

TOWARDS SELF-RELIANCE

In a rapidly globalizing world, the call to buy Made in Bharat products is more than just a slogan-it is a powerful movement that reflects the aspirations of a self-reliant and resilient nation. As India (Bharat) emerges as one of the fastest-growing economies in the world, supporting indigenous products is not just a matter of economics; it is a matter of national duty, cultural identity, and strategic foresight.

For India, it highlighted the urgent need to reduce dependency on foreign goods and build strong domestic manufacturing capabilities.

This realization gave momentum to the "Aatmanirbhar Bharat" (Self-Reliant India) campaign launched by the Prime Minister, urging citizens to support homegrown brands, local artisans, MSMEs, start-ups, and traditional industries.

Buying "Made in Bharat" products directly contributes to the country's economic strength. Every rupee spent on locally manufactured goods fuels domestic industries, generates employment, and keeps wealth circulating within our economy. From rural artisans making handicrafts to high-tech Indian start-ups manufacturing electronics and green technologies, every sector benefits when we choose indigenous alternatives.

Moreover, promoting Indian products also helps preserve our rich cultural heritage. Handloom, Ayurveda, traditional crafts, spices, and organic farming practices are not just commercial products-they are part of Bharat's centuries-old wisdom and heritage. Supporting them sustains livelihoods in rural and semi-urban areas and prevents the erosion of our cultural identity.

There's also a strategic dimension to this campaign. Excessive reliance on imported goods in critical sectors like electronics, pharmaceuticals, and defense can pose serious security risks. By investing in and purchasing indigenous products, we strengthen our national resilience and reduce vulnerabilities.

Critics may argue that Indian products sometimes lack the polish or pricing competitiveness of their international counterparts. However, the gap is narrowing fast. Today, Indian brands are innovating, matching global standards, and offering world-class quality. The government's initiatives such as "Make in India," PLI (Production-Linked Incentives), and Startup India are empowering domestic enterprises to scale up and go global.

But policy alone is not enough. True transformation begins with us-the citizens. The onus lies on every Indian to make conscious choices. Whether it's buying a Khadi kurta, choosing Indian-made electronics, using local apps, or supporting a regional brand, each decision we make can create ripples of change.

Career Opportunities for Women in India's Electronics Industry

■ SALEEM AHMED

In the heart of India's rapidly transforming digital economy, a silent revolution is underway-women are stepping into the circuits and chips of the electronics industry, carving out spaces in labs, production floors, design centers, and boardrooms. Once considered a male-dominated field, the Indian electronics sector is now increasingly recognizing the power of diversity, and women are playing a key role in this evolution.

From the factory lines in Noida to innovation hubs in Bengaluru, women are taking up the soldering iron, the oscilloscope, and the executive chair. And at the heart of this transformation is the Electronics Sector Skills Council of India (ESSCI)-a catalyst for empowering women through targeted skilling and industry-aligned training.

The Expanding Electronics Landscape

India's electronics industry is expected to surpass USD 300 billion by 2026, fuelled by global shifts in supply chains, robust government incentives like the Production Linked Incentive (PLI) scheme, and rising domestic consumption of electronic goods. As India moves towards becoming a global hub for electronics manufacturing and design, the demand for a skilled, innovative, and diverse workforce is growing exponentially.

This surge brings with it immense career opportunities for women, especially in:

- Electronics Manufacturing Services (EMS)
- Semiconductor design and embedded systems
- Mobile and consumer electronics repair
- PCB assembly and quality control
- IoT, Robotics, and Automation
- Solar electronics and green energy solutions

The industry's demand for precision, discipline, and focus makes women particularly well-suited for many of these roles. However, to fully harness this potential, skilling and upskilling are non-negotiable-and that's where ESSCI plays a pivotal role.

ESSCI: The Enabler Behind the Change

Established under the Ministry of Skill Development and Entrepreneurship (MSDE), ESSCI is the nodal body dedicated to creating a skilled ecosystem for the electronics sector. With over 75 job roles developed and aligned to National Skill Qualification Framework (NSQF), ESSCI has been instrumental in mainstreaming women into electronics-related job roles.

Key Initiatives Include:

- Women-Centric Skilling Programs for roles like LED assembly, mobile repair, solar installations, and PCB soldering.
- Industry-Academia Partnerships to ensure real-world exposure and better placement outcomes.
- National Apprenticeship Promotion Scheme (NAPS) facilitation to integrate women into mainstream apprenticeships.
- Train-the-Trainer Models to build a strong base of female instructors, creating ripple effects in communities.

How to Get Started

1. **Education:** Pursue a B.Tech/B.E. in Electronics and Communication Engineering, Electrical Engineering, or related fields from private institutions. Specialized courses in VLSI, IoT, or embedded systems enhance employability.

2. **Certifications:** Enroll in ESSCI courses for industry-recognized certifications in semiconductor design, IoT, and AI.

Career Paths Open to Women

Whether a woman is a school dropout, an ITI student, or an engineering graduate, the electronics sector has space for everyone:

1. **Skilled Technicians and Operators**

Women are increasingly hired in electronics factories for their dexterity, precision, and focus, particularly in roles like soldering, assembling, testing, and quality control for products like smartphones, consumer durables, and electric vehicles (EVs). For example, Tata Motors employs 1,500 women in its SUV production line, and MG Motor India has 37% women on its shop floor.

Women with short-term skill training can begin careers in:

- Electronic assembly
- PCB soldering
- Component testing
- Quality inspection

These roles are in high demand in electronics manufacturing clusters like Sriperumbudur, Noida, and Pune.

2. **Mid-Level Technical Jobs**

Diploma holders and trained candidates can explore:

- Service and repair of smartphones, TVs, and consumer electronics
- Solar system installation and maintenance
- EV charging station technicians
- Automation and IoT device installation

3. **Engineering and R&D Careers**

Women are excelling in chip design, verification, and testing. The semiconductor industry is projected to grow significantly, with women's participation expected to rise from 24-28% in 2020 to over 30% by 2027. Roles include VLSI design engineer and semiconductor manufacturing engineer.For B.Tech or M.Tech graduates in ECE or related fields, opportunities lie in:

- VLSI and embedded systems
- Hardware design and validation
- Product testing and compliance
- Robotics and sensor integration

With remote work and flexible hours becoming more acceptable, women engineers can balance family responsibilities and professional growth effectively.

4. **Entrepreneurship**

Skilled women are also turning into job creators by starting:

- LED bulb manufacturing units
- Repair centers for electronics and white goods
- Retail of components and accessories
- Local e-waste collection and recycling businesses

ESSCI supports such ventures by linking women to funding agencies, mentoring, and digital platforms.

Industry Trends Supporting Women

► Growth of the Electronics Sector: India's

electronics industry is projected to grow significantly, with the semiconductor market alone expected to reach \$100-110 billion by 2030, driven by technologies like AI, IoT, 5G, and EVs. This creates a high demand for skilled professionals, including women.

► **Gender Diversity Initiatives:** Companies like Micron (28% women workforce) and NXP (24% women workforce) are fostering inclusive environments with flexible work policies, maternity benefits, and return-ship programs for women re-entering the workforce.

► **Government Support:**

► Science and Technology for Women Program promotes women's participation in STEM through research and skill development.

► Skill India Initiatives provide training in VLSI, AI, and IoT, targeting women to bridge the skill gap.

► The 2017 Maternity Bill and policies addressing workplace safety support women's retention in the workforce.

High-Demand Roles and Salaries

- VLSI Design Engineer: ₹5-10 LPA (entry-level), ₹15-20 LPA (senior).
- Embedded Systems Engineer: ₹5-8 LPA (entry-level), ₹10-15 LPA (mid-level).
- PCB Design Engineer: ₹4-7 LPA (fresh-er), up to ₹12 LPA (experienced).

► Semiconductor Manufacturing Engineer: ₹6-10 LPA (entry-level), ₹15 LPA+ (senior).

Conclusion

The journey for women in electronics has just begun, and the signal is strong: India's electronics industry needs women-not just as workers, but as leaders, innovators, and entrepreneurs. With the right mix of policy support, industry collaboration, and targeted skilling initiatives like those from ESSCI, the future circuit boards of India will not only carry current-they'll carry the hopes of empowered women everywhere.

(The author is officiating Head, Electronics Sector Skills Council of India (ESSCI)

■ DR. ASHWANI KUMAR

Rituals have always shaped and regulated human shared understanding, as we are social beings, because of our ability to share meanings. They help individuals to set their goals and aspirations. Emile Durkheim observed that it's a common ritual that keeps members of communities together. He believed they strengthen shared beliefs and social bonds. However, in a contemporary society, the institution of the market created rituals. Market-based rituals associated with shopping, fashion, beauty routines, and leisure have become subtle forms of violence. These rituals do not cause direct physical harm, but they cause hidden damage to our ecology, individual mindset, and social fabric. This damage affects everyone, whether they participate actively or just observe.

Shopping has evolved from a need-based activity into a means of expressing identity and finding inclusion. Entering a mall, filling shopping carts, and unboxing deliveries has become a daily routine that shows belonging to consumer culture. Yet these actions hide

harm. The rise in plastic packaging, single-use bags, and delivery boxes leads to widespread environmental harm. According to a study by Oceana, around 164,000 tonnes of plastic packaging waste from e-commerce are generated annually, significantly contributing to global pollution. Convenience is celebrated as freedom, but it disguises slow, invisible damage that seeps into rivers, oceans, and even human bodies as microplastics.

Fashion plays a similar role. The identity of people in a modern society is often linked with their appearance, and the fast fashion industry takes advantage of this relationship. This correlation gives birth to fast fashion, and the fabric of the majority of clothes that represent the fast fashion is manufactured from polyester, a cheap but environmentally harmful petroleum-based material. When people wash polyester items, microfibres enter our water systems, and discarded clothes pile up in landfills that will last for generations. Although fashion is marketed as a form of self-expression, it often creates anxiety, dissatisfaction, and a need for con-

stant comparison. What appears to be choice and individuality can be little more than another system of self-surveillance, which means that fear of not being in style becomes pressure to consume indefinitely. In this context, 'violence' refers to the subtle yet pervasive harm inflicted not through direct physical aggression, but through environmental degradation, psychological strain, and cultural coercion. It reflects the way societal norms and industry practices, particularly in consumer habits, exact a toll on individuals and ecosystems.

Beauty rituals also play a role in the cycle of everyday violence. While skincare routines, makeup kits, salon appointments, and workouts may appear to be acts of self-care, they often serve as tools of social control that promote nearly inhumane standards of perfection. Products containing harmful chemicals can damage the body; plastic waste harms the environment; and the relentless pursuit of beauty negatively impacts our emotional and mental health. The body, which should be viewed as something natural, instead becomes a project shaped by market

demands and media influences, designed to create a specific image.

Even leisure activities partake in these violent expressions. Malls, disposable cups of coffee, selfies with drinks and logos, and air conditioning on the weekend are not harmless; they exist in collaboration with consumer markets. Leisure takes on consumption, and friendship is commodified through the selection of the cafe, the drinks, and the labels that we publicly share. Every act of leisure in this form implicitly supports social and environmental harm and distributes the effects of violence beyond private choice.

These violent rituals are insidious because of the unseen harm caused. They destroy an environment, put stress on our bodies, wear down mental capacity, and exacerbate social inequalities. The waste and pollution impact some communities more than others, but the consumption and leisure aspects are mostly directed toward the middle and higher classes. Unlike traditional violence, which has a victim and an offender, in these violent rituals, all are victims.The perpetrator of environmental

issues can be anyone from consumers of polyester clothing to bystanders breathing in polluted air, and even future generations who will face the consequences of landfills. One does not have to be actively involved to feel the impact; we are all both contributors to and victims of this violence.

The modern ritual of everyday life is therefore a contradiction. It provides identity, joy, and social belonging, yet simultaneously results in harm on several levels. The markets of consumption, fashion, beauty, and leisure foster a muted brand of ecological, psychological, and social violence against ordinary people that is normalized through repetition and comfort. "Ordinary" becomes political, and the usual act of buying clothes, putting on makeup or how we decide to spend our precious free time carries weighty implications.

Conceptualizing these as violent rituals leads to a re-examination of everyday life. It encourages us to understand how we contribute to ecological degradation, bodily harm, and social stratification in our daily lives. It also

encourages us to think about alternatives that can create identity, belonging, and joy without harm, such as participating in sustainable clothing practices, saying no to the throwaway culture, taking leisure in public and natural places, and participating in forms of beauty practice that celebrate the body rather than controlling it.

In this way, the sociology of everyday life is vital to understanding contemporary violence. Not all violence is visible, and not all harm is immediate. Much of the significant destruction occurs within rituals we perform every day, often unnoticed. By recognising the weight of market based daily rituals, we can no longer dismiss their consequences as harmless. Acknowledging our shared responsibility challenges us to rethink, resist, and ultimately transform the rituals that define our lives. The future depends on whether we simply follow these patterns or consciously choose new practices rooted in care for ourselves, each other, and the planet.

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International Literacy Day: A Mandate for Higher Education Institutes in the Digital Age

■ PROF. DINESH CHANDRA RAI

Every year on 8 September, as we observe International Literacy Day, we reflect on our progress as a society. While the classic image of a child learning to read a book remains powerful, today's landscape is different. This year, with the focus on "Promoting literacy in the digital era," we face a new reality. Literacy isn't just about reading words; it's about navigating a world shaped by screens, apps, and data. As a university leader, I can tell you this isn't just a policy goal for us-it's a human mission. Our job is to make sure the promise of a digital future reaches every single person, not just those with a fast internet connection.

The gap we're seeing in India today is stark. We have a generation of young people who are true digital natives, building tech empires and pushing the boundaries of innovation. But a short trip to any village shows the other side of the story. There, the digital divide isn't an abstract concept; it's a very real barrier. It's the farmer who can't access critical weather data, the student who missed class because of a poor network, or the parent who can't get government services online. Our challenge isn't just to catch up-it's to bridge this divide with compassion and smart strategy, turning potential into real progress for everyone.

The Vision from the Ground Up

The National Education Policy (NEP) 2020 gives us the perfect blueprint for this. It's not just another document; it's a living guide that encourages us to break free from old ways of thinking. The policy's push for a well-rounded, hands-on education, one that mixes different subjects and puts technology at the center, is exactly what we need. We're asked to do more than just produce graduates; we're asked to create people who can solve problems, think critically, and contribute to their communities.

This is where our work gets truly personal. We've embraced programs like Unnat Bharat Abhiyan (UBA), which isn't just about adopting villages; it's about building a connection. It's about our students and faculty spending time in rural communities, understanding their daily struggles, and helping them find solutions. Imagine our students from the computer science department helping villagers set up a basic internet hub, or our education majors creating simple, visual tutorials in local languages on a tablet. This isn't just a project; it's a partnership. In this, our youth volunteers from the National Cadet Corps (NCC) and National Service Scheme (NSS) can play a particularly important role. Their existing framework of community service

and discipline makes them ideal for leading on-ground digital literacy campaigns, acting as the first point of contact and support for village residents.

The Real Barriers and Our Next Steps

The work isn't easy. I've seen firsthand the obstacles we face. The biggest one is simply a lack of infrastructure. You can't teach digital literacy without electricity or a reliable internet signal. Then there's the people part of the problem. Many of our educators themselves need to be comfortable with new technology before they can teach others. And we can't forget the relevance issue: if the digital tools we offer don't solve a real-life problem for people, they won't be used. A study at Dibrugarh University even showed that even our post-graduate students struggle with some digital skills, which tells us we have work to do right at home before we go out into the community.

To start, we must team up with private service providers and local governments. They have the resources and expertise to help us build community Wi-Fi spots and set up digital labs in villages. A combined effort is much stronger than a solo one. Within our own walls, every professor and student, no matter their field, should receive ongoing training in digital skills. We need to create a university-wide cul-

ture where digital literacy is a core part of everything we do, not just a separate subject. We should also invest in creating digital content in local dialects and languages. Think simple video tutorials for farmers on using a mobile app to check market prices or for women's self-help groups to manage their finances. It's about meeting people where they are. To incentivize this, we could launch a special "Digital Impact Fund" to support student-led projects aimed at solving digital literacy challenges, turning our students into entrepreneurs and innovators who are rewarded for practical solutions that directly help our communities.

A Call to Action

The journey ahead is about more than just technology. It's about building a more inclusive society where everyone has a chance to succeed. The principles of NEP 2020 and the spirit of initiatives like UBA show us the way. By committing ourselves to these goals, we can transform our universities from academic centers into true engines of national development. It is a big task, but with a clear vision and collective effort, we can make sure that our nation's story in the digital age is one of universal access and shared opportunity.

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Cloudburst: Excruciating state of nature

■ SHYAM SUDAN

Recently the incidents of cloud bursting are increasing at an alarming rate. It causes multiple damage at its epicenter, both of human life as well as infrastructure. Every year there is loss of precious human souls , animals and other creatures due to this natural devastation. Now the big question is that ,Is it a natural catastrophe or a human error. There is need of action research in this direction on priority basis, because such incidences are happening on regular intervals. Especially in hilly areas, the incidences of cloud bursting are creating havoc for everyone. During rainy season inhabitants of hilly terrain are in great fear and trepidation. No doubt at general looking it is a natural phenomenon because rain is not in our control and domination. But in this modern era ,when we initiate the process of artificial rain ,t hen it would be a question mark over our advancement, why there is no solution to control the process of excessive raining. Cloud bursting incidences occur in nature prior to our scientific knowledge and advancement but at present we count this by our loss . Earlier our population was very meagre, moreover we have not built our infrastructural assets on hilly areas. Now we have develop lot of housing colonies , bridges, highways , tunnels etc on such hilly and mountainous terrain. The main reason behind this so called natural disaster is linked with our advancement and interference with nature. We are giving priority to various mining activities, tunnel building, highways construction and other structures on these hilly areas ignoring the concern of nature priority. Due to these activities we are changing the alignment of nature and it's working style. Deforestation on these hilly areas is one of the visible

ground and reason for this discomfort situation. However ,we are planting more and more trees in our nearby habitat, but at natural sites where the nature demand we are creating covered land into barren .There is popular saying that crown suits only on the head .Our intermingling and interference with nature impact the rate of global warming. At a result we have seen that our seasons are shifting their cycles. Cloudbursting usually occurs where there is great difference of temperature between the sphere and clouds .Due to humidity and high temperature at nearby earth clouds start pouring rain at rapid rate causing the problem of cloud bursting. Beside cloud bursting other natural disasters like flash floods, drought, hailstorm and lightning incidences are increasing day of day. The reason behind all these natural disasters is only the global warming. And global warming is increasing only due to our fault and errors. We can't blame the nature for such unwanted situation. Becuse nature is not against the living creatures on this planet. Nature is giving nurture to living creatures instead of creating trouble for them .it is us who are constantly giving wounds to nature with our greed and parasitic behaviour. It is a great concern for all of us that ,we need advancement at the stake of human lives or there is need of harmony with nature. We are not against the idea of advancement, but what is the need of that advancement when there is nobody to enjoy that comfort. Every year we have organized various campaigns of environment protection but on the other side we are continuously giving wounds to nature. There is need of harmonious relationship between our advancement and nature wheel ,only that we can create a healthy and comfortable design of our living.

