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Literature Review On The Impact Of Reskilling & Upskilling On The Performance Of The Employees In The Automobile Industries

Rashmi Nair[1]

Research Scholar: Sadhu Vaswani Institute of management studies for girls

Assistant Professor: ISMS Sankalp Business School, Pune1

Dr. Sheena Abraham[2]

Research Guide: Sadhu Vaswani Institute of management studies for girls

Assistant Professor AKI Poona Institute of Management Sciences and Entrepreneurship, Pune[2]

Abstract

Upskilling involves acquiring more advanced capabilities that align with one's current role to address skill shortages, whereas reskilling focuses on learning entirely new abilities to transition into different positions. Reskilling enables employees to shift into new roles within the same organization, often by building on related skill sets—an approach that is becoming increasingly important as companies face ongoing talent shortages. We are currently amidst the Fourth Industrial Revolution, an era defined by rapid advancements in artificial intelligence and automation that are transforming the workplace. This shift has increased the demand for a workforce equipped with high-level skills. To bridge the current skills gap, organizations must prioritize the development of talent and the cultivation of new competencies, making adaptability and continuous learning essential. To future-proof their operations, companies must make skills a central focus of their workforce strategies. Looking inward—by emphasizing internal talent development and mobility rather than relying solely on external recruitment—offers additional benefits, such as higher employee retention and engagement. This study will review some key literatures to analyse the gap in reskilling and upskilling for the employees of the automobile sector and to understand the alignment of future workforce for an industry ready workplace to meet the demands of the changing workplaces.

Keywords; Reskilling, Upskilling, Automobile Industries

1. Introduction

The job market is changing rapidly. In the next decade a significant share of newly created jobs will be entire new occupations. On the other hand, many existing jobs will either become redundant or require new skills. There's a major skill gap within the companies to fill these roles so they need to reskill and upskill their employees if they wish to adjust appropriately. In an attempt to fill these gaps, companies are offering staff trainings to optimize their performance (upskilling) or to "recycle" them for a different post (reskilling)

1.1 The Fourth Industrial Revolution

Due to the advent of the fourth industrial revolution companies are undergoing huge internal changes over the past few years, updating their corporate culture, computerizing, and encouraging creativity and innovation amongst their staff. The digital revolution is moving at such a pace that it is demanding to create new professions and roles for which there aren't enough candidate with the right training. Industrial 4.0 is the trend of automation and data exchange in manufacturing technologies including cyber physical system, the internet of things, cloud computing and cognitive computing. It is a vision that evolved from an initiative to make the German manufacturing industries more competitive. Industry 4.0 is the information intensive transformation of the manufacturing and related industries in a connected environment of big data, people, process, service, systems and IoT-enabled industrial assets with the generation, leverage and utilization of actionable data and information as a way and means to realize smart industry and ecosystems of industrial innovation and collaboration. It's not just IoT of course: cloud computing (and cloud platforms), big data (advanced data analytics, data lakes, edge intelligence) with (related) artificial intelligence, data analysis, storage and compute power at the edge of networks (edge computing), mobile, data communication/network technologies, manufacturing execution systems (MES), enterprise resource planning (ERP, becoming i-ERP), programmable logic controllers (PLC), sensors and actuators, MEMS and transducers (sensors again) and innovative data exchange models all play a key role. Additionally, the same technologies, such as Robotic Process Automation (RPA), AI (AI engines, machine learning), the meeting of both and so forth that pop up in close to all software areas such as enterprise information management, business process management and applications in the sourcing market are of course showing in IoT-enabled industrial/manufacturing applications and IoT manufacturing platforms as well. The new capabilities of Industry 4.0 lead to the 'smart anything' phenomena which often get most attention: from smart grid, smart energy and smart logistics to smart facilities, including smart buildings, smart plants, and smart offices to the mentioned smart manufacturing, smart factories, smart cities and so on. So in Industry 4.0 machines interact with each other over the internet. Therefore, it is important to note that Industry 4.0 is not just about technology. It also looks at the role of society and workers i.e. the collaboration between men and machines as with collaborative robots or cobots. So, this demands new required skillsets of factory workers, and it alarms the organization on the upskilling and reskilling of their employee skills.

1.2 Upskilling & Reskilling The World Economic Forum predicts that it will create as many as 133 million new roles. And although that's good news, these jobs are going to come with new sets of required knowledge, which is where the increased need for upskilling and reskilling comes into play. Upskilling focus on adding to an existing skillset within the role may be due to new technological changes. Doing this can help the organization stay up to date with the current trend in the market and survive in the competitive market and remain flexible whenever a change happens. It involves training to help them perform better in their current job. Reskilling refers to a process of learning entire set of new skills needed to do an entirely different job. Over the past few years there is a shift in the business models so the huge demand for changing workforce, demographics, emerging cultural movements and persistent competitions for highly skilled professionals. This is changing the requirements of job skills and competencies required to fulfill those skills. The business leaders are now in constant lookout to meet the skill gap needs in their employees.

1.3 Reskilling: Equipping Employees to Take on New Roles: Automobile manufacturers are making plans to shift away from gas-powered vehicles toward electric and plug-in vehicles. Artificial intelligence-driven technology solutions are taking on more repetitive tasks such as claims processing tier and one help desk duties. Self-serve kiosks are taking the place of many bank tellers, cashiers, and customer service representatives. When entire roles face declining demand or outright obsolescence, employees and businesses should look at reskilling. It's a retraining effort that may include earning a new degree or certification to complement a company's corporate learning and mentoring programs. One advantage to reskilling existing employees is that the employer gets to keep people who are already familiar with the company and the marketplace; they are just moving to a different part of the organization. Reskilling is a win for employees, too. They get to master an entirely new set of skills that sets them up for success in a new career – without any employment gap. Amazon is just one company with a reskilling program. When the company decided to automate much of its warehouse work, they launched a reskilling program to train 100,000 warehouse workers and low-level coders to be IT technicians and data scientists, respectively.

1.4 Upskilling: An Essential Tool for Staying Current in the Field

Upskilling is different. There are many jobs that have been around for a long time – and are expected to be essential for years to come. Accountants, Sales and marketing professionals. CEOs, human resources leaders, project managers, and so many more! What these jobs have in common is that, while the underlying function varies little over time, the tools, technologies, and best practices to do the work well can change dramatically. Technology advancements, industry requirements, and customer buying preferences can all drive changes to the skillsets required by these professionals. Marketing professionals who once relied on print advertising and direct mail, for example, must master social media engagement, virtual event promotion, and marketing automation technologies. We've previously talked about the difference between durable and perishable skills. According to research and advisory firm Gartner, the number of skills required for a single job increases 10 percent annually. Further, one-third of the skills that appeared in average job posting in 2017 are no longer needed in 2021. These are natural evolutions.

Upskilling will strengthen employees' current skills, build new ones, and improve their abilities to contribute to their company and their field. When employees and managers routinely monitor the tools and best practices of the profession, upskilling is the way to gain and maintain essential skills for career success.

1.5 Upskilling & Reskilling essential for the future of Work To stay competitive and challenging in this fast-moving world upskilling and reskilling is the only choice left with the employers. a report from Citrix found that 82 percent of employees and 62 percent of HR directors said workers would need to reskill or upskill annually for an organization to maintain a competitive advantage. Another, solutions for the firms is to look for new employees with the requisite skills. However Research by Gallup found the cost of replacing an employee is between one-half to two times their annual salary. Whereas the World Economic Forum estimated that to reskill employees can average around $24,000 per employee. Adaptability, flexibility, and a commitment to lifelong learning will be vital...It's time for companies and individuals to embrace the upskilling imperative. For companies, upskilling enables them to build a future-ready workforce." The reality is that companies need to engage in both upskilling and reskilling training for employees.

1.6 Adapting Employee skills and roles to the post pandemic ways of working

The Covid19 crisis demanded the workers and employers change their way of working over a night. Despite initial fears that the pressure would be too great, the new adapted way of working is slowly becoming a blueprint for the long term. The productivity of the employees has increased with the Covid19 work from home so many companies are now planning to develop a hybrid culture. The pharma companies which was in boom during the pandemic now plan to make 30 % online and 70% offline working model permanent thus leveraging the freshly developed skills of its sales reps. In 2017, the McKinsey Global Institute estimated that as many as 375 million workers—or 14 percent of the global workforce—would have to switch occupations or acquire new skills by 2030 because of automation and artificial intelligence. In a recent McKinsey Global Survey, 87 percent of executives said they were experiencing skill gaps in the workforce or expected them within a few years. To meet this challenge, companies should craft a talent strategy that develops employees' critical digital and cognitive capabilities, their social and emotional skills, and their adaptability and resilience. Now is the time for companies to double down on their learning budgets and commit to reskilling. Developing this muscle will also strengthen companies for future disruptions.

2.0 Literature Review:

Theme 1: Digital Learning and Strategic Reskilling – Enabling Workforce Agility in a Post-Pandemic World

Nayak (2018) highlights how evolving learning environments have empowered workers to acquire new skills regardless of location. The COVID-19 pandemic significantly accelerated the use of fully digital training tools, such as live video sessions and interactive social media groups, which aim to replicate the effectiveness of in-person learning. This digital transformation not only makes learning scalable but also

enhances personalization, thereby improving overall impact.In an era where organizations must constantly adapt, aligning new responsibilities with existing skills becomes critical. Leaders who prioritize upskilling and reskilling are more likely to foster innovation and develop new business models in the post-pandemic world.

ElSayary (2023) further notes the global recognition of the need to build a resilient workforce, especially in response to the physical, social, and psychological challenges brought by the pandemic. Training and skill development play a central role in fostering resilience, particularly in fast-changing work environments across diverse industries.

Theme 2: Upskilling and Reskilling in the Era of Automation and AI – Challenges and Opportunities

Sawant, Thomas, and Kadalg (2022) warn of the growing threat automation poses to low-skilled jobs. However, they also identify three industry categories ripe for transformation. The first includes emerging sectors driven by new technologies like blockchain and cryptocurrency, which require skill sets beyond traditional academic programs. The second comprises industries embracing disruptive technologies—for example, how Netflix's streaming model replaced physical media like DVDs. The third involves sectors such as ride-sharing, which must continuously update skills to stay competitive.

Chakma and Chaijinda (2020) emphasize that during the current wave of Industry 4.0, it is more cost-effective to train existing employees than to hire new ones. Reskilling helps organizations remain aligned with evolving industry standards, boosts employee retention, and enhances overall performance. They reference a McKinsey report that projects over 375 million workers globally may need to reskill by 2030 due to digitization and AI.

Morandini et al. (2022) further elaborate on how AI is reshaping required professional skills. Tools like PathAI in diagnostics and NLP in customer service are transforming operational models and requiring reskilling across both knowledge and blue-collar jobs. While transversal skills such as critical thinking and problem-solving are gaining importance, demand for some mid-level roles is declining. The study also highlights the dual impact of generative AI like ChatGPT: enabling innovation while raising concerns about job security and global inequalities in upskilling resources. Financial and time constraints remain significant barriers, particularly for less-skilled workers.

Bimber (2018) stresses the importance of forward-looking policies to manage the impact of technological innovation. He advocates for inclusive upskilling programs and policies to help workers adapt to changing labor demands. His work calls for ongoing research to understand how tech changes affect job roles, required skills, and compensation systems—ultimately seeking equitable outcomes in a tech-driven economy.

Theme 3: The Strategic Importance of Reskilling and Upskilling in Maximizing Employee Performance in the Developing IT Sector

Dr. K. Samuel and Gilsha K.G (2023) examine the dynamic nature of the IT sector, where frequent technological changes create skill gaps among employees. As a response, IT service providers are heavily investing in reskilling and upskilling initiatives to retain top talent and enhance performance. With the IT job market being highly competitive, employees increasingly seek employers who are committed to their

growth and development. The study reviews literature that links training programs to improved employee skills and productivity. It highlights the integral role of reskilling in technological advancement and performance enhancement. A diverse group of IT employees participated in a survey, revealing that differences in experience and skill levels underscore the necessity for tailored training and development. Such programs not only improve productivity but also foster career growth and employee engagement.

Theme 4: The Role of Reskilling and Upskilling in Advancing Career Progression, Promotions, and Performance

Alfredo Díaz (2020) conducted a mixed-methods study to assess the impact of reskilling and upskilling on employee promotions. The findings demonstrate that employees who actively pursue developmental programs increase their value to the organization and enhance their chances of promotion. This commitment to personal growth reflects positively on their career trajectory and contributes to corporate advancement.

Cheryl (2021) also explores how training and development impact employee promotions. Organizations that invest in upskilling not only enhance employee performance and satisfaction but also benefit from improved retention rates and reduced recruitment costs. Such investments create a more engaged, motivated, and high-performing workforce that drives organizational success.

1. Conclusion

Reskilling and upskilling have become a need of the hour in today's ever-changing environment due to technological advancements. The literature mentioned in the study clearly shows that there is an impact of reskilling and upskilling on the performance of employees in the automotive industry. The industry is rapidly changing due to the innovations led by Industry 4.0. Continuous learning has become mandatory due to advancements in automation due to robotic technology, IOT, electric vehicles and more. Maintaining the workforce through uplifting their skills has become mandatory for their performance and productivity for the organizations to sustain in the competitive world. Studies show that employees who have taken part in reskilling and upskilling initiatives have shown significant improvement in their technical competencies required for the job. It is always a benefit to the organization if they proactively involve themselves in the reskilling and upskilling of their employees because this enables innovation, faster work, fosters critical and logical thinking abilities and the organizations can go ahead in the competitive market.

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