber/IO) activities beyond regular diplomatic and economic activities and below the use of kinetic military force. [1] In fact, such tactics have been codified in People's Liberation Army's (PLAs) writings as the "Three warfare's" strategy (TWS), consisting of psychological warfare (心理战, *xinlizhan*], public opinion warfare (舆论战, *yulunzhan*], and legal warfare (法律战, *faluzhan*).

In this paper, we will focus on the social media-based information operations aspect of grey zone warfare. The U.S. Department of Defence (DoD) defines Chinese Information/Influence operations as those that "combine psychological warfare with cyber operations to shape adversary behaviour and decision making," with the likely intention to "use it as an asymmetric capability to deter U.S. or third-party entry into a future conflict, or as an offensive capability to shape perceptions or polarize a society."[2]

It is understood that Information is at the heart of such subversive operations and technologies, like Generative AI, that provides the ability to generate, manipulate, disseminate content at scale while maintaining credibility and uniqueness of data will be an indispensable tool in the Chinese arsenal to achieve their objectives of "degrading adversary decision making, weakening adversary will to fight, undermining adversary support for war, undermining adversary government from within, along with supporting deterrence" (Bu et al., 2011; Ji, Sun, and Yu, 2005; Luo et al., 2018; Li, 2016).

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[1] *https://www.rand.org/content/dam/rand/pubs/research_briefs/RBA500/RBA594-1/RAND_RBA594-1.pdf*

[2] *Office of the Secretary of Defense, Annual Report to Congress: Military and Security Developments Involving the People's Republic of China, U.S. Department of Defense, 2023, p. 156*

What is Generative AI

For better appreciation of Generative AI, it will be appropriate to start with a working definition of Artificial Intelligence, Machine Learning, and other related terminologies.

Artificial Intelligence is the concept that a machine can do intelligent things like make decisions, sense the world around it, interact with its surroundings, and learn from experience. The subset of AI that focuses on learning from experience is called "Machine Learning". [3] Machine Learning (ML) focuses on creating algorithms that enable systems to learn from datasets by training it on these datasets and applying this learning to solve new problems.

Generative AI is a branch of AI that makes use of ML techniques to generate new content like text, image, audios, and videos, based on user generated inputs. In other words, Generative AI models can detect the patterns in the user generated input, compare it with the datasets the model is trained on and generate an entirely new output which is supposed to be coherent and contextually relevant.

Large Language Models (LLMs) is a specific application of Generative AI that is designed to generate human like text by making probabilistic inferences about the next word in a sequence.

The most widely known AI tool, ChatGPT, is based on the GPT-4 LLM developed by Open AI. It was trained on a dataset of more than 45 terabytes of text from the internet (books, articles, websites, and other text-based content). Apart from LLMs, there are also Text-to-image, Text-to-videos models like Midjourney or DALL-E-2.

Why is Generative AI a suitable candidate for Information operations

Until recently one of the most adopted strategies for Information operations on social media, was 'Astroturfing.' Astroturfing is defined by the Technology and Social Change Project at Harvard as "attempt[ing] to create the false perception of grassroots support for an issue by

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[3] *https://mitsloan.mit.edu/ideas-made-to-matter/machine-learning-explained*

concealing [actor] identities and using other deceptive practices, like hiding the origins of information being disseminated or artificially inflating engagement metrics". This strategy was operationalised by either creating basic bots that would copy and paste virtually identical social media postings from multiple accounts or by employing an army of actual people, like the 50 cent army[4] and Base 311 (it is a unit within PLA with mandate of executing the TWS)[5] to do the same job. In both these cases, such content could be easily detected due to their suspicious posting patterns and repetitive content.

However, now Generative AI can produce an infinite supply of coherent, nuanced, and entirely unique content across a range of topics. For example, a Facebook/Twitter account run by such an AI agent can post daily relatable content in regional languages like movie reviews, views on latest trends, festival wishes etc while ensuring relevant cultural references are also incorporated. Therefore, this social media account though being run by an AI agent takes on the personae of an authentic individual, starts resonating with other actual social media users and once it has earned their legitimacy, it begins to sprinkle in the misinformation that it seeks to spread like for ex. that India is to blame for Chinese aggression, Indian soldiers are weak etc. Such accounts can be created by the millions at almost no cost. The bot accounts will not only post proactively but also react to other users' posts and engage in long-term conversations. As per researchers, in contrast to previous advancements in social media manipulation, the significant leap forward with Generative AI lies in the credibility of the messenger rather than the message itself. Therefore, what is truly transformative is the potential of Generative AI to convincingly emulates human behaviour, generating media content at a large scale, thereby reinforcing the authenticity of the messenger.

In addition, we must remember that these Generative AI models are not 'thinking', therefore their response need not be internally consistent/logical and in many cases such models can 'hallucinate' and

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[4] *https://www.jstor.org/stable/24742326*
[5] *The Role of PLA Base 311 in Political Warfare against Taiwan (Part 3)*

produce an output that is completely fictional. However, as it is presented by AI in such a convincing manner, it triggers our cognitive fluency bias and we tend to believe this to be true.

Therefore, the major improvements that Generative AI has brought to the field of social media manipulation can be summarised as; authenticity, scalability, cost effectiveness, harder to detect. Content produced by these models tend to be more believable both in terms of the message as well as the messenger, apart from this the content so produced can be shared across networks with great ease providing the advantage of scalability, these models are cost effective in the sense that once trained with relevant datasets, they can function as end-to-end systems and finally given the inherent cognitive fluency bias of humans the content generated by these models are difficult to detect.[6]

In fact, an anonymous cybersecurity researcher who goes by the name of "Nea Paw" created an AI based algorithm in 2023 that automatically generated tweets, articles complete with authentic sounding journalist names; rebutting articles put out by Russia against US and western allies and all this just cost him $400. [7,8]

Researchers have summed up all the above discussed aspects in a convenient acronym referred to as the ABC framework viz. the Actors, Behaviour and Content[9] framework. In short, Generative AI has the potential for creation of 'MaaS'/'DaaS' system i.e. Mis/Disinformation as a Service, wherein such capabilities may be utilised by any actor (state/non-state) to generate genuine sounding misinformation content, in vernacular languages, personalised to each individual user, amplify this at scale across various social media platforms using coordinated behaviour and all this at a fraction of the cost it currently takes. A generation of Indians who rely on social media as their primary source of information, only makes it easier for the Chinese to achieve their objective.

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[6] *https://www.rand.org/pubs/perspectives/PEA2679-1.html.*

[7] *https://www.wired.com/story/400-dollars-to-build-an-ai-disinformation-machine/*

[8] *https://www.youtube.com/watch?v=cwGdkrc9i2Y*

[9] *https://www.ivir.nl/publicaties/download/ABC_Framework_2019_Sept_2019.pdf*

Misuse by China:

The capabilities of Generative AI give immense power in the hands of anti-national and anti-social actors to create, spread misinformation throughout the world, thereby posing a fundamental threat to our national security and democratic fabric of our society. At present, we will restrict ourselves to how the PRC is actively looking at how to make use of these technologies to meet their objectives of psychological warfare.

The push for pursuing these methods comes from the very top of Chinese leadership. In a May 2021 Chinese Communist Party Politburo Collective Study session, Chinese General Secretary Xi Jinping stated that China should try to "create a favorable external public opinion environment for China's reform, development and stability," in part by developing more-compelling propaganda narratives and better tailoring content to specific audiences.[10]

Based on an initial review of Chinese military writings, there is clear awareness by at least some in the People's Liberation Army (PLA) of Generative AI's revolutionary potential.[11]

A June 2019 article co-authored by SSF Base 311 personnel called for the PLA to abandon the use of "sockpuppets" (马甲, *majia*), or false online identities used for deception, in favor of AI enabled "intelligent public opinion guidance" (网络舆情智能引导, *wangluoyuqing zhinengyindao*) software that can automatically and adaptively generate content and select the optimal time and method for coordinated posts. [12]

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[10] *https://time.com/6320638/ai-disinformation-china/*

[11] *Chen Dongheng [陈东恒] and Xu Yan [许炎], "Generative AI: A New Weapon for Cognitive Confrontation" ["生成式AI: 认知对抗的新武器"], PLA Daily, April 4, 2023. For a similar argument, see Mao Weihao [毛炜豪], "Looking at the Military Applications of Artificial Intelligence from ChatGPT" ["从ChatGPT 看人工智能的军事 应用"], PLA Daily, April 13, 2023.*

[12] *https://jamestown.org/program/cognitive-domain-operations-the-plas-new-holistic-concept-for-influence-operations/*

A 2022 article by PLA researchers argued for embracing bots on social media as the perfect complement to AI: "In the face of Western countries taking the opportunity to smear and attack [us], we must have the courage to use social bots [社交机器人] to carry out public opinion [struggle], and use relevant social bots to carry out information bombing [信息轰炸] against the enemy's social network to drown it out" (Long and Zhou, 2022). Hu Xiaofeng, a top PLA researcher, paraphrased Friedrich Engels to say that "undoubtedly, the cutting edge technology of AI represented by ChatGPT will inevitably be applied in the military field" (Hu, 2023). Specifically, Hu noted that for "cognitive domain operations, ChatGPT technology may also be used to produce fake news, fake emails, and even imitate human language styles for information deception, or be used in cyber-attacks." This view was echoed in another article arguing that the "rapid development of Generative AI and its wide application . . . is the general trend of cognitive warfare in the future" (Chen and Xu, 2023). Yet another said, "ChatGPT-like applications can efficiently generate massive amounts of fake news, fake pictures, and even fake videos to confuse the public . . . Compared with human beings, large-scale model technology has huge advantages in terms of quantity and time for its application toward information generation" (Shen, 2023). Another PLA Daily article argued that GPT-3 and emotional AI (情感智能 or 情感AI) are much better for social bots and public opinion guidance than deepfake technology (Wang, 2023).

An April 2023 article argued that Generative AI will enable nuanced, personalized content, and not only proactively post but also respond to other users' posts and engage in long-term conversations. Therefore, after social bots based on ChatGPT are instilled with personalities, positions and tendencies, they can become invisible on the Internet and become cognitive shaping tools. As seen earlier, they are more influential,

autonomous, quicker and cheaper to create and are better concealed than traditional [human-run] astroturfing [网络水军][13].

Some PLA discussions focus on the prospects of Generative AI for enabling "precision cognitive attacks" (精准认知攻击), specifically highly tailored or even personalized IO against small groups or individuals. For example, one article noted that "ChatGPT's powerful data processing capabilities and high autonomy enable it to conduct preference analysis and subsequent related information production and information delivery," supporting "precision cognitive attacks" based on "personalized user portraits" using big data to analyze individual preferences.[14]

Chinese researchers are also looking at developing and using their own versions of publicly available GenAI tools like ChatGPT. Not only will this avoid the dependency on ready to use AI solutions offered by western tech companies like OpenAI but also it will steer clear of the limitations imposed by language and inherent western values that might

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[13] *Zhou Zhongyuan [周中元], Liu Xiaoyi [刘小毅], Li Qingwei [李清伟], "ChatGPT Technology and Its Impact on Military Security" ["ChatGPT 技术及其对军事安全影响"], Command Information System and Technology [指挥 信息系统与技术], April 2023, pp. 7–16. Zhou Zhongyuan [周中元], "ChatGPT's Challenges to Military Security and Countermeasures" ["ChatGPT 对军事安全 的挑战与应对策略"], Defence Science & Technology Industry [国防科技工业], July 2023, pp. 46–48. For related articles, see Chen et al., 2023; Hua Rui [华瑞], Yang Longxiao [杨龙霄], Yang Runxin [杨润鑫], "When Generative Artificial Intelligence Heads to the Battlefield" ["当生成式人工智能走向战场"], PLA Daily, December 1, 2023*

[14] *9 Chen et al., 2023, Chen Changxiao [陈昌孝] and Wang Zihan [王梓晗], "Characteristics, Application, and Countermeasures of ChatGPT from a Cognitive Perspective" ["认知视角下ChatGPT 的特征、运用及应对之策", Political Work Journal [政工学刊], July 2023*

be embedded in such technology. In fact, these Chinese developed GenAI tools can be used by the PRC to subtly propagate Chinese influence as the algorithm behind development of these tools will inevitably reflect Chinese values. Beijing has already started the process of developing its own AI technology. As of April 2023, at least 30 Chinese companies, universities, are developing Generative AI models, including large technology companies such as Alibaba, Baidu, Huawei, iFlyTek, and SenseTime (Cheng, 2023). These models include LLMs, such as Huawei's PanGu-Alpha and Baidu's ERNIE 3.0 Zeus. Baidu has also developed a text-to-image model optimized for Chinese-language prompts, ERNIE-ViLG 2.0.

To better understand the potential of Generative AI for the PLA, it would be pertinent if we highlight the research work done by a prominent Chinese AI military researcher Li Bicheng, who has likely helped the PLA operationalize AI for its information warfare. As early as 2016 Li made an accurate prediction about the required AI capabilities to address technical challenges for highly effective online public opinion warfare which included generating social media posts that are personalised and customized targeting individual social media users.[15,16]

The model Li proposed has five main capabilities as depicted below.

- receive public opinion situation and guidance orders from command-and-control centers.
- select appropriate post generation models according to the topic, style, and emotional tone set by guidance orders, and generate posts with certain character traits.
- adjust guidance timing and methods based on current online public opinion.

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[15] Li Bicheng [李弼程], "Model for a System of Online Public Opinion Struggle and Countermeasures" ["网络舆论斗争系统模型与应对策略"], National Defense Technology [国防科技], October 2016.

[16] Li Bicheng [李弼程], Hu Huaping [胡华平], and Xiong Yao [熊尧], "Intelligent Agent Model for Online Public Opinion Guidance" ["网络舆情引导智能代理模型"], National Defense Technology [国防科技], June 2019.
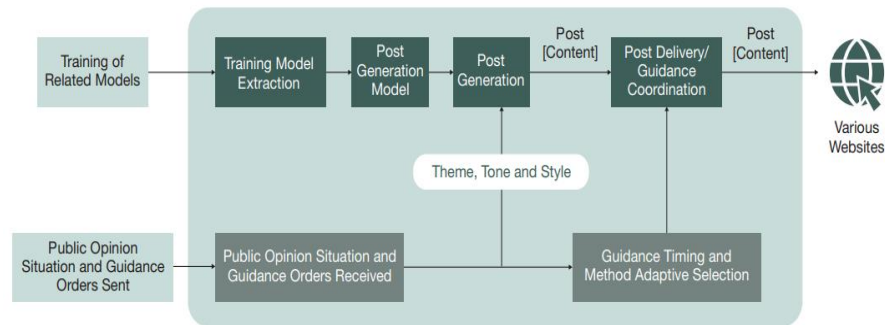
- publish posts and conduct public opinion guidance based on set behavioral characteristics and guidance timing and methods.
- carry out coordinated online public opinion guidance between multiple intelligent agents (Li, Hu, and Xiong, 2019).

Figure: PLA Researchers' Vision for Generative AI–Driven Social Media Manipulation, adapted from Li et al 2020

Therefore Li's model envisages a ready to use operational concept wherein a set of inputs (AI modelling and CCP objectives) inform post (content) generation and post timing (delivery) and coordination between post mechanisms for outputs to social media.[17]

Two nongovernment public reports and one foreign government report suggest that the Chinese Party-state has already begun to adopt Generative AI for cyber enabled IO. In September 2023, Microsoft reported that "[s]ince approximately March 2023, some suspected Chinese IO assets on Western social media have begun to leverage Generative artificial intelligence (AI) to create visual content. This relatively high-quality visual content has already drawn higher levels of

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[17] *Li Bicheng [李弼程], Xiong Yao [熊尧], Huang Tao [黄涛], and Pan Le [潘乐], "Simulation Deduction Model and System Construction for Intelligent Online Public Opinion Guidance" ["网络舆论智能引导仿真推演模型与系统构建"], National Defense Technology [国防科技], October 2020.*

engagement from authentic social media users.[18]. More recently in December 2023, an Australian Strategic Policy Institute (ASPI) report identified a "new campaign (which ASPI has named 'Shadow Play') [that] has attracted an unusually large audience and is using entities and voice overs generated by artificial intelligence (AI) as a tactic that enables broad reach and scale." The report explained that the "coordinated inauthentic influence campaign originat[ed] on YouTube [and promotes] pro-China and anti-US narratives in an apparent effort to shift English-speaking audiences' views of those countries' roles in international politics, the global economy and strategic technology competition." The campaign reportedly employed text-to-image and likely text-to-speech Generative models to generate thumbnails and voiceovers for their videos, respectively. [19] In addition to these private organisations, the Taiwanese government claimed that PRC produced videos with "artificial intelligence (AI)-generated voiceovers and fake hosts," targeting President Tsai Ing-wen in the lead-up to Taiwan's January 2024 elections. [20]

The recent Threatintel report released by OpenAI shows that, among many others, they disrupted a China-origin operation known as "Spamouflage" attributed by the FBI to a unit within China's Ministry of Public Security. This network targeted global audiences, especially members of the Chinese diaspora and critics of the Chinese government. The network used ChatGPT to debug code, seek advice on social media analysis, research news and current events, and generate content that was then published on blog forums and social media. In April 2024, the campaign ran a series of comments in English that criticized Chinese

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[18] *Microsoft Threat Intelligence, Sophistication, Scope, and Scale: Digital Threats from East Asia Increase in Breadth and Effectiveness, Microsoft, September 2023, p. 6.*

[19] *Jacinta Keast, Shadow Play: A Pro-China Technology and Anti-US Influence Operation Thrives on YouTube, Australian Strategic Policy Institute, December 2023, p.3.*

[20] *https://www.taipeitimes.com/News/front/archives/2024/01/11/2003811930 , https://www.taipeitimes.com/News/taiwan/archives/2023/04/27/2003798692*

dissident Cai Xia. one X account that posted the initial comment and a cluster of other accounts that posted the rest of the comments as replies.[21]

Warning signs for India:

During the COVID-19 pandemic, China spread many disinformation campaigns against the efficacy of Indian manufactured vaccines, tried to stoke communal tensions by focusing on Tablighi Jamaat issues and amplified accounts criticizing the Indian government's efforts to cope up with the crisis. Immediately afterward, anti-India propaganda from China and the People's Liberation Army (PLA) surged during the Galwan Valley clash in June 2020. Many fake videos began to emerge on Twitter portraying Chinese soldiers beating up certain persons whom they claimed to be Indian Army soldiers. Recently during the Manipur clashes, accounts from China have attempted to stoke tensions between the different sections and spread fake news that Indian government is engaging in a genocide of the Kukis etc. Social media platforms like Weibo & X were extensively used by state-sponsored handles to shape the opinion. Even during the G 20 Summit, there were attempts by Chinese accounts to portray the summit in a poor light by spreading negative news about the capability of India to host such an event.

What can be done:

The discussion up to now would have driven home the point on the almost frightening potential of Generative AI technologies to be misused by malign actors. Therefore, there needs to remain no doubt that such technologies need to be regulated and such regulation needs to be at multiple levels.

The first level is framing certain 'rules of the road' regarding the development, deployment, usage etc of such technologies at the global and regional level. These rules must prescribe certain boundary conditions such as transparency and explainability in algorithmic

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[21] *https://openai.com/index/disrupting-deceptive-uses-of-AI-by-covert-influence-operations/*

decision making by developers of these models, risk assessment frameworks and accountability to specifically highlight AI generated content by social media companies. In this regard European Union (EU) has come up with an AI Act[22] and in India a Digital India Act (DIA) has been proposed which will strictly deal with misinformation and 'high-risk AI' to prevent user harm. The regulation must be based on the concept of 'predominant use', and tools whose significant usage is adversarial needs to be regulated strictly.

At the second level is technological. There needs to be investment in new technologies that can detect AI generated content. Meta has already started a system whereby they have developed a new AI technology called Few Short learning to detect content generated by AI.[23] Further, there is also need to develop technologies to identify networks of accounts amplifying each other's messages, large groups of accounts created simultaneously, instances of hashtag flooding. The AI developers need to incorporate the facility, right during creation of model, to 'watermark' all content produced by these models as 'Generated using AI'. Further research needs to be undertaken in creation of indigenous and

Thirdly, none of this will work in the absence of proper awareness and digital literacy among the population that would focus mainly on enhancing citizens ability to recognise inauthentic content. This assumes even more importance in a country like India where majority of the population rely on social media for their news.

Conclusion:

As seen from the discussion above, China is on the pathway to shift towards a more information driven, intelligent AI driven form of warfare. Generative AI is likely to significantly impact the future of influence operations and, though we need more research to fully understand the threat of AI-powered influence operations as well as the feasibility of

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[22] *The Artificial Intelligence Act*

[23] *Harmful content can evolve quickly. Our new AI system adapts to tackle it.*

proposed mitigations, there are no silver bullets for minimizing the risk of AI-generated disinformation.

India is on the cusp of a digital and technology revolution. As India grows in economic heft and strategic influence, the level of interest in our growth and polity is bound to increase and not all this interest would be benign. Therefore, we cannot discount the possibility of such attempts being undertaken by bad actors to interfere in the functioning of our democracy, development of our economy and in exploiting the faultlines in our society. In fact, as shown in the study, our neighbours, especially China, has already taken note of this potential application of this technology to engage in information warfare and has already developed models to this effect. Considering the wide scope of ramifications of such a technology, this paper advocates for the formulation of a comprehensive, proactive, and inclusive strategy to effectively address this evolving threat in all it's manifestations, especially it's scope for spreading mis/disinformation.

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Ensuring Child Protection through Police Trainings

"Children are the living messages we send to a time we will not see." — Neil Postman.

(A framed message displayed on the wall of the Centre for Children, SVPNPA)

Vipin Bhatt*

Centre for Children at the Sardar Vallabhbhai Patel National Police Academy (SVPNPA):

The permanent establishment of the Centre for Children at the SVPNPA, to provide safety and security to the children, is one of the most creative paradigm adjustments in the police leadership regime. Shri. Atul Karwal IPS, Director of SVPNAP, formally inaugurated the Centre for Children on May 5, 2021. A vision and mission statement were drafted and approved to determine the fundamental values upon which the Academy should operate. It rationalized the agenda, training methodology, and themes for the Academy. Fundamentally, it reshaped the public's opinion that the rights of the children are not trivial matters for the police leaders. SVPNPA, under the institution's vibrant police leaders, is ready to restructure the discourse on child protection in India. The Centre for Children is now a permanent hub to work with other stakeholders, including the judiciary, child rights commissions, policymakers, think

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tanks, legal luminaries, academic and research institutions, and civil society organizations. In order to develop a global perspective on a child rights-based approach, it has also opened the floor for unrestricted dialogues, sharing of ideas, and working with the relevant stakeholders. Finally, it strengthened commitment that Indian Police Service is ready to take the leadership role in defending, protecting, and promoting the rights of the children.

Snapshot of Children and Crime Records:

The children in India come in contact with the law enforcement agencies either as a victim or a witness or who is alleged to commit a crime. Undoubtedly, all these children are in need of care and protection (CNCP). The children are susceptible to violence and crime happens in the public domain and private spheres. The family, friends, school, society, and the condition generated due to economic, social, and political constraints create an impact on the child's psychology and life, both. They become victims of the situation beyond their control. As reported from the National Crime Records Bureau (NCRB) for 2022, the rate of crimes against minors is frightening. A total of 1,62,449 crimes against minors were reported under the different legislations in India, which implies 445 cases were registered per day. In 2022, there were 63,414 cases of child sexual offences filed under the POCSO Act of 2012, which means seven cases of child sexual violence were filed in an hour. An estimated 83,350 reports of missing children were reported, and 2,878 children were trafficked. Only 175 child labour cases were registered under the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986, despite the large number of visible child labour instances in India. According to NCRB data, 1002 cases were registered under the Prohibition of Child Marriage Act of 2006, demonstrating the continued prevalence of child marriage 1,830 cases of crimes against children were registered under the special provisions of the Juvenile Justice (Care and Protection of Children) Act, 2015. Additionally, according to statistics from 2022, 32 instances were reported under the Medical Termination of Pregnancy Act, 1971, and 57 cases were filed under the Prenatal

Diagnostic Techniques (Regulation & Prevention of Misuse) Act of 1994. NCRB data also shows that, 37,780 children were apprehended out of 30,555 reported cases against children who were allegedly found in violation of the law. Since children have different needs, levels of maturity, and distinct way of response in a given situation than adults, the police must respond differently. They must have a thorough understanding of child psychology, the developmental process, and the familiarity how to work with children.

Dedicated Police Force for Children:

Providing safety and care to a child is the one of main duties of the law enforcement agencies. As soon as the child comes in contact with the police it becomes primary duty of the police officer to provides substantive and the procedural justice to a child. Police must ensure that child must receive her/his legal entitlements. The different statutory provisions and the precedents by the Supreme Court and the various High Courts in India provide various remedies to the children. It becomes obligatory for the police to effectively implement the provisions in the best interest of the children.

To build a cadre of dedicated police officers that can work especially with the children, Section 107 of the Juvenile Justice (Care and Protection of Children) Act, 2015 (JJ Act, 2015) creates statutory obligations to appoint Child Welfare Police Officer (CWPO) not below the rank of assistant sub-inspector in each police station in India. CWPO should be a person with aptitude, appropriate training and orientation to exclusively deal with children issues. The JJ Act, 2015 further directs to constitute Special Juvenile Police Units (SJPU) in each district and city, headed by a police officer not below the rank of a Deputy Superintendent of Police or above. SJPU shall consist of all CWPOs and two social workers having experience of working in the field of child welfare, of whom one shall be a woman. The law further instructs to provide special training to enable them to perform their functions more effectively.

In order to provide safe and secure environment to the children at that *thana* (police station) level, the concept of child friendly police station

has been created, which meant to provide a safe and silent space to a child in the crowded police station, where s/he can find some peace and can communicate freely without the public eyes. The first child friendly police station was launched in Pune in the year 2020, which is now followed by the other States including Delhi, Kerala, Maharashtra, Odisha, Jharkhand and others. The National Commission for Protection of Child Right also issued Guidelines for Establishment of Child Friendly Police Stations.

Supreme Court of India on Training of Police Leaders:

The Supreme Court of India in *Sampurna Behrua vs Union Of India & Ors on 12 October, 2011* directed the Home Departments and the Directors General of Police of the States/Union Territories to provides appropriate training and orientation to Child Welfare Police Officer. The required training will be provided by the District Legal Services Authorities under the guidance of the State Legal Services Authorities and Secretary, National Legal Services Authority.

Furthermore, keeping the importance of training as one of the important aspects to build an understanding on child and the law, mental health of the child and development of the child, the apex court also directed the National Police Academy and State Police Academies to *must consider including child rights as a part of their curriculum on a regular basis and not as an isolated or sporadic event.* (Emphasis Added).

Child Protection Concerns and Policing:

Police response to a child's plight is an important aspect for the policymakers, the judiciary, and the public at large. Police, indeed, have a major role to play in shaping the present and the future dynamics of the child. Some of the major child protection concerns, but not limited to, are missing children, digital technology and children, including child sexual exploitative and abuse material, sexual violence, commercial sexual exploitation, child trafficking, commercial exploitation of children, using children in drug peddling, child marriage, children in drug situations,

children in conflict with the law, corporal punishment, children in exploitative and vulnerable situation and others.

Children's Perception and Police:

Due to a lack of academic research, in India, it is challenging to assess children's perception towards police. A study titled "Status of Policing in India Report 2018," conducted by Common Cause and the Centre for the Study of Developing Societies, found that 44 percent of the respondents reported "significant" fear of the "police torture." The different global academic studies show that children have major fear of punishment from the police. The source of information for creating children's perception about the police image also assisted through the television, the internet, as well as from the detective novels. The information gathered from the family, school, or friends through words of mouth or by sharing personal experiences plays a pivotal role in creating an aura of police in children's minds.

"Life's aspirations come in the guise of children." - Rabindranath Tagore

A Child's Simple Mind's Complexity:

It's captivating to realize that an adult, with an experience of childhood, is familiar with the child's development journey and could become a little easier to understand what the child might be thinking. However, for a child, it is extremely difficult to think like an adult. A child is going towards adulthood with no idea how an adult behaves, contemplates, and comprehends the matters. There is a different dynamic in how both players perceive each other. Sometimes a police officer views a child through the lens of the criminal justice system and their professional expertise. It becomes critical that a police officer must show empathy to the child's feelings, identify the child's thought process and help accordingly, acknowledge and address the trauma and provide the best care possible to the child.

"The law is reason, free from passion." – Aristotle

Innovativeness and Law Applicability:
Features in the criminal justice system that deals with the adults are different from the child justice system and implementation needs an innovative approach. In the last more than two decades there have been considerable number of changes, legal, policy and practices, occurred in the realm of the child rights including child protection. The new procedural justice has been evolved and became part of the law devoid of the adult criminal justice in the country. The journey of the Juvenile Justice (Care and Protection of Children) Act, 2015 and Rules, 2016 from the Juvenile Justice Act, 1986, created a wave of changes in the substantial law and opened the scope for the procedural justice which is different from the Code of Criminal Procedure Code. The JJ Act, 2015, as a vertical Act, touches almost all the aspects of child protection issues in India including child marriage, child labour, missing child, child in conflcit with law (CiCL), child trafficking. Children in begging and drugs situation etc. Likewise, the Protection of Children from the Sexual Offences Act, 2012, is another entry, where the Act and Rules emphasis on different approach while dealing the children who are victim/survivor of sexual offences.

   For a police officer, an understanding of the law to provide a safe and secure environment, through substantial and procedural justice, shall be the paramount consideration. Making the police sensitive to the children's entitlement, by using the same law can create wonder. The training is all about raising the standard of work by using the same laws in the best interest of the children. For instance, the law prescribes that the testimony of the child victim of sexual violence should be taken by the lady Metropolitan Magistrate (MM)/Judicial Magistrate of First Class (JMFC). In one of the cases, an eight year-old girl child, victim/survivor of sexual violence, was very uncomfortable with the male strangers. At the time of the statement of the child under 164 Cr. P.C., the social worker and the woman police sub-inspector an investigating officer (IO) working in the case realized that the child might be uncomfortable with

the male MM, and there is a need to change to the lady MM. Hence, to get an order for a change, both approached the Chief Metropolitan Magistrate (CMM). After listening to the request, the CMM argued that the judiciary creates no difference between male and lady judicial officers and further added that our judicial officers are well trained to take the statement of the child, boy or girl, in a professional manner.

Realizing that, arguing with the CMM would be futile, as soon as the ACMM was about to reject the application for change of MM, the IO instantly responded - Sir, the issue is not with judicial officers, but the problem is that the girl is still uncomfortable while talking to any 'stranger' male. The effect of the violence is very high, as the trauma persists, her counselling is still going on. And as soon as she finds herself with an adult male, all alone, she starts vomiting and screaming. The moment the CMM listens the IO's version, he immediately orders to change the MM from a male to a lady MM. The approach was a mixture of professional expertise and passion. She later shared that having lady MM is preferable in the law; that's what she learned in the training programs, but what if the child is not comfortable talking with the male? Then we need a little different approach. This positive case study became part of the police training programs and motivated the different police officers to work in the best interest of the children.

"You must keep your mind on the objective, not on the obstacle." – William Randolph Hearst

Training on Child Protection:
The police have a wide range of responsibilities, including maintaining public safety and security, preventing crime, protecting people and animals, investigating crimes, and enforcing the law. Children become a territorial subject of concern in this domain. Police training in child protection covers a variety of topics. The knowledge of substantive law, understanding of court precedents, effective implementation of procedural law, and the strategies to handle the different situations shall be the paramount consideration in the training programs. It also involves

comprehending the forensic evidence, the child's needs and development, and overall justice. Once the fundamentals on child rights are understood, it is easier for the police officer to establish rapport and deal with the children's problems in the most humane way possible. The purpose of providing police with training on child protection is to help them comprehend the elements that contributed to a successful investigation. It also involves understanding "why" any child protection situation is significant, "what" needs to be done, "how" to deal with the child in difficult circumstances, and "where" to look to obtain the most effective remedy. The following case examples are crucial to comprehending the significance of conceptual clarity and dispelling myths with regard to children.

Case Studies:

I.Commercial Sexual Exploitation of the Children: CNCP or CiCL

Should a minor who is being sexually exploited for commercial purposes be considered a child in conflict with the law or one who requires care and protection? It has been discovered via interactions with several organizations, such as the judicial officers, Juvenile Justice Boards and Child Welfare Committees, that police turn over children who are discovered in violation of the Immoral Traffic (Prevention) Act of 1956 (ITPA, 1956) either to the Court or the Juvenile Justice Board. In order to address this issue during police training programs, the facilitators came up with a case study that served as an example and some discussion starters.

Two girls Rani (14 year old) and Sunita (16 year old) who were involved in prostitution were found by Police during a raid at red light area at 5 O'clock in the evening. During the raid, police also found Sundri (30 year old) with two children (2 year and 8 years old), Meena (21 years old) and Deepa (45 year).

Some simple question to be raised after giving the above question to the police officers such as what should the police do in such a case. The police's most typical answer in this matter is to take them all to the

Judicial Magistrate of First Class (JMFC) or Metropolitan Magistrate (MM). When asked where the judicial authorities would send the children for shelter, majority of the officers in the trainings responded, to the Home for Women or Nari Niketan, rather than the Child Care Institutions. Through the discussion, the trainee police officer was given clarification on the different age of the child given under the JJ Act, 2015 and the ITPA, 1956; the concept of Child in Need of Care and Protection (CNCP) under the JJA Act, 2015; the role of judicial and quasi-judicial authorities such as the Juvenile Justice Board (JJB), the Child Welfare Committee (CWC), and MM/JMFC; and the placement of women, girls, and young children in homes, jails, or child care facilities such as Nari Niketan is the place for Nari or Woman and not for children. The police officers' comprehension of the ethical and legal ramifications of the concerns was thoroughly examined, and their additional inquiries were addressed. Following several dialogues with state police personnel regarding this issue, it has been observed that the police have begun presenting the children to the Child Welfare Committee instead of MM/JMFC or JJB.

II. Breaking the Myth: Too many children are involved in the crime.

The number of minors engaging in criminal activity is rising, which is one of the common beliefs regarding children who are conflict with law. However, no one knows how much. The training could correct these commonly held views. As part of an open discussion, the facilitator asked the participants to rate the number of cases they believed children could have been engaged in if 100 FIRs had been filed in a given year in India. According to police officers, 40 to 80 percent of crimes are now committed by children. They have also added it is now a major source of concern for the police. They conclude that children commit more crime than adults. Their conscience was shaken after the conversation when the NCRB data, which had been accumulated over the preceding five years, was displayed to them. The NCRB data indicates that it has never increased to one percent.

Table: Information on child in conflict with law and apprehension compared to the overall crime and arrests of adults in India.

Year	2018	2019	2020	2021	2022
Crime Committed by Juveniles (IPC+SLL)	31,591	32,235	29,768	31,170	30,555
All India Total Crime Committed (IPC+SLL)	50,74,635	51,56,172	66,01,285	60,96,310	58,24,946
% Crime Committed	0.62%	0.62%	0.45%	0.51%	0.52%
Number of children apprehended	38,256	38,685	35,352	37,444	37,780
Total Arrest (India)	55,08,190	52,13,404	68,14,614	58,09,380	53,90,233
% Apprehend/Arrest	0.69%	0.73%	0.51%	0.64%	0.70%
Source: National Crime Records Bureau					

Homeless Children are Born Criminals:

During training programs, police personnel often make statements like "the children who live on the street are born criminals" or "the majority of homeless children are involved in the crime." When asked how often homeless or street children are involved in crimes, police officers typically reply that between 70 and 80 percent of the time, the homeless youngsters are participating in the crime. Showing an NCRB data, however, indicates that for the previous five years, it has never been above 7 percent. This also shows that the family has a major role to play.

Table: Child in Conflict with Law – Children Living with Parents/guardian and Homeless Children

Category	2022	2021	2020	2019	2018
Children living with Parents	32430	31757	29258	32351	32433
With guardian	3502	3496	3742	3724	3432
Homeless	1848 (4.8%)	2191 (5.8%)	2325 (6.5%)	2602 (6.7%)	2391 (6.2%)
Total	37780	37444	35352	38685	38256
Source: National Crime Records Bureau					

Way Forward:

A knowledge Hub: In order to give the Police Leaders a comprehensive, social, psychological, and legal understanding of child protection, the Centre for Children at SVPNAP has a significant role to play. The Centre for Children could be the best platform to develop best practices in the challenging situations, provide education, and open stimulated and candid discussion with the different stakeholders, including the judiciary, policymakers, academic and research institutions, and civil society organizations with the police leaders in the country

Collaboration with State Police Academies: While keeping the local situation of children in the context, the State Police Academies under the leadership of SVPNPA could adopt a uniform training curriculum in the country. It would help police officers active in the field to furnish noble services to the children in need of care and protection.

Educational Curriculum: Training programs for police personnel who deal with children must include education on legal, social, forensic, and mental and physical medical support. It should also include innovative approaches, successful case studies, interpretations of the court orders, and child rights jurisprudence in the country. The content should offer the

resource materials in vernacular, resource persons at the national, state, and local levels, etc.

Data Bank: Centre for Children at SVPNPA, in partnership with the State Academies, could establish a technologically enabled central databank, an online platform for the police leaders on child protection in the country.

Impact Assessment and Academic Studies: In partnership with Indian premier educational and research institutions, under the guidance of Police Leaders at Centre for Children, could take the lead in creating effective evaluation tools to assess the impact and direction of the training program. The Academy could also initiate new studies to explore good practices in the country on the role of police personnel. It could provide a platform to conduct a social audit of the services, including child-friendly infrastructure available to the children in the country.

In conclusion, police training should be a matter of the heart and an engagement of the intellect that feeds the spirit to provide the best possible protection to our children.

Indian Legal Regime and Child Protection:

Special Laws:

- The Bharatiya Nyaya Sanhita, 2023
- The Digital Personal Data Protection Act, 2023
- The Surrogacy (Regulation) Act, 2021
- The Assisted Reproductive Technology (Regulation) Act, 2021
- The Transgender Persons (Protection of Rights) Act, 2019
- The Juvenile Justice (Care and Protection of Children) Act, 2015
- The Protection of Children against Sexual Offences Act, 2012
- The Child and Adolescent Labour (Prohibition and Regulation) Act, 1986.
- The Bonded Labour System (Abolition) Act, 1976
- The Immoral Traffic (Prevention) Act, 1956
- The Pre-conception and Pre-natal Diagnostic Techniques (Prohibition of Sex Selection) Act, 1994

- The Transplantation of Human Organs and Tissues Act, 1994
- The Narcotic Drugs and Psychotropic Substances Act, 1985
- The Prohibition of Child Marriage Act, 2006
- The Protection of Women from Domestic Violence Act, 2005
- The Information Technology Act, 2000
- The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989
- The Medical Termination of Pregnancy Act, 1971
- The Probation of Offenders Act, 1956
- The Factories Act, 1948

Local Laws:
- The Tamil Nadu Devadasis (Prevention of Dedication) Act, 1947
- The Andhra Pradesh Devadasis (Prohibition of Dedication) Act, 1988
- The Karnataka Devadasi (Prohibition of Dedication) Act, 1982
- The Maharashtra Devadasi System (Abolition) Act, 2005
- The Goa Children's Act, 2003
- The Bombay Prevention of Begging Act, 1959. (Applicable in Delhi also)

Personal and Other Laws:
- The Hindu Adoption and Maintenance Act, 1956
- The Guardians and Wards Act, 1890
- Adoption and The Juvenile Justice (Care and Protection of Children) Act, 2015
- The Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulation of Production, Supply and Distribution) Act, 1992
- The Right of Children to Free and Compulsory Education (RTE) Act, 2009
- The Registration of Births and Deaths Act, 1969.

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Author's Profile:

Vipin Bhatt is having an advanced university degree in Social Work and a graduate degree in psychology with Honors from Jamia Millia Islamia University, Delhi. He has completed his Law degree for University of Delhi and handled court cases on child rights in India. Additionally, he is a Fulbright- Hubert Humphrey from University of Minnesota, Law School, and International Visitor's Leadership Program alumni on Trafficking in Person both from the United States of America. Vipin Bhatt has extensive experience working with the United Nations (UN) and other international bodies in India and South Asia on Child Protection and Gender-Based Violence (GBV) issues. He served as the Executive Director at the South Asian Association for Regional Cooperation in Law (SAARCLAW) and as a Regional Child Protection Officer at the South Asia Initiative to End Violence Against Children (SAIEVAC), both apex bodies of SAARC, based in Kathmandu, Nepal. Vipin Bhatt as a UNICEF's consultant has worked in Sardar Vallabhbhai Patel National Police Academy, Ministry of Women and Child

Development, Government of India and the Department of Women Child Development, Government of Madhya Pradesh. Vipin has been actively engaged with various Civil Society Organizations (CSOs) in India, focusing on laws and policies related to child rights. He has designed, organized, and conducted training and capacity-building workshops for diverse stakeholders, including the judiciary, law enforcement agencies, lawyers, media personnel, women, youth, children, policymakers, and other partners. His areas of expertise encompass program management, monitoring and evaluation, advocacy, networking, partnership-building, and knowledge management on child protection issues. His contributions also include drafting manuals, Standard Operating Procedures (SOPs), and curricula addressing child protection concerns. At presently, Vipin Bhatt is based Delhi and could be reached via
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Exploring the Investigating Use of Virtual Reality Technology in Crime Scene Reconstruction and its Impact on Forensic Investigation and Legal Proceedings

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Abstract:

The aim of this paper is on the recent developments of Virtual Reality (VR) as an assessment tool in determining crime scenes and in relation to forensic sciences and justice systems. It provides more depth and real-life scenarios that are helpful for those in law enforcement or legal professions, whether as an officer in the field or inside a courtroom. The first analysis relates to how VR helps increase the chances of reconstructing a crime scene through virtual reality to gain digital form, hence creating accurate models of crime scenes for forensic analysis, and can give many physical features in identifying and investigating trace evidence. This also assists in maintaining and establishing better and well-related contractual relations regarding the events that occurred at the crime scene. Further, the research assesses the level of effectiveness of VR in relation to trial proceedings and also underlines the promising opportunities of VR in creating transparent, complete, and compelling sources in trials. By guiding judges to really visit the actual

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crime scene, VR enhances their actual understanding of the background of the case and thus might enhance the chance of fairly judging the case. The research also examined the effects of new technologies in incorporating, such as Virtual reality, into normal policing and the forensic profession while considering disadvantageous aspects such as Ethical concerns, Standard Operating Procedures, uneven technological advancement and variation in the level of technology adoption between different nations. The present paper aims to reveal these challenges to improve the use of VR in the field of forensic science and law.

Keywords:

Virtual Reality, Forensic, Crime scene Reconstruction, Technology.

1. Introduction:

Virtual reality (VR) has become an influential tool in several industries, including gaming healthcare, due to the real-life experiences it provides and the level of interaction. Meanwhile, in the field of forensics and law enforcement, VR technology is widely used in reconstructing crime scenes and building accurate representations of physical environments. Virtual Reality entails the use of computer-generated models through which a person can manipulate or play out three-dimensional models on screen with the aid of devices such as goggles with screens or specially designed gloves with sensing capabilities. The idea of Virtual Reality dates back to the 1960s, but the improvement of computer-generated graphics, interfaces, and sensory equipment has pushed the VR evolution forward (Burdea & Coiffet, 2024). It goes without saying that VR is needed in today's society, which relies on technology. This makes it a valuable tool, especially in applications that involve the use of visuals and interaction in simulation. In the field of forensics, VR technology helps in recreating the crime scene, leading to virtual visits and detailed examination of intricate crime scenes by investigators, jurors, etc [Khalilia et al. (2022)] This can lead to an improved understanding of events and possibly enhance the accuracy of investigations, as well as the fairness of judicial proceedings. VR technology is still a new and

promising area of research in the context of crime scenes as it allows for the preservation of the crime scene even after the changes have happened, making it useful for constant investigations and judicial processes. For instance, when investigating a crime scene, VR can provide replicas of the scene and create or eliminate various theories of what transpired in the scene. Nevertheless, the application of VR in legal processes is not without its difficulties. Bain (2016) The issues of reliability, accuracy and credibility of virtual reality-generated evidence continue to be actively debated in law. The challenges reported are a biased jury and the presentation of facts due to the technological constraints in the trial. Furthermore, police departments have started investing in VR, where different crime scenes are modelled to increase performance in critical thinking and correct steps for handling and solving complex cases. This not only prepares the officers but also ensures that the legal requirements are met as when engagements in realistic crime scene investigation exercises. When it comes to scene investigation stimulation (SIS), there are certain challenges which, if addressed, determine success in applying VR technology into forensic practice: costs associated with employing the technology, its sophistication, the question of VR bias, and the lack of standardised guidelines on creating VR crime scenes. In addition to that, there is a constant requirement for current legal requirements to ensure that legislation can keep up with the rapid progression of technology surrounding virtual reality in order to provide the guidelines for personal information protection, data integrity, as well as the appropriate use of VR in delicate scenarios. ("Fundamentals of Wearable Computers and Augmented Reality," 2001) It is helpful, therefore, to revisit and periodically check the effects of this technology on forensic science and legal systems. This continuous evaluation guarantees that VR is given the maximum benefits without harm touching the patients.

2. Virtual Reality in Crime Scene Reconstruction and its Types:

Crime scene reconstruction is the application of the advanced technology called virtual reality (VR), a virtual environment that simulates reality.

There are various categories of VR technology, such as fully immersive systems that employ headsets and motion-sensing equipment to give participants a 360-degree sensory experience and non-immersive systems that present a computer-generated environment through a standard computer interface.

- ➢ **Fully Immersive VR:** These systems utilise headsets such as Oculus Rift, HTC, or PlayStation VR; these are full sensory, where the user is taken into a virtual world by what they see and, in some cases, feel. Players can realistically influence the environment, making it perfect for the simulation as if the player were at the crime scene.

- ➢ **Semi-Immersive VR:** This type of VR entails projecting a large screen or having several monitors so that the user is enclosed in a number of monitors. Semi-immersive systems, such as CAVE (Cave Automatic Virtual Environment), are less immersive than fully immersive VR but still extremely useful if you have to conduct a group discussion or use the system as a learning tool; in this case, the view of the crime scene is highly detailed.

- ➢ **Augmented Reality (AR) and Mixed Reality (MR):** While not strictly VR technologies, these technologies lay digital information on top of the real world and are becoming more widely adopted in crime scene analysis. Virtual and augmented reality technology such as the Microsoft HoloLens allows a visualisation of the crime scene layout and the physical interaction of such objects as the HoloLens demonstrates 3D models of evidence or reconstructed scenes in a real-life environment.

- ➢ **Desktop VR:** Somewhat less engaging but vastly more popular, when a person sits in front of a computer or a laptop, using a mouse, keyboard, or other input devices to navigate the virtual realm. This method is particularly useful for analytical purposes and can be applied when using more advanced VR equipment, which is not an option during training or initial investigations.

> **Virtual Reality Photogrammetry Tools:** These tools utilise images captured at the crime scene to create realistic 3D models that are navigable in a virtual reality setting. It uses software like 'RealityCapture' or 'Autodesk ReCap' to process images to create highly detailed and scalable models where investigators can track them from different angles and perspectives.

These technological differences enable very real, full-scale recreations of the crime scene that are investigated and can be navigated in some fashion by the authorities and the legal teams in order to get a better view of what has happened in that particular crime scene. Through the use of VR in reconstructing crime scenes, forensic experts can maintain a record of the scene features forever as they can revisit the same scene repeatedly for analysis without physical interference. These tools are handy in cases with multiple objects and persons, where the spatial relationships and positioning of objects and evidence are essential in reconstructing a sequence of events and establishing causality. Furthermore, the VR application in courts as an evidentiary tool also enhances the probability of juror and judicial impartiality by offering clear visual depictions of the crime scenes. Therefore, VR technology helps make forensic examination more accurate and affects the justice and speed of legal cases.

2.1. Application and Process of Creating Crime Scenes Using VR Technology:

Virtual Reality (VR) enhances forensic science by producing detailed, interactive crime scene models. It provides the list of events and the context in space and time, which we could not obtain with other techniques. The police officers or investigators can literally take a 'virtual tour' of the crime scene and view the dimensions that could not be viewed before and show more about the crime, which aids in hypothesising situations, seeing how they play out and coming up with a better story. When constructing these virtual environments, photogrammetry and laser scanning come into the sphere to help the investigators or evaluators. They take the measurements of the

photographs and other objects, and the VR model is actually of the scene, making a virtual crime scene includes several processes. First, photos, videos, and measurements, including the use of a LiDAR scanner tool, are taken at the scene of the crime, that data is then converted into a VR model by using software that converts the static data into a dynamic 3D environment. More layers can be added to the base – trajectories of projectiles, blood spatter patterns, and object visibility from different angles. This environment enables the investigators to try out the different possible situations and conditions since the environment is malleable. It is worth noting that VR is iterative – investigators can go around the crime scene again and again as new information is gathered or as theories are tested and using VR for crime scene reconstruction has massive potential in forensic investigation and the law. It makes the evidence more accurate and comprehensible to the investigative officers and judges and presents evidence more realistically. Virtual reality is a new forensic method that allows for more investigation and better communication of complicated evidence.

2.2. Impact of Forensic Investigation:

The use of Virtual Reality (VR) technology is one of the great milestones in crime scene investigation and legal processes. As a tool, VR has the potential to improve the analytical functions, education of forensic staff, cooperation between experts, and adaptation to the legal environment, which is also redesigning the approaches to forensic investigation.

1. *Using VR for Better Visualization of Evidence:*

The implementation of VR technology in the sphere of forensic science can be regarded as one of the milestones in the advancement of criminalistics and judiciary. However, in terms of enhancing analytical approaches, training forensic or police personnel, convening experts, and modifying legal provisions, VR technologies in the present moment take new forms in the field of forensic investigation.

2. *Enhanced Forensic Laboratory Experiments Through VR:*

Using virtual reality tools enhances the experience, as it offers greater interaction and provides a 3-dimensional perception of crime scenes to

the experts. This results in an improved and effective analysis of the position and nature of the interaction of objects in the crime scene and could uncover evidence that may otherwise be overlooked in the formation of a two-dimensional perspective on the crime scene. Noond et al. (2002) The utility of VR technology expands to an aspect of forensic laboratories by making it possible to model scenarios that are either dangerous or impractical to model physically. These virtual experiments are very important for hypothesis testing in virtual settings so that results coming from forensic data are more accurate.

The implementation of VR for enhanced visualisation also enables forensic investigators to walk through a reconstruction of the crime scene and have an enhanced, three-dimensional view that cannot be easily put to reality with plain pictures or narrations. It allows for a closer analysis of the spatial interactions and positioning of evidence, which is often essential when exploring intricate crime scenes. Also, improved forensic laboratory experiments through virtual reality allow forensic researchers an opportunity to create various experiments and check hypotheses in a controlled, repeatable, and safer environment. These capabilities enhance the precision and speed of forensic results, hence the possibility of expediting cases.

2.3. Training and Education for Investigators:

1. Use of VR in Forensic Investigation Training:

The use of Virtual reality during the training activities is quite helpful in offering the feel of the real scene without putting the forensic investigator at risk of being at a real crime scene. It also brings a positive impact to the learning aspect while also making the investigators ready for different operational situations that can occur including those that are unusual and risky.

2. Impact of VR on Forensic Investigation Knowledge Retention:

Some of the research conducted showed that there is a high potential for acquiring higher levels of retention when using VR-based training as compared to other conventional methodologies. This is because VR is uniquely immersive and allows the participant to experience life-like

events, and therefore, its impact on the training of the trainee is profound on the ability to impact their learning and memory factors positively. ("Emerging Technologies in Virtual Learning Environments," 2019) Indeed, the application of VR for forensic training presents considerable value. In using VR within the context of forensic investigation training, newcomer investigators can engage more frequently and realistically with a broad array of contexts than can be encountered in their work. This exposure is handy in developing their observational and analytical skills since the assessment does not necessitate physical access to the scene, which could be logistically intimidating and costly. Secondly, education in formal understanding is also affected by VR, especially concerning knowledge of forensic investigation. Due to the possibility of natural and active interaction with a trainer and material, involving thought-provoking VR in the process accelerates and stabilises the quality of the training process by fixing complex information in learners' memories more effectively than traditional approaches to learning.

3. *Sharing Virtual Crime Scenes with other Experts:*

With the use of VR technology, virtual scenes of crime can be shared with various forensic experts across the globe. This capability is useful in getting opinions from experts without having to move around, which makes forensic analysis faster and can increase the number of opinions from experts who may be consulted. One of the benefits of VR, therefore, is the fact that one can share virtual reconstructions of crime scenes with other forensic experts who could be from different parts of the world. This aspect not only helps in providing a substantial amount of forensic details but also improves the interaction between different branches of law enforcement and experts. One can browse the virtual scene on their own, speak with their peers, and, as a result, build a more unified perception of the case. The kind of collaboration that VR can foster results in arriving at a more meaningful interpretation and conclusion, improving the investigation process.

4. *Facilitating Interpol Investigative Collaboration Through VR:*

The use of VR in the process of collaborative work together with different countries and international organisations like Interpol has changed the model of sharing information and forensic data. Thus, using VR, Interpol is capable of improving combined investigations where several agencies work on the different aspects of the same case at the virtual crime scene, which would result in better cooperation and more efficient functioning of the international police forces. (Roupé et al., 2018) The employment of VR systems for investigative reconstructions in a crime scene revolutionises forensic processes and the law. Training and educating forensic personnel, the possibility of sharing a crime scene virtually, and backing international projects, VR technology provides a more effective, no erroneous, and creative approach to present-day forensics with improved analytical skills. When combined with other technologies, this technology has the potential for future improvement that could establish higher standards for forensic examinations internationally. This integration of VR in forensic sciences is all-embracing, pointing towards its future role as a middle weapon in advancing crime scene investigation and legal systems. As technology advances, the uses and applications of VR are believed to broaden even more, thus continuing the innovations in this area.

5. *Technical Disparities:*

The use of Virtual Reality (VR) technology in the reconstruction scenes of crimes symbolises a revolution in forensics investigation technology that holds profound meanings in the legal processes for accuracy and efficiency. The technical inequalities VR enforcement brings into bearing imply crucial barriers that should be overcome to enhance its usage. The first is that there are significant differences in the level of technical implementation of VR systems and, consequently, the similarity with real life. Virtual reality systems with a relatively high level of immersion are important insofar as the physical and spatial authenticity of the crime scene reconstructions? is concerned. Nevertheless, developing such explicit environments needs higher graphic rendering and computational power, which is expensive and

impractical at times. However, lower-fidelity VR entails decreased vividness, inevitably resulting in limited spatial perception and, consequently, the correct understanding of the events. There is a problem of asymmetrical technological integration, significantly limiting the use of VR tools in forensic practice. This is because multiple VR platforms and tools exist, and different levels of effectiveness and a change in the interface through which crime scenes are reconstructed and reviewed characterise them. This means that when there are no standard procedures for reconstructing VR, the admissibility of such reconstructions in a court of law can be questioned, which in turn complicates the legal process and, in effect, may weaken the credibility of the forensic evidence given in court. There is another technical divergence associated with vestibular and tactile senses through which humans receive several sensations. Visual and auditory realism is constructed incredibly well in VR, but other senses, such as olfactory, gustatory, and even touch, are often absent and might be an essential feature in certain crime scenes. For instance, some feelings like smell or touch can be missed, which may affect the perceived view of a crime scene. This sensory limitation affects the possibility of the Virtual Reconstruction process to convey all aspects of the scene and, as a result, the subsequent legal conclusions. Data integrity and security are two major hurdles that also require technical consideration. It is, therefore, important that when digitising the crime scene data with the specific aim of creating a virtual platform, the integrity of the actual physical evidence in the scene is not compromised in any way. While translating anything that could be altered and manipulated into digital form, questions of authenticity and admissibility may arise in court. Moreover, it is also crucial to protect the entry of such sensitive data and their alteration from any unauthorised person and/or entities, as well as from the legal perspectives and rights of the parties involved in the case. Last, the discrepancies in the usage and training of the average user, particularly the working forensic staff, can impact the application of VR tech. It was identified that there are differences in the operating proficiency of complex VR systems in law enforcement and legal entities at different levels, and thus, the effective deployment and

interpretation of VR reconstructions. These discrepancies highlight the need for extensive training courses and effective design of interfaces, which would allow the inclusion of the technology as clear and beneficial in different legal and forensic situations. It is, therefore, crucial for the above-mentioned technical disparities to be corrected to fully unlock the capabilities of VR in crime scene reconstruction.

➢ Firstly, the refinement of simulation quality,
➢ Secondly, the closer coordination with standard platforms,
➢ Third, the broadening of multi-sensorial interfaces,
➢ Fourth, the guaranteed reliability and trustworthiness of data as well,
➢ Fifth, aspect is the accessibility for the user through professional training, which shows that VR technology can improve forensic investigation and vehemently support the justice system.

3. Implementation of the Standard Operating Procedures (SOP) for Virtual Reality Technology in Crime Scene Reconstruction:

To this end, standardisation of the structures and procedures of applying VR technology, particularly in the forensic domain, is crucial to enhance the effectiveness and uniformity of the practice. Standardisation involves the formulation of common mannerisms in acquiring, evaluating, and presenting crime scene information. This involves careful tuning of the VR hardware and software to precisely imitate the real-life environment. These generally include the International Organization for Standardization (ISO) and other standard-setting organisations that oversee these standards before they are set in the public domain to help consumers understand that VR reconstructions are scientifically accurate and can be compared across different studies on the same scale.

1. Guidelines for Data Acquisition:

There are various data collection methods for VR crime scene reconstruction, where state-of-the-art tools like 3D laser scanning, photogrammetry, and infrared imaging make detailed documentation of

the physical space. All policies must specify how and to what extent the measurements should be precise and detailed to offer an enlarged, lifelike replica of the scene. These guidelines also have to cover how digital information is communicated, stored and protected to eliminate chances of tampering or compromising evidence and how they may be inadmissible in courts.

2. Protocols For Scene Reconstruction:

When data is obtained, reconstruction procedures of VR scenes define the process of converting raw data into vivid and realistic virtual environments or objects. They should also describe how the data is integrated from the sources, how errors are corrected and how the end product will be a replica of the scene that was being studied. Moreover, it should be noted that all of these models need to be developed objectively to prevent subjectivity from entering the process and distorting the forensic examination.

3. Interoperability And Compatibility:

To be incorporated into the legal system, VR technology must also be versatile in different hardware and software systems that are utilised by law enforcement officers and legal professionals. This standardisation means that VR reconstructions can be easily shared between the platforms and easily viewed by multiple people, such as forensic engineers, law enforcement agents, attorneys, and judges.

4. Ethical And Legal Considerations:

The policies should also address ethical and legal concerns regarding the rights of privacy and the proper treatment of young people or other victims of violent offences. Furthermore, the guidelines should specify the legal principles that should guide the admissibility of VR recreations in trials: relevance, authenticity, and non-offensive presentation.

5. Training And Certification:

To ensure validity and credibility of the VR reconstructions, standard operating procedures/training and accreditation for forensic practitioners or experts in VR technology are recommended. Such programs should demonstrate the technical aspects of VR applications and ethical and

legal issues in forensics. Since technology is constantly improving and new judicial guidelines are being introduced regularly, it is imperative to regularly update oneself on new technologies and legal amendments.

4. Impact on Legal Proceedings:

Virtual Reality (VR) technology has become prevalent in forensics as well as in the court process, especially in crime scene reconstructions. Aside from changing the manner and method of presenting shreds of evidence in the courtroom, this technology also greatly impacts the cognition of jurors and judges. Due to the three-dimensional replication of instances, virtual reality allows for a better appreciation of fact-based situations and could result in better and more impartial justice. By incorporating VR technology into the legal processes, there is dynamism in the courtroom. It offers sequential and spatial views of the crime scene that cannot be provided by usual means of evidence presentation. For instance, VR can show differences in lighting, lack of it or how visibility could have been when the incident occurred, which is an important factor in most criminal cases. They allow judges to more authentically assess the positions and locations of various elements or participants within the crime scene. In addition to that, VR assists in the analysis of other intricate forensic information. For example, bloodstain pattern analysis with the help of traditional still images is difficult to explain, but once exposed through virtual reality, one can see the path that the blood will follow and where it will impact on a three-dimensional plane. Thus, this capability enables experts/judges to comprehend forensic conclusions and distinguish the shades of the evidence, contributing to proper deliberation and verdicts. Thus, the potential of VR to enhance the fairness of legal decisions relates more to democratising the interpretation of evidence. An exact replica of the scene, regardless of their tech savviness or capacity to understand other conventional forms of evidence, VR brings parity. This ensures that each judge assesses the evidence in a similar context, minimising chances of misinterpretation or bias. Also, VR can potentially be of paramount importance in evaluating alibi defense and witness statements. Therefore, using virtual reality, we

can recreate the crime scene and assess the credibility of statements and alibis of defendants or other witnesses. This aspect of VR not only aids in the corroboration of believable narratives but also in rejecting fake or fictitious stories. However, some concerns must be addressed while using VR in legal proceedings. The arguments concerning the risk of VR impacting the emotions or biasing the jury are not baseless and should be taken with due consideration. The legal profession requires rules to be run and ensure that VR is not applied in ways that could mislead a jury/judge in a court of law. The application of Virtual Reality technology in the reconstruction of crime scenes has been seen as an innovative advancement in the field of forensic science and policing. Therefore, if used to explain crime scenes and make their visualisation clear and comprehensible, VR can significantly affect the prejudiced or non-prejudiced nature of judicial proceedings. Its further evolution and implementation into the judiciary sphere exemplifies trends that will enhance the quality of justice being offered in courts across the globe.

5. Conclusion:

The use of Virtual Reality (VR) technology in reconstructing crime scenes portrays a new dawn in the field of forensics since it provides an enhanced all-around method of reconstructing crime scenes and a new way of handling the crime scene in a judicious manner. This paper has now provided a systematic dissection of the diverse roles of VR technology, detailed and analysed its potential to revolutionise the conventional crime scene investigation and advance the judicial system by offering an interactive realism of the crime scenes. Another key strength noted in the use of VR relates to the ability to revisit scenes of a crime after an incident without the physical arrangement of the scene being changed. This perpetual availability of the scenes in their raw forms can play an important role in forensic processes, as they are an ideal base for hypothesis formation and a rehearsal place, which are both essential for constructing an effective investigation. However, technology also brings some issues like bias and the need for standardisation to motivate people to adopt technology that can be credible and reliable in

law enforcement. The present use and application of VR in forensic and legal proceedings are not without certain challenges. The realistic disparities include variance in the capabilities of the VR systems and how this has a ripple effect on the realism and reality of the reconstructions of crime scenes. These disparities must be resolved for the full potential of VR to be harnessed and effectively used in forensic contexts. Solving these issues requires improving the need for higher-fidelity VR systems, defining the best practices for making and utilising VR crime scenes, and providing haptic interfaces to consider elements other than the visual and sound ones. The paper also acknowledges the technical and ethical issues that arise when integrating VR in forensic, police and legal matters. Some of the problems that arise in this field include data accuracy, privacy, and procedural reforms, which present the need for strict protocols for properly utilising VR technology towards exacting justice without jeopardising ethical considerations.

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Book Review:
Police Discretion in India by Satyajit Mohanty

Aditya Goenka, IPS*

Author	: Satyajit Mohanty
Published in	: Police Journal of Sardar Vallabhbhai Patel National Police Academy Publisher: Routledge, 2024
Price	: INR 1295 (Hardcover)
Pages	: 205
Title	: Police Discretion in India - Legal and Extralegal Factors.

Satyajit Mohanty is an IPS officer of the 1988 batch borne on the Odisha cadre. His book on Police Discretion in India is a discerning work that examines the crucial but often neglected part of police functioning - discretion. The work is a pioneering effort in the area of police studies in India which delves into the complex issue of police decision making especially those related to arrests. Mohanty develops a framework within which to situate the idea of discretion in the area of law enforcement in India. By analysing the landscape of laws, rules and other statutes he also postulates a nuanced position of both environmental and value driven factors that influence decision making in policing.

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Overview:

At the heart of the book is the idea that decision making by police officers, especially related to arrests, are equally based on factors such as external pressures, personal judgment, experience, media, public expectations and situational context, rather than, as is normally expected, within the sole domain of laws and state policies. Mohanty puts forth the argument that police discretion while being an essential requirement for implementation of laws can also be the biggest source of violation of citizens rights. The book is divided into seven chapters, it begins with an introduction into the particular context of arrest discretion in India, then delves into the theoretical aspects of Police discretion and the factors both legal and extra-legal that influence its application. The third chapter traces the history of the legal landscape within which arrest discretion operates right from the Regulation Act of 1772 till the latest judgements from the Supreme Court. It succinctly presents the various legal concerns and the larger evolution of the law reflecting both the concerns of the society and need for an effective police force. Then the book goes on to measurement of the various factors that affect police discretion and more importantly the interplay of legal and extra-legal factors. Finally it dives into both the individual and situational factors that affect arrest discretion and it ends with a conclusion that brings the various arguments presented in the book together.

Important Themes:

1. Theoretical Basis of Discretion

Mohanty successfully situates police discretion in the landscape law enforcement and focuses on arrests. The book looks at literature from across the world and draws from the wide body of research done while studying these issues in other countries. The book draws from classical as well as contemporary theories and goes into the depth of the debate between legality and subjective interpretation. The work confronts the question whether police officers can apply the law and arrest individual on subjective criteria. This is a critical question in the Indian content

especially when there is a pressing need to prevent human rights violations.

2. The Indian Context:

While the work draws on theories from across the world, the pioneering research is the first of its kind in the Indian context. It engages with the difficult questions related to arrest discretion and methodically examines the various factors that influence such decision making using analytical tools in order to support the arguments it proposes. Such an approach ensures that the research is relevant to the Indian context and examines the realities within which the Indian law enforcement agencies operate. Factors such as caste, politics, media etc are examined in order to come up with a nuanced understanding of the issues involved.

3. Discretion and Police Culture:

Mohanty examines the police subculture and the way it influences police discretion. He looks at the basic paradigms of "Dirt Harry problem," "Us Vs Them," "The Thin blue/khaki line," "Code of silence" when examining the central issues pertaining to police sub-culture. He looks at the beliefs, norms and rituals as the dimension of the determinant of the category of sub-culture and then measures it as per the above four indicators. Such a detailed examination of the determinants of the arrest discretion provides a number of insightful observations.

4. Legal and Ethical framework:

The book also looks at the legal framework, which under grids, police discretion. Mohanty examines the various laws, statutes and supreme Court judgements that shape police discretion in India. Despite the fact that there are formal guidelines that frame arrest discretion, the informal determinants, such as environmental, individual, organisational process and value also play an equally important role. Mohanty highlights the interplay of these various factors that finally bear upon the individual officers decision while making an arrest.

5. Practical Implications and Reforms:

The book dispels the myth that arrest discretion is solely based on the diktats of the law. By highlighting the fact that despite amendments in the CrPC, and various judgements that have been passed, the number of arrests have not come down dramatically. This begs the larger question that merely making appropriate laws might not be the panacea for all the problems of unnecessary arrests. The author highlights solution such as community policing, police training, etc as an essential part of the process to ensure that arrest discretion is used for the benefit of the law and not for other reasons. By highlighting the extra legal influences, the author also distinguishes between extra legal factors and illegal determinants.

Strengths of the Book:

1. Analysis: Mohanty's book is based on solid research among a large number of practitioners in the Indian context. The academic rigour and deep examination of the major themes, that range from organisational, subcultural, environmental, individual, and situational determinants of police discretion in India makes the book an essential read for anyone dealing with the Indian criminal justice system.

2.   Indian Context: Mohanty does a commendable job in drawing out the determinants of police discretion in the Indian context. By doing detailed empirical analysis of the various determinants and their multifaceted dimensions, he is able to make sense of the highly complex field of police discretion in India. Not only does he foreground the issues involved, but having trained a large number of police officers in India, he is also able to translate these ideas into specific policy in inputs.

3. Field Experience: Mohanty's experience as a serving police officer for over three and a half-decades and as a trainer at the SVPNPA and other police training institutes has ensured that he is able to draw upon his field experiences while doing his academic research. This has ensured that the book is not merely theoretical but reflects the situation

on the ground to a large extent. The evidence that Mohanty uses to support his thesis is not anecdotal, but based on solid empirical analysis.

    4. Clarity: Despite the complex themes dealt with in the book, Mohanty manages to go in-depth into most of the factors that influence police discretion. The lucid and clear prose makes the book highly accessible and is of much relevance to practitioners, policymakers, and scholars concerned with Indian law enforcement.

Limitations :

While Police Discretion in India is an insightful and timely piece of research it suffers from the problems that pioneers face. As the author himself notes, a number of other determinants could not be operationalised as the tools required to measure those are not robust enough. This work opens up the field of police discretion to further research in order to develop more Indian theories and frameworks to better understand this area and make meaningful policy inputs.

Conclusion:

Satyajit Mohanty's Police Discretion in India - Legal and extra-legal factors, is a significant contribution in the area of Indian police studies. It offers an in-depth and empirical examination of the vast and complex field of police discussion framed within the complexities of the Indian sociopolitical landscape. Drawing on his extensive field experience and deep scholarship, Mohanty has provided a valuable work for practitioners, scholars, law, enforcement professionals, and policy makers working towards the goal of improving the function of the Indian police forces. The book serves as both a critical analysis of existing practices and a call to action for reform in the way police discretion is exercised and regulated.

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