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The Samavesa Model of SAKSHAM Institutions
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Emotional Intelligence, Organisational Commitment & Employee’s Performance: An Empirical Study of Textiles Manufacturing Supply Chain Workforce
Krishna Nand Tripathi, Ashish Sonwalkar

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From the Desk of National President

Dear Friends,

Greetings !!

It is a great pleasure to write another message for the IJTD. I would like to thank Dr. Radha R. Sharma, Chief Editor of IJTD and the entire Editorial Board for immense support in order to publish the said journal.

Hope all are well. We all have been experiencing the deadly pandemic. This pandemic has taught us that we should exercise caution at all times and follow Covid protocol and it must be ensured that all the country men should be vaccinated as fast as it can be. I am quite confident that we will be able to overcome this situation, if we take care of ourselves and abide by all the rules and regulations to minimise Covid-19.

The various activities performed by different chapters during the last six (6) months are commendable, viz., numerous webinars have been conducted, back to back training programmes have been arranged and technological up-gradation of National Office has been done. We have come to the end of another financial year i.e. 2020 -2021 and concluded our chapters’ AGM also within the stipulated time period. The financial growths of all the chapters are encouraging during the ongoing pandemic. Due to this pandemic situation, we have no option but to reschedule the proposed IFTDO Conference from November 2021 to April 2022.

By the end of August 2021, the 85th Batch of ISTD Post Graduate Diploma in Training & Development course will be commencing through virtual mode with revised and updated syllabus. The updated course curriculum: Theory papers of 1st Semester Paper (I – IV), 2nd Semester (Paper V – VIII) and 3rd Semester (Paper IX – XII). Students will be provided with text books and reading material, covering the above syllabus to facilitate self-learning. Contact classes will be held periodically to support the students for the above papers.

As usual, the soft copy of this journal will be circulated to all the esteemed members of ISTD, Corporate, PSU, NGOs and other stake holders on regular basis. This will help us to update the various reforms of HR & L&D across the world. Many young and talented L&D professionals have sent their research papers for publication, which have some good insights to understand the good practices and change the management scenario in the L&D space.

We would earnestly request all the members of ISTD to take active participation in all the activities conducted by your respective chapters, and thereby enliven all the members throughout the country.

I am grateful to the Past Presidents, National Council Members and seniors for their continuous guidance, support and trust from all the members across the country.

I hope you will enjoy reading this journal.

Warm regards and best wishes.

National President
From the Desk of Chief Editor

Rethinking, Reimagining and Reforming (triple R) in Learning and Development for Aatam Nirbhar Bharat

COVID-19 pandemic has drastically changed the world and has disrupted economic and social life of everyone. The Future of Job Report, 2020 of the World Economic Forum (WEF) highlights the double impact of pandemic induced problems on economic performance and loss of jobs due to rise in adoption of technological advancements such as big data e-commerce, cloud computing, artificial intelligence based automation and deployment of humanoid robots. According to an estimate reported by WEF there will be displacement of 85 million jobs by the year 2025 and there will be shift in division of labour between humans, machines and algorithms. This indicates emergence of a wide gap in the future skill requirements. Based on their survey the following skill- sets have been identified for re-skilling and upskilling.

- Analytical thinking and innovation
- Active learning and learning strategies
- Leadership and social influence
- Critical thinking and analysis
- Technology design and programming
- Creativity, originality and initiative
- Complex problem-solving
- Technology use, monitoring and control
- Resilience, stress tolerance and flexibility
- Quality control and safety awareness

The above provides the direction for preparing human resource for future roles where learning and development will play a critical role. Based on the experiences of professionals from cross section of industries in India, the pandemic has helped crystallise the competency requirement to cope with the new normal and these are: adaptability, resilience, learning agility, emotional intelligence, creativity, risk-taking ability, passion, compassion, communication, trust, authenticity, resourcefulness, belief in one’s idea, persistence, perseverance, experimentation, empowerment and leadership challenges. It is interesting to note that all these fall under behavioural competencies. Of course, requirement of functional competencies will vary from industry to industry but a common factor cutting across industry sectors is digital mindset with ability to function in the digitalised or hybrid environment.
Having identified the new age competencies, the role of the learning and development (L & D) professionals is to reimagine, redesign and use design thinking in reskilling and upskilling using simulations, gamification and a variety of virtual and collaborative technologies. Along with that talent acquisition and talent development in the new age would be other areas for HR professionals to rethink about. Remote working has thrown up challenges of well-being at the workplace which offers opportunity for counselling and mentoring. Hence, never before such a range of diverse opportunities were available for learning and development professionals who are required to rise to the occasion bridging their own knowing-doing gap to create impact in the digitalised world using knowledge from all available sources. To quote an Indian ancient scripture:

“Let noble thoughts come to us from all direction.”

(Rig Veda, 1.89.1)

In the words of Mahatma Gandhi “you be the change you want to see in others”

My good wishes to the readers for your health and well-being. I thank the Editorial Board for their support in bringing out IJTD in this new avatar. Your feedback is welcome!

Prof (Dr.) Radha R. Sharma
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The Samāvēśa Model of SAKSHAM Institutions

Dr. Pragya Mathur Kumar*

ABSTRACT

This article is a theoretical exploration of the role of inclusion and innovation in building organizations that will thrive in the VUCA environment. The author proposes that Samāvēśa mindset (inclusion) needs to be rediscovered in new age social, economic and political entities which are being referred to as potentially SAKSHAM institutions. The notion of a SAKSHAM institution refers to the synergized entity that is driven by Strategy, Aspiration, Knowledge, Sensitivity, Honesty, Action Orientation, Motivation to develop. Focused on embracing change and continually becoming the best version of themselves, Saksham institutions would be growth oriented and energized by diversity. There is scope for developing this idea in the future and the application based research will give it the strong foundation it needs.

KEYWORDS

Samāvēśa, SAKSHAM, diversity, inclusion, innovation, growth enablers.

INTRODUCTION

As the world enters a new era, ‘disappearing boundaries’ and ‘shared experiences’ have become a reality. No individual, community, organization or nation can exist in isolation in the present day. There is an emerging ‘unity or oneness’ which brings people of diverse backgrounds together in efforts to deal with common challenges being encountered by citizens everywhere. There are fundamental changes which require a different mindset of which - willingness to change, readiness to learn and ability to work in a VUCA environment are most crucial. This article is a theoretical exploration of the role of inclusion and innovation in building organizations that will thrive in the future. The shift from familiar to unknown will be a challenge. However, inclusion and innovation will pave the way for embracing change and growing, together. That all humans are part of one family has been a part of the Indian culture and tradition. In fact, the notion of universal brotherhood has always been a part of India’s message to the world and the popularly known “Vasudhaiva Kutumbakam”:

अर्थ निति: परो वेति गण्या लघुचेतासम।
उदात्ततिरं नु वृद्धो विनिथमक।१।

This is mine, that is his, say the small minded, The wise believe that the entire world is a family. (Source: Maha Upanishad 6.71–75).

This shlok is a testimony to deep roots which the all-inclusive attitude of the Indian tradition has nurtured. The concept of inclusion is neither new nor imported. In the contemporary context, “Samāvēśa” or “inclusion” as it is literally translated; refers to all encompassing sentiment of universal brotherhood which is the key to building universally proactive and collaborative institutions. The manner in which suffering due to the COVID pandemic has brought nations of the world together, is a harbinger of the
possibilities that exist when inclusion begins to influence social activity and common goals create opportunities for innovation. The Samāvēśa Model is a perspective that combines the value of inclusion and innovation in building SAKSHAM institutions driven by Strategy, Aspiration, Knowledge, Sensitivity, Honesty, Action Orientation, Motivation to develop, grow and empower. The underlying belief is that human potential is unlimited. Social organization must create viable ecosystems that empower people and create opportunities for transforming not only their own lives but also making an impact across borders.

The Samāvēśa Mindset

The Society for Human Resource Management (SHRM) defines diversity as “the collective mixture of differences and similarities that include, for example, individual and organizational characteristics, values, beliefs, experiences, backgrounds, preferences, and behaviors.” They break down diversity even further into two categories – visible diversity traits and invisible diversity traits. In discussions revolving around diversity, visible traits are often what is emphasized and include race, gender, physical abilities, age, and body type. Invisible diversity traits include things such as sexual orientation, religion, socio-economic status, education, and parental status among other things. SHRM defines inclusion as “the achievement of a work environment in which all individuals are treated fairly and respectfully, have equal access to opportunities and resources, and can contribute fully to the organization’s success. The Samāvēśa Mindset refers to a cultural mechanism which has the capacity to accept and manifest diversity without any reservations about the differences between what already exists and what has been added on. The innate respect for diversity and inbuilt magnanimity makes it possible to include new elements which are different and unique. This willingness to incorporate diversity enriches the existent structure by infusing innovation and creating a positive synergy that thrives on change. The author proposes that Samāvēśa mindset (inclusion) needs to be rediscovered in new age social, economic and political entities which are being referred to as potentially SAKSHAM institutions.

The notion of a SAKSHAM institution refers to the synergized entity that is driven Strategy, Aspiration, Knowledge, Sensitivity, Honesty, Action Orientation, Motivation to develop. Focused on embracing change and continually becoming the best version of themselves, Saksham institutions would be growth oriented and energized by diversity. More magnanimous than a melting pot – the idea of Samāvēśa advocates the richness and magnificence of the quintessential “Indian Thaali” which has space for dal, chappati, sabzi, chutney, dahi, chawal, pickle, papad, salad, kheer and some pudina-zeera flavored chaach: each having a unique place without compromising the flavor of another. In fact here is the highlight: the thaali itself has several variations across the country: it could be served on a banana leaf and consist of idli, sambhar, chutney, vada, dosa, rasam if the South Indian version was being referred to! Enriched by regional variations, different versions in different climatic zones/regions of India leave adequate room for innovation and celebrate the spirit of Samāvēśa. Organizations that will thrive in this age of uncertainty will be those which try new things, and keep the focus on learning. The SAKSHAM institutions will be driven by those who think differently, pivot and adapt to change, are flexible and try new things, embrace change with an open mind, support and collaborate with others and retrain. reskill…. preparing for the future. Empathy, creativity, flexibility & adaptability are skills for the future that being inclusive will embed in the mindset of people who will then drive innovation. The Samāvēśa Model encompasses enablers that institutions can adopt to foster inclusivity and sustain innovation at different levels. Starting from the smallest social unit of the Family as the first lesson in developing an inclusive and innovative mindset, the institutional ladder moves up step by step from the academic towards a world view of incorporating empowering values,
attitudes and behaviours that champion the cause of inclusion and innovation.

![Diagram of the Ladder of institutions for developing inclusion and innovation](Figure1.png)

**Figure 1: What SAKSHAM refers to**

**The Ladder of institutions for developing inclusion and innovation**

The right combination of mindset and action is required to learn how to thrive in challenging times. Innovation requires time to unlearn and learn new things as well as to mindset to use every adversity as an opportunity. The influence of several factors drives the values required for accepting inclusion and subsequently, innovation. It doesn’t happen in a day. There is a gradual progression working through different levels of institutions. The enablers of inclusion and innovation are incorporated in the society through the family, school, centers of higher learning, organized social groups, organizations, geopolitical entities and going beyond borders - at the international level-worldwide. Every drop in the ocean counts. The Family as a primary level institution plays an important role in the growth of an inclusive and innovative society. At this level, equal opportunity, equal respect and no gender bias can help in creating an environment that encourages every member of the family to develop his/her potential to the fullest. At the school level, education can instill values and reward behaviours that are conducive to the goals of innovative thinking and inclusive processes. Educators need to be made aware of principles of transformational education through training programmes that are designed to promote higher order thinking skills. The role of teachers as agents of change makes it imperative that the best people make a contribution to nation building by playing the role of thought leaders who encourage innovation and are generous enough to cultivate inclusion in classrooms. Centers of Higher Learning are incubators of the future leadership that will impact the world. It is therefore vital that support systems within the administrative machinery of these institutions forge the weapons of innovative and diverse ideas. Not only are these institutions an opportunity to gain academic excellence and expertise but also the nursery of social and political change leaders. There is a need to balance the dynamic energy of youth and channelize it in the pursuit of human development. Organised social groups refer to communities that are bound together by shared cultural, social, economic factors or political ideology. These are instrumental in shaping the social processes. By encouraging interaction and building bridges across different groups, they can influence the social fabric and make it more colorful and inclusive. For example, the transgender community is experiencing a social attitudinal shift and resultant opportunities to become part of the mainstream crossing the barricades of social bias. The next level of institutions are organizations with a common purpose, a clearly defined structure and processes driven by a shared vision and leadership. These are the theatres where the interplay of social belief systems and organizational directives can be seen in the evolution of an organizational culture. The geopolitical institution or nation is at the next level. The role of national parliaments through enactment of legislation, budgetary allocation of adequate resources and ensuring accountability for the effective implementation of initiatives is of great significance.
There should be a step by step process through which every social institution in the ladder must play a positive role in creating a culture of openness to experience. Looking at the longer-term, organizations and individuals need to build systematic capabilities to guide them and help make wise decisions in order to thrive through challenge. Innovation Mindset is the belief that we can use our skills, intelligence, and characteristics to improve whatever situations we find ourselves in. A person with an innovation mindset has creative confidence in the ability to solve problems and find better ways to do things. Social institutions must progressively contribute to build capacity for integrating knowledge and skills, adapting and flexing to meet future needs. New mindsets, knowledge, skills, and capabilities can help to create a stronger, better world. Skills and capabilities can align to drive change so that we all can thrive, innovate, and grow. By providing a platform for inclusiveness and innovation, by encouraging the recognition of contributions from indigenous people, civil society, and other stakeholders, by implementing target driven social initiatives and initiating policy changes: the government can ensure no one is left behind. The diverse population includes differently abled, transgender, senior citizens and socially/economically disadvantaged groups. The government at the state and national level can create opportunities to encourage innovation by including these groups in the process of nation building through participation in decision making.

There are no clear cut boundaries separating institutions or the strategies they adopt. For example, the advancement of gender equality requires a range of actions at all the levels, and the intervention of a range of institutions with different mandates and purposes. No target related to inclusiveness can generally be achieved through a single institution. Small and big institutions can contribute to inclusiveness in many different areas as well as society-wide. Hence, the ladder.

The Growth Enablers

Building and fostering a diversity and inclusion strategy ... is a catalyst for success and a foundation for innovation. There is no doubt that diverse teams are proven to be more innovative. Synchronizing diversity and inclusion efforts with a company’s innovation strategy and roadmap ensures a company’s DNA is set for innovation in the first place. Innovation is the lifeblood of any organization in an era of disruption. In order to stay competitive, it is imperative that organizations build an innovation culture that is linked to diversity and inclusion(1).
A diverse and inclusive workforce is necessary to drive innovation and encourage creativity. It becomes a strong foundation for nurturing new ideas through out-of-the-box thinking which become part of the strategy. Institution is a broad and multi-faceted term, which encompasses a range of structures, entities, frameworks and norms that organize human life and society. From outcomes of cognitive processes in the form of mental representations that are context dependent (time and space) and domain-specific (2) to sets of rules and norms (3). Institutions are supported by beliefs that facilitate their dissemination and their rules are inserted in hierarchical, power relationships between individuals (4). Formal institutions include written constitutions, laws, policies, rights and regulations enforced by official authorities. While institutions are certainly not the only means to reduce inequalities, inclusive institutions are critical enablers of equity and are central to achieving the objective of leaving no one behind (5). Inclusion refers to whether institutions through their actions directly support or enable outcomes that advance the common good as opposed to particular interests. It is about participation in decision making and problem solving processes and not just about diversity. Innovation involves divergent thinking that leads to creative, unique and insightful solutions which have an impact in terms of social and economic value. Innovation can be related to the unique Indian concept of “jugaad” which could involve new and unique applications of old technologies, unprecedented design to develop a new product, new processes and structures to improve performance in diverse areas. Innovation is being viewed as an important strategy for inclusive growth in developing economies like India. The leap frog strategy and pushing the pedal for accelerated application of new innovations is visible in the increasing number of start ups in the current scenario. Forbes Insights conducted a comprehensive survey of more than 300 senior executives and found that diversity is a key driver of innovation and is a critical component of being successful on a global scale. Also, responsibility for success of company’s diversity/inclusion efforts lies with senior management. Leadership and culture are the wheels that move inclusion towards innovation and make diversity valuable in the true sense.

**Initiatives To Foster Inclusivity And Sustain Innovation At Different Levels**

Today’s institutions need to move beyond mere acceptance of diversity. They must leverage that diversity for innovation and growth. Diversity has many facets including race, ethnicity, gender or gender identity, age, religious affiliation, class, caste and sexual orientation. But diversity isn’t always something we can measure or see. Diversity also includes people with differing educational backgrounds, personality types, cultural references, experiences, or physical abilities. Inclusion is when every single person in the community is valued, heard, respected, empowered, and feels a true sense of belonging. It goes beyond tolerance to actually celebrating and elevating every person in the room. Boris Groysberg and Katherine Connolly of Harvard Business School conducted a study in 2013 of 24 companies that had earned reputations for
making diversity a priority. One of their key findings was summed up perfectly by Paul Block, the CEO of Mersant who told them “People with different lifestyles and different backgrounds challenge each other more. Diversity creates dissent, and you need that. Without it, you’re not going to get any deep inquiry or breakthroughs.” Innovation requires the ability to see things differently. However, diversity alone does not guarantee innovation. Participative decision making and openness to ideas irrespective of their source are ways to facilitate inclusion. The Samāvēśa Model Of Saksham Organizations is based on leveraging the benefits of inclusion and nurturing innovation. Quite like the kite rising against the wind, innovation is the result of diverse perspectives creating an opportunity to look beyond by inclusive processes that give everyone an opportunity to influence the decision making through participation. The ingredient of diversity enters the system through recruitment and selection. The culture ensures inclusion. Training strengthens the approach through sensitization and awareness of bias driven behaviours. The socialization process ensures cementing of cultural factors that are critical to inclusion and innovation. Innovative ecosystem (research, trial, feedback, accelerate, deliver), enabling environment, mentors, entrepreneurship, Abhaya dana niti (no fear of failure), Idea farms (shared platforms), financial support for R&D, monitoring & evaluation, fostering linkages and idea generation brainstorming would be functional in encouraging innovation. The role of the organization would involve: enhance capacity development, communication and consultation, information exchange among stakeholders, promote feedback mechanisms, employee engagement, transformational inclusive leadership, technology and infrastructure, empowering Processes/Involvement in decision making and flat Structure.

A. To move from diversity to inclusion:
- Recruitment and selection (free from bias)
- Culture that accepts diversity and facilitates innovation

B. To encourage innovation:
- Innovative Ecosystem (research, trial, feedback, accelerate, deliver)
- Enabling Environment
- Mentors
- Intrapreneurship
- Abhaya Dana Niti (no fear of punishment for failure)
- Idea Farms (shared platforms)
- Financial Support for R&D
- Monitoring & Evaluation
- Fostering linkages
- Idea generation.

C. Role of Organization
- Enhance capacity development
- Communication and consultation
- Information exchange among stakeholders
- Promote feedback mechanisms
- Employee Engagement
- Transformational, inclusive leadership
- Technology and infrastructure
- Empowering Processes/Involvement in decision making
- Flat Structure.

Figure 5: The Samāvēśa Model Of Saksham Organizations
The integration of inclusion and innovation finds a platform in organizations that celebrate divergent thinking and reward it. Undoubtedly, the future belongs to SAKSHAM organizations that not only encourage diversity but also ensure inclusion and innovation find a place in a culture that has room for different opinions to be heard. There is however no magic wand and any attempts at inclusion would require time and concerted effort through interventions at different levels of institutions. This is only the beginning...perhaps the seed. To conclude: in the words of Thomas Edison, the value of an idea lies in the using of it. There is scope for developing this idea in the future and the application based research will give it the strong foundation it needs.

References


Emotional Intelligence, Organizational Commitment, and Employee’s Performance: An Empirical Study of Textiles Manufacturing Supply Chain Workforce

Dr Krishna Nand Tripathi*, Ashish Sonwalkar**

ABSTRACT

Emotional intelligence is the culmination of abilities possessed by an individual who is involved in managing emotions. This competency is associated with understanding and managing the feelings of oneself and the people around. Organizational commitment is an emotional connection that measures the emotional attachment, identification and participation of an employee in the organization.

The study aims at analysing the effect of emotional intelligence on organizational commitment and performance of employees working in the supply chain department of textile manufacturing companies in India. The researcher followed the descriptive design approach of the research study. 200 questionnaires were randomly sent to respondents working in the supply chain department of major textile companies in India.

The study found a predominant relationship between an employee’s emotional intelligence, organizational commitment and his performance. The coefficient of determination between emotional intelligence and organization commitment was 56.30%. Emotional intelligence accounted for 34.6% of employee performance volatility.

KEYWORDS

Emotional Intelligence, Organizational Commitment, Employee Performance, Textile Industry, Supply Chain Management

INTRODUCTION

Emotional intelligence plays a salient role in success in the workplace and should be nurtured and practised by all parties facing the challenges of globalization and business competitiveness. It is additionally a positive encouragement to establish relationships that can lead to the achievement of common goals and effectiveness. Therefore, we explore and analyse in-depth the effects of emotional intelligence on the employee and his performance in this section.

Emotional Intelligence (EI) is one of the most frequently studied topics in organizational studies. EI is an important predictor of a variety of enviable organizational outcomes, including job performance, job satisfaction, organizational civic behaviour, and organizational commitment. Emotional intelligence is
about managing emotions to be properly expressed. Therefore, in a constructive and transparent environment, people can work together towards a common goal. When leaders value emotions, so do employees. Therefore, if a manager feels upbeat, confident, creative, flexible, tolerant, respectful and compassionate, employees can reflect those feelings.

Organizational Commitment (OC) is considered an important determinant of the effectiveness of an organization. Studies have shown that an organization’s engagement can predict the outcome of a variety of organizations, including improved job performance, reduced turnover and awareness of withdrawal, reduced absenteeism and increased civic behaviour of the organization (Sinha and Jain, 2004; Herscovitch, Topolnystsky, Stanley and Meyer, 2002, Meyer and Allen, 1997, Mathieu and Zajac, 1990). In addition, motivated and dedicated employees who provide time and energy to pursue an organization’s goals are increasingly recognized as a key available asset to the organization (Pfeffer, 1998).

Human performance is defined as the result of specific activities to achieve goals based on specific criteria. This may include unobservable manipulations or behaviours of mental processes (eg problem solving, decision making, program design, reasoning) (Bailey & Robert, 2003). Emotions are powerful psychological behaviours that can have a significant impact on behaviour and performance (Brown et al., 1997).

Although studies have shown a significant relationship between emotional intelligence, organizational commitment and employee performance (Rangriz & Mehrabi, 2010), the literature indicates that emotional intelligence variables are in the organization. It does not guide how to directly influence the relationship between employee engagement and performance.

This study aims to examine the role of emotional intelligence and organizational commitment in employee performance. Therefore, this study examines the relationship between emotional intelligence, organizational commitment, and employee performance.

**LITERATURE REVIEW**

**Emotional Intelligence (E.I.)**

Goleman presents emotional intelligence as a skill with two important areas as part of his emotional abilities. “Personal ability” to describe how to manage oneself (ie Self-regulation, self-motivation, etc.) and “social ability” to describe how to manage relationships (i.e Empathy, social skills) (Goleman, 1995). Emotional intelligence is a powerful psychological skill that can have a significant impact on behaviour and performance (Brown, 1997).

The concept of emotional intelligence of Salovey and Mayer (1990) seeks to define emotional intelligence within the standard norms of the new intelligence. Following their ongoing research, the first definition of EI is “the ability to perceive emotions, integrate emotions to promote thinking, understand emotions, coordinate emotions and promote personal growth.”

Based on Kedri (2001), people with a high level of emotional intelligence can control their behaviour, have the resilience to achieve their goals in life, deal with negative emotions and with others. Conversely, a person with low emotional intelligence is a person who acts on their feelings without considering the outcome, does not clarify the purpose of life, has little ability to deal with negative emotions, and has low ability to build a friendship with other people.

According to Bar-On (2000) de Jorfi et al. Al., (2010), Emotional intelligence is the ability to understand oneself effectively and to understand others, enjoying good relationships with others, adapting to the environment, and responding well to environmental demands. Additionally, the ability to understand and explain emotions also refers to emotional intelligence.

But on the other hand, emotional intelligence improved thinking (Mayer & Caruso, 2002). Based on Saloveyet. Al., (2007), Emotional intelligence is a form of social intelligence that includes the ability to be a department.
Fletcher (2007) stated that emotional intelligence refers to an individual’s ability to process relationships with others (interpersonal relationships) and control emotions (interpersonal relationships). Emotional intelligence is a set of abilities that refer to the understanding and control of our own and others’ emotions. Emotional abilities are usually the ability to learn based on the emotional intelligence that leads to the performance of the boss.

Emotional intelligence is an aspect of intelligence that is responsible for someone’s abilities, such as the ability to manage oneself, relationships with others, and the skills to drive reactions to the inner and outer worlds (Lin, No date).

According to Hee Kim (2010), emotional intelligence is the efficiency with which one knows and manages one’s emotions, understands the emotions of others, and maintains good relationships with others. Emotional intelligence is also defined as a set of abilities owned by someone involved in managing emotions (Wonga & Law, 2002).

Nelson and Low (2003) can accurately identify emotional intelligence from skills and self, to feel self-esteem, to act responsibly as values and dignity, and to build and maintain a variety of healthy relationships. Defined as a combination, communication with others, work well and effectively manage your daily needs and stress.

**Employee Performance (EP)**

In economic development and global competition, many companies can still survive. It is believed that most of these businesses survive on employee performance. However, an important question is how to improve employee performance, which is linked to survival and business development, and whether it is sustainable. Thus, performance must be considered to bring benefits to the business. Indeed, the benefits depend on the individual performance of the employees (Yao, 2009).

Human performance is the result of measures taken to achieve goals based on criteria. This usually involves the behaviour or behaviour of unobservable mental processes. These include problem-solving, decision making, program design, and reasoning (Bailey & Robert, 2003). A comprehensive assessment of employee performance typically includes performance and work process outcomes, such as evaluating employee performance, and the results of this second process are considered performance (Soltani & Iraj 2003).

Dharma (2001) states that performance is performed by an individual or a group of people or produced or provided by a product or service. The researchers then added that work performance is an outcome that can be achieved with your work. All results are then evaluated by the company or supervisor. Shahzaet. Al. (2010) stated that performance is a period or outcome of an activity. Job performance is the recording of results achieved over some time as a function of a particular job or activity (Bernardin and Russel, 2006).

Rivai (2006) explained that the performance of work can be accomplished by individuals or groups of people in the business who have the authority and responsibility in their respective efforts to legally achieve business goals, morality or ethics. However, according to Nayyar (1994), job performance refers to the level of an individual fulfilling this role by referring to certain criteria established by the organization. In conclusion, performance is the characteristic aspect that humans need to achieve their goals. We can say that the performance of the team is measured in different ways and different aspects. All researchers have different ideas for defining performance, but most researchers give the same definition of performance and it is the result of that realization.

As quoted by Mishra (2010), contextual performance generally benefits the organization through interpersonal behaviour and the behaviour of those who want to help and cooperate with others. These people follow the rules and procedures of the
organization and often volunteer to carry out their duties. Second, the execution of tasks is the behaviour of those who are directly related to the completion of the work and who include the implementation of technical processes and the maintenance and service of technical needs (Motowidlo et al., 1997). However, as cited in Gryn (2010), Furnham (1997) asserts that performance can be measured according to three types: quality, quantity, deadlines, and cost-effectiveness.

**Organizational Commitment (OC)**

Meyer and Allen (1990) proposed three types of organizational commitment. It is an emotional engagement that measures the emotional attachment, identification, and involvement of an employee in an organization. Continuance commitments are commitments related to costs that employees perceive to be related to leaving the organization. Employee engagement can be an important tool in improving the performance of an organization.

Jaramillo et al. (2005) conducted a meta-analysis of 51 empirical studies and reported a positive relationship between organizational commitment and job performance. Another study found that the more dedicated employees, the more likely they were to perform well and the less likely to quit their jobs (Mathieu & Zajac, 1990).

A study by Chughtai and Zafar (2006) on university teachers in Pakistan found that very enthusiastic teachers are better than non-enthusiastic teachers. This study focuses primarily on the low/high impact of engagement on an employee’s ability to perform their duties.

Emotional commitment is described as the emotional desire of people working in a company to continue working in an organization to detect themselves in the organization (Yavuz, 2010). Employee emotional ties to the organization were seen as an important determinant of dedication and loyalty. Qaisar et al. (2012) state that emotional commitment is based on the worker’s emotional connection, participation, and his perception of the organization.

Employee engagements are important because high levels of engagement can easily lead to a variety of positive organizational outcomes. A meta-analysis shows that engagement is negatively associated with turnover (Cooper-Hakim & Viswesvaran, 2005), absenteeism (Farrel & Stamm, 1988) and unproductive behaviour (Dalal, 2005), positive for satisfaction at work (Cooper-Hakim & Viswesvaran, 2005), Motivation (Mathieu and Zajac, 1990) and organizational civil behaviour (Riketta, 2002). Less employee’s engagement is also linked with low employees morale (DeCotiis & Summers, 1987) and diminished altruism and compliance measures (Schappe, 1998).

The theory of Porter, et al, (1982) is that employees often stay in the organization because they believe in the mission, values, standards and goals of the organization, and they have a strong desire to do their best. By achieving the goals of the organization, they feel the most important resource of the organization which leads to raising the level of belonging to their organization. Bansal, Mendelson and Sharma (2001)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age Group</th>
<th>Educational Level</th>
<th>Designations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>&lt; 35 Yrs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>36 - 45 Yrs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt; 46 Years</td>
</tr>
</tbody>
</table>
shared the same opinion as Porter et al. (1982). They measured the organization’s commitment against the goals achieved by employees. In other words, if an employee is engaged in the organization, he must have the goals, mission and desire to achieve the goals, missions and objectives of the organization. Darwish (2000) disagreed, but saw that engagement was measured by the extent to which employees accepted changes in the organization. Herold et al (2008) took the same point of view as Darwish (2000), and organizational commitment is the attitude of employees after changes within the organization, more specifically.

RESEARCH METHODOLOGY

The researchers have utilized the descriptive research methodology for this study work. The variables used were qualitative and were collected based on perceptions of respondents from textile companies working in the supply chain department through a field survey. The research had shared the questionnaire with 200 respondents but got a response from 145 respondents only. Ordinal levels of measurement were used by constructing a five-point Likert scale...

Hypothesis of The Research Study

H1: There is no significant relationship between Emotional Intelligence (EI) and Organizational Commitment of employees’ working in textile company’s supply chain department.

H2: There is no significant relationship between employees’ emotional intelligence and the performance of employees working in textile company’s supply chain department.

Table 2 presents descriptive statistics of the relationships between Emotional Intelligence (EI), Organizational Commitment (OC) and Employee performance (EP) of textile company’s supply chain departmental employees. From the mean score of 14.0, the variable EI (Emotional Intelligence quotient) is a High average score of 14.59 and variable OC (Organizational Commitment). A high average score of 17.36, which is above the group average. This proves that most of the respondents have put their emphasis on these variables.

Test of Research Hypothesis

H1: There is no significant relationship between Emotional Intelligence (EI) and Organizational Commitment of employees’ working in textile company’s supply chain department.

Table 3: Regression Test Summary: Dependent Variable - Organizational Commitment

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>.563a</td>
<td>.346</td>
<td>.318</td>
<td>5.234</td>
<td>.253</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Emotional Intelligence

Table 2: Descriptive Statistics of Relationship between Emotional Intelligence, Organizational Commitment and Employees’ Performance.

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency (N)</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Kurtosis Statistic</th>
<th>Kurtosis Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Intelligence</td>
<td>145</td>
<td>9</td>
<td>23</td>
<td>14.59</td>
<td>2.737</td>
<td>-0.420</td>
<td>0.427</td>
</tr>
<tr>
<td>Employee Performance</td>
<td>145</td>
<td>9</td>
<td>23</td>
<td>17.36</td>
<td>6.297</td>
<td>-0.748</td>
<td>0.427</td>
</tr>
<tr>
<td>Organizational Commitment</td>
<td>145</td>
<td>9</td>
<td>23</td>
<td>10.43</td>
<td>3.129</td>
<td>-0.213</td>
<td>0.427</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>145</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Interpretation

The results of the regression between the independent and dependent variables: The model was important by establishing a relationship between emotional intelligence variables and organizational commitments with a regression value of 0.563. The coefficient of determination (R²) is 0.346, indicating that 34.6% of changes in an organization’s commitment are explained by independent variables. Therefore, it can be concluded that there is a relationship between employee emotional intelligence and organizational commitment of employees working in textile company’s supply chain department.

Table 4: Coefficients of Relationship between Textile company’s supply chain departmental Employees’ Emotional Intelligence and their Organizational Commitment

<table>
<thead>
<tr>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>-.883</td>
<td>2.515</td>
<td>-.351</td>
<td>0.721</td>
</tr>
<tr>
<td>1.231</td>
<td>.167</td>
<td>.565</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Interpretation

A factor of the relationship between the commitment of an organization (OC) and the Emotional Intelligence Index (EI) of employees of the Supply Chain department of the textile company: The value of the constant is -0.883, which is the intersection, so a negative relationship is made. This line contains the name of the independent variable (EI) that refers to the gradient. The value of the independent variable (emotional intelligence) is important. It also describes the establishment of relationships between independent and dependent variables. The significance value (0.000) of the variable is less than the decision rule value of 0.05. The relationship between an employee’s emotional intelligence index and an organization’s commitment is obtained by this model. Organizational Commitment = --0.883 + 1.231 Emotional Intelligence + U. The model above is a regression model of organizational commitment and emotional intelligence. Since the null hypothesis was not accepted, there is a significant relationship between employee Emotional Intelligence and Organizational Commitment.

H2: There is no significant relationship between employees’ Emotional Intelligence and the performance of employees working in textile company’s supply chain department.

Table 5: Regression Test Summary: Relationship between Emotional Intelligence and Employees’ Performance.

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.531a</td>
<td>0.275</td>
<td>0.269</td>
<td>3.135</td>
<td>0.217</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Emotional Intelligence

Interpretation

R square, the set R square, and the standard error. R (Employee Performance: EP - It’s easy to get out with my co-workers at work, I find it fun and valuable to do my job) which is a multiple correlation coefficient between the observed and predicted values of the dependent variable. Due to the large values indicated by the multiple correlation coefficients. This gave a value of 0.531. The volatility of the Dependent Variable (Employee Performance: EP) In the regression model, the value of the small decision factor of 0.269 is not fully explained. The square of the R model by emotional intelligence explained 26.9% of employee performance fluctuations, indicating that the model does not fit well with the data.
Table 6: Coefficients of Relationship between Textile companies supply chain departmental Employees’ Emotional Intelligence and their Organizational Commitment

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>.0.419</td>
<td>1.508</td>
<td>.429</td>
<td>0.787</td>
</tr>
<tr>
<td>Emotional Intelligence</td>
<td>0.678</td>
<td>.105</td>
<td>.515</td>
<td>.000</td>
</tr>
<tr>
<td>Constant</td>
<td>6.659</td>
<td></td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

**Interpretation**

The t-statistics help determine the relative importance of each variable in the model. This is indicated by an independent variable with a value well below -2 and greater than +2. Emotional intelligence has a sig. 0.000 value. It explains the important relationship between the dependent variable of employee performance and the independent variable of emotional intelligence.

Therefore, the null hypothesis that there is a significant relationship between employee emotional intelligence and employee performance was accepted.

In other words, employees who understand the emotions can easily get along with their colleagues in the workplace, express themselves easily and find it interesting and valuable to get the job done on time. The “performance and applied” Emotional Intelligence occupied by this model is Employee Performance (EP) = 0.419 + 0.678 Emotional Intelligence (EI) + U.

This model illustrates the relationship between emotional intelligence and employee performance. Since the null hypothesis has been accepted, there is a significant correlation between employee emotional intelligence and employee performance of the supply chain department.

**CONCLUSION**

The survey confirmed that there is an important relationship between employee Emotional Intelligence and Organizational Commitment of employees working in the supply chain department in textile companies. According to the variables in our survey, the source of employee’s Emotional Intelligence is a good understanding of their emotions.

The survey was also able to establish a link between Employee Emotional intelligence and Employee Performance. Employee Performance (EP) is achieved through intelligence and employee empowerment. Employees who are empowered and involved in innovation are satisfied with their work and more productive. Innovative organizations allow employees to develop and contribute to strategic goals.

Leadership self-development plays a central role in the blooming of the organization by improving employee performance. Applying the Emotional Intelligence of managers, improves the performance of the employee through an organized, self-directed development scheme. Leaders need to grow on their own to ameliorate their emotional intelligence.

The research was able to establish that there is a significant relationship between employees’ Emotional Intelligence and Organizational Commitment. The sources of employees’ Emotional Intelligence, according to the variables in our questionnaire, were, how perfectly did they understand their own emotions, how easy they found it to express themselves, can they express their feelings at work, and how much control do their emotions have over the decision making at work, among other operational variables of emotional intelligence. The research was also able to conclude that there is a significant relationship between an employees’ emotional intelligence and his performance.
References


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Pedagogical Impact of AICTE National Initiative for Technical Teachers Training (NITTT) Online Orientation Program for Mentors in INDIA

Dr. K. James Mathai*

ABSTRACT

A comprehensive Policy for Training of Technical Teachers (2019) was formulated under the ‘National Initiative for Technical Teacher’s Training (NITTT)’ framework by Dr. H.P. Kincha Committee. This training policy is initiated by All India Council of Technical Education (AICTE) for improving the quality of technical education in India.

Under this policy guideline, an Orientation Training Program (OTP-1) is supposed to be organized in contact mode for the senior faculty members as mentors of technical education system. The responsibility of conducting this program was given to four premier Institutes - National Institute of Technical Teachers’ Training & Research (NITTTR) situated at Bhopal, Chandigarh, Chennai and Kolkata regions of the country. But the outbreak of COVID-19 pandemic has forced NITTTR to schedule this program in online mode for a duration of six days from 3rd to 10th June 2020. The main goal of OTP-1 is to develop a set of identified competencies for mentoring newly recruited inductee teachers joining the technical education system. These senior faculty members as mentors are supposed to mentor and assess the portfolio of work done by inductee teachers, who would report to them in phase-II against the Key Performance Criteria (KPC). The Phase-II of training has two stages: first “Industrial Training” and second “On-the-Job-Training”. In the schedule mentor program, 200 nos. of senior faculty members in the position of Associate Professor and above were identified.

The Mentor OTP was offered successfully through an online digital platform, combining both GMeet and Learning Management System (LMS)- ‘MOODLE’. After the conduct of all six days of training sessions, the Mentors and trainees were asked to provide feedback on their Digital competence, Pedagogical Aspects & Resource Persons, Technology with Pedagogy, MOOC- Contribution to learning, ITP Organized, Distance learning Challenges, Future of online Training/Learning during post Covid-19 crisis. In this paper the author critically analysed the above pedagogical aspects while implementing the ‘AICTE-NITTT online Mentor OTP- NITTTR Bhopal Model’.

KEYWORDS

All India Council of Technical Education, OTP- Orientation Training Program-Key Performance Criteria, FIP- Faculty Induction Program.

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INTRODUCTION

The Kincha Committee, visualized two distinct categories of training programs namely:

i) Faculty Induction Program (FIP) to be provided to newly recruited inductee teachers; and

ii) In-Service Training Program (ISTP) catering to the specific requirement at various levels of their teaching career.

This FIP is provided in two phases to the Inductee Teachers who have less than five years of teaching experience. In the first phase of the Training Program, the inductee teacher completes eight modules on pedagogical methods, offered as Massive Open Online Course (MOOC). The inductee teachers have to pass and get certified. The second phase of the training includes on the job training and exposure to industry/field practices. During the second phase, the inductee teachers are expected to work under a trained mentor (who will be one of the senior faculty members undertaken OTP) at the institute.

Orientation Training Program (OTP) for Mentors

The conduct of Orientation Training Program for Mentors is a new concept in the process of implementing NITTT framework. In order to bring in uniformity at national level among NITTTRs in the approach of mentoring, an orientation of mentor teachers on aspects of “Industrial Training” of inductee teachers and on implementation of “On the Job Training” was highly desired. With this perspective NITTTR, Bhopal was entrusted to co-ordinate with the task of offering Orientation Training Programmes (OTPs) for Mentors in collaboration with other NITTTRs. The purpose of the OTPs is to orient and equip the senior level faculty members to be mentors in respective institutions. In all eight Modules, different pedagogical aspects of teaching and learning were developed by NITTTRs for FIP. Each of the eight modules were designed in four quadrant (Q1..Q4) approach- Q1- with Video Lectures, Q2-with eContent, Q3-with Discussion Topics and Q4- with Assessment. All the eight Modules are certified as Massive Open Online Courses (MOOCs) through a platform called ‘Study Webs of Active Learning for Young Aspiring Minds’ (SWAYAM) Portalhttps://online-degree.swayam.gov.in/.

The title of the eight modules as MOOCs are as follow:

- Module-1: Orientation Towards Technical Education and Curriculum Aspects
- Module-2: Professional Ethics and Sustainability
- Module-3: Communication Skills Modes and knowledge Dissemination
- Module-4: Instruction Planning and Delivery
- Module-5: Technology Enabled Learning and Life-Long Self-Learning
- Module-6: Student Assessment and Evaluation
- Module-7: Creative Problem-Solving Innovation and Meaningful R&D
- Module-8: Institutional Management and Administrative Procedures

Figure 1 : AICTE-NITTT Online Mentor OTP-NITTTR Bhopal Model
The newly recruited teachers as inductee teacher gets certified for FIP. These inductee teachers, as mentee, undertakes “Industrial training” and then “On-the-Job-Training” under the mentor. In the “On-the-Job-Training”, the mentee implements the learning of all eight modules in their teaching and learning practices at the Institute/College. The mentees will collect the evidences and prepare a portfolio, as per the module activities and in turn will be assessed by Mentor on stated “Key Performance Criteria”.

Registration Process

In the OTP, the sponsored Sr. faculty members of different AICTE affiliated colleges as proposed mentors gets registered on NITT portal www.nittt.ac.in. This sponsored teachers, as mentors in turn undertakes the OTP by NITTTRs. The OTP trainees are also enrolled in the MOODLE LMS Platform https://lms.nitttrbpl.ac.in for providing them access to the content materials, video lectures and undertaking activities like discussions on content materials, assessment of learning through quizzes, assignments and interactions.

Design of Orientation Training Program (OTP) for Mentors

The Mentor OTP was offered through the digital platforms, combining both Google Meet (GMeet) for live discussions and Learning Management System (LMS) ‘MOODLE’ for facilitating instructional resources. The eight module coordinators and invited experts join from their respective cities such as Bhopal, Chandigarh, Chennai, Kolkata and other parts of the country to the virtual platform to train the participants. The OTP was implemented in flipped mode. Out of 200 prospective mentors registered for the OTP-I, only 153 of them were able to complete the programme.

In order to conduct the training, a program guideline ‘Mentor Training Manual (MGM)’ was also prepared. The training program was conducted as per ‘AICTE-NITT Online Mentor OTP-NITTTR Bhopal Model’ as shown in figure (1). The prospective mentors were registered on www.nittt.ac.in portal. A pre-OTP Meet was scheduled 2-days prior to launch of online programme to make the participants familiarise with ‘AICTE-NITT Online Mentor OTP-NITTTR Bhopal Model’ and technologies. In the flipped mode, the learning materials in form of e-contents and video lectures of each Modules were made available to the participants through MOODLE Learning Management System 24x7 for 20 days. A screenshot of the courseware on LMS is shown in figure (2). The learning of mentors was assessed progressively by administering daily Quiz’s (MCQs) and taking feedback. A comprehensive home ‘Assignment-1’ was given to the mentors to be submitted on the 5th day, followed by feedback. Another ‘Assignment-2’ was provided to be submitted on 6th day. Every day, the module experts from NITTTR Bhopal, Chandigarh and Chennai interacted with participants live using ‘G-Meet’ for discussion and solving their queries. At the end of submission, a summative feedback was also given to the participants.

Finally, on securing 50% of total score, e-certificate is issued by NITTTR Bhopal. The successfully qualified mentors from the OTPs would then mentor, supervise and evaluate the performance of the young inductee
teachers during their Phase– II of the Faculty Induction Programme (FIP) on the-job of working in their respective institutions including the 4-week training in the industry/research/field organisation.

**Pedagogical Impact of ‘AICTE-NITT Online Mentor OTP-NITTTR Bhopal Model’**

As two OTP programmes were supposed to be conducted, it was necessary to have a critical analysis of the first training programme to know about the pedagogical impact of the use of technology and teaching learning method, as well as to uncover weaknesses and strengths for its development and maximizing its effectiveness for future programmes. Out of 153 nos of trainee mentors, 115 nos of them responded to the survey.

The mentees were from Government Engineering Colleges (21.5%), Self-Financed Engineering College (43.1%), Government Polytechnic (16.9%), and from pharmacy, MCA, Management, etc. as shown in Figure 3 below.

A. **Digital Competence:** The pedagogical impact of online training program depends upon the trainee’s experience in Online Learning. On a question ‘.which statement best describes your experience with online learning?’ it has been observed that about 24% have extensive, 60% of learner have some experience, and 12.2% have first time experience. So it can be concluded that more than 84% of mentors had one or the other online learning experiences as shown in Figure 4.

Trainees were using different type of devices such as PC, Laptops, tablets and smartphones as shown in Figure 5. Most of the mentors had digital competence and were comfortable with online learning.

**Pedagogical Aspects& Resource Persons**

The mentors opined the pedagogical aspects that enabled successful e-learning. The first ten pedagogical aspects that helped mentors are listed below and also shown in Figure 6:
Ten Pedagogical Aspects of eLearning

1. Flexibility of Learning Management System (LMS) (71.3%)
2. Accessibility (Platforms, materials, resources) (69.6%)
3. Instructional Design/Structure and use of LMS (65.2%)
4. Competency/Content Expertise of Resource person (64.3%)
5. Ease of Use of Google Meet for video discussion (53%)
6. Customization of LMS (Ability to personalize learning for students) (51.3%)
7. Management and Administration of LMS (49.6%)
8. Innovation (Freedom to experiment with teaching practice) (49.6%)
9. Increased autonomy, motivation, self-determination, self-regulation among learners (47.8%)
10. Engagement and enjoyment with resources persons (46.1%)

C. Technology with Pedagogy

The success of online learning depends upon the level of expertise, both in content and handling technology by trainers and pedagogy of integrating technology in the teaching and learning process. Pedagogy of integrating technology means the level of instructional efforts that the trainer puts in to conduct the program by implementing the learning theories in practice. Particular in-

- Design-flexibility, User friendliness, instructional Design/ Structure, discussions, interactive and collaborative tools for peer to peer, learner to e-content material and learner to trainer.
- Delivery – Ease in accessibility, customization or personalization, technology availability both hardware, softwares and Internet bandwidth.
- Assessment- The assessment of learning that has been done through time-to-time quizzes and submission type assignments.

It is commendable that out of 115 nos. of respondents, 101 mentors have rated efforts made by the tutors for pedagogical integration, as very good and above as shown in Figure 7.
D. MOOC: Contribution to Learning

According to the responses of the trainees, by attending the training program, the level of skills and knowledge have progressively increased by the end of programme. This increase in the level of learning is depicted in the Figure 8.

![Figure 8: Contribution to Learning](image)

E. Organization of ITP

According to the mentor’s response, the ITP was well organized, the learning outcomes were clear, e-contents were well organized, the course activities were appropriate and they were able to participate fully during the training session as shown in Figure 9.

![Figure 9: MOOC Organized](image)

F. Distance Learning Challenges

On a question to list the top eight important pedagogical challenges, the mentors anticipate following modes in switching to online distance learning:

1. Keep Student Motivating and engaging -82 (71.3%)
2. Involving students from socially disadvantage-69 (60%)
3. Access to Technology -75(65.2%)
4. Establishing Infrastructure-64(55.7%)
5. Students Digital Competence -61(53%)
6. Teachers pedagogical Competence -51(44.3%)
7. Identify activities and producing content into online learning -51(44.3%)
8. Supporting Students with Speeds Needs-48 s (41.7%)

G. Future of Online Training/ Learning

Responses were also gathered from mentors to the question, ‘whether the mentors would like to continue with online/distance learning after post-covid19, when institution fully reopens’. About 39.1% of mentors opined that the online teaching will become integral part of Institution practices as shown in Figure 10.

![Figure 10: Post-Covid-19 Online Training/Learning](image)

H. Overall Rating of the AICTE-NITT TMentors Orientation Training Program

About 71.5% mentors has rated the AICTE-NITT TM online Mentor OTP-NITT TR Bhopal Model of training as excellent, as shown in Figure 11.
Conclusion

The implementation of online Orientation Training Program for senior faculty members of Technical Education System of the country, was a challenging task for NITTTRs in beginning of Covid-19 situation. It was conducted under the watchful monitoring of AICTE, New Delhi and members of Dr.Kincha Committee at national level. The ‘Excellent’ feedback provided by trainees on the conduct of program have motivated the author and the core group members. It was a great experience to know the pedagogical impact of program by critically analysing the implementation of ‘AICTE-NITTTR online Mentor OTP-NITTTR Bhopal Model’. This successful model is now implemented by all the four NITTTRs at regional level- Bhopal, Chandigarh, Chennai and Kolkata. The four NITTTRs are continuing to offer similar mentor training programs across the country at national level.

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Disaster Management – Increasing Responsiveness Through Training

Prof. Alok Kumar*, Prof. Pramod Pathak**, Dr. Namrata Pathak Shukla***

ABSTRACT
Disasters have been visiting humanity at nagging frequency since time immemorial challenging the wit, the grit and the resolve of human beings. Cataclysmic events ordained by nature or due to human activities, sometimes follies or over-enthusiasm, bring catastrophes, that throw insurmountable challenges causing extensive damage to life and livelihoods. The intriguing aspect of disasters is that they are highly unpredictable and catch humanity unawares. The current pandemic is a case in point and despite struggling for around one and half years we are still clueless. Naturally, there is need to create readiness to face the disaster when it strikes so that damage to life and livelihoods is minimized. Countries have been facing the challenge with some kind of disaster management machinery in place which can help them cope with the impact. It is highly desirable because when preventing a disaster is not possible, at least mitigating its impact need to be the next best option. The crux lies in the responsiveness of the disaster management machinery.

It has been observed that when a disaster strikes, the initial response is rather slow and directionless, leading to an initial chaos that proves costly. But, we also find that where there is preparedness, like in the case of the military organizations, handling disaster is more effective and this is possible because of the readiness that is achieved through continuous training. In the present situation also, the same was the case and in situations where military was involved or where the government machinery was more prompt, may be due to developing a sophistication as a result of experiencing frequent disasters, the situation was handled better. It’s not only about pandemic, but in almost all kinds of disasters, the same holds good. Effective training machinery then is what renders responsiveness to the disaster management system. The present paper attempts to explore and examine the prospects of creating more responsive disaster management machinery through training and more societal involvement. Examples galore can be found that prove that popular participation and well trained disaster machinery have made the difference.

KEYWORDS
Pandemic, Disaster Preparedness, Responsiveness, Training, Japanese Model, Odisha Model, Community participation, Disaster mitigation, CSR initiatives

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INTRODUCTION

While disasters have been visiting humanity since time immemorial, almost always the response has been a patterned one. It has been an initial confusion persisting for a considerable time followed by chaos and only subsequently mitigation efforts appear to take shape in the right direction. The obvious lesson is that, we seem to have not developed any kind of a disaster management sophistication which the experience could have led to. One reason may be that disasters do not strike at short intervals and naturally there is some kind of an amnesia that follows, once normalcy has been restored, by design or by default. However, some natural disasters like floods in the state of Bihar are more frequent than other ones but the response is still not up to the mark.

If we talk about the present pandemic CoViD19 that has been perhaps one of the biggest global disruptions of the past hundred years, we need to remember that pandemics are not new to humanity. Nevertheless, our responses have always been following the pattern mentioned above. There are some notable exceptions in countries like Japan or South Korea which fared slightly better than rest of the World but again they did not exhibit the degree of maturity that was expected with so much of experience. Coming to India, we are found to be less prepared compared to some developed nations, though, we do have no less experience and wherewithal to cope with the adverse effects of the disaster. The CoViD pandemic can be an eye-opener in this regard. May be the human resource aspect needs to be given greater emphasis in order to develop the readiness and responsiveness that is needed.

India has witnessed many disasters in the recent past including floods and droughts, quakes and tsunamis, landslides and cloudbursts, fire and cyclones etc but the pandemic has dealt the most severe blow. Though we may take heart from the fact that the whole world was in similar predicament, yet that cannot be a reason for slackness or faltering. Dealing with disasters does not merely need basic resources but more of experience and maturity in handling situations. We need more developed and mature human resource systems to be in place to manage the disasters and we need to remember that this resource is the critical factor. Managing disasters has to do with both, management and science. These two fields need to be combined to address the challenges, which a disaster throws. But it is the management, particularly the HRM, which is important. Human Resource Development (HRD) for disaster management holds the key.

RATIONALE

India has made considerable progress since the second decade of the twentieth century, which witnessed a collapsed administrative machinery under the then British rule that saw the death of 1.75 crore people. Today, we have a Government of our own, scientific and technological advancements to our credit, a well-oiled administrative machinery and substantial financial muscle. But, the responses did not reflect readiness that we could have been capable of. It is obvious that we need to emphasize HRD for disaster management that involves the administrative machinery, the people and the community at large. There are instances which prove that training of not only the designated personnel but also the community helps in sprucing disaster mitigation efforts. The readiness, that comes from rehearsal, as in the case of armed forces, and community training for mature involvement in crisis times, are two things that are needed. And the one answer is effective and periodic training.

OBJECTIVES

India has made considerable progress since the second decade of the twentieth century, which witnessed a collapsed administrative machinery under the then British rule that saw the death of 1.75 crore people. Today, we have a Government of our own, scientific and technological advancements to our credit, a well-oiled administrative machinery and substantial financial muscle. But, the responses did
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**METHODOLOGY**

The methodology covers a broad spectrum of mixed methods like observation, expert opinion, interviews, cases apart from insights from secondary sources and media reports.

**LITERATURE REVIEW**

The word ‘disaster’ as understood through the Oxford Dictionary is “Any sudden, great misfortune, calamity”.

Webster’s Dictionary understands the same as “A sudden ‘calamitous event’ producing great material damage, loss and distress”. As per our ‘Disaster Management Act (2005)’, disaster gets defined and understood as “A mishap or calamity or catastrophe or severe occurrence in a geographical area that arises out of natural or man-made causes or by an accident or negligence leading to substantial loss of human life or suffering or damage to, and destruction of / damage to property or degradation of environment, and is of such a magnitude that cannot be easily coped up by the community affected”.

Disaster has been studied from multiple perspectives, from science and technology (for early warning system or control to whatever extent that is possible) to environmental studies (for disasters due to negligence of human being in maintaining the eco-balance) to economics (for estimation of damage and providing economic relief to the affected) to management (for managing the crisis, eliciting proper behaviour, creating awareness and training systems).

According to S. S. Shukla (2011), it is the disaster which causes severe damage to ecology and hence, economy in an area. With usage of space and newer technologies, we can develop an operational mechanism for a fool-proof disaster warning system, especially in cases of droughts or cyclonic winds and their monitoring and mitigation. P. Patil (2012) opines that there are certain aspects we need to focus more – effective warning and alert system. The work by Chen-Huei Chou et al (2013), focuses on developing an internet based DMS (Disaster Management System) from the view-points of stakeholders like the Government, sufferers, social units and the like. It further discusses the needs to be met, utilizing the systems and smart anticipation of crisis related behaviour and disaster efficacy. According to P. Banerji (2013), recovery is faster in Japan than in India in Disaster Management cases. Vicky Walters et al (2014) highlight the linkages between the marginalization of homeless people and their vulnerabilities to disaster (of any scale). It puts forward the notion and realization that more attention is required for meeting needs of the homeless. It also talks about integrating such needs to the expected routine hazards in policy and research guidelines.

Ben Wisner (2015), in his ideation discusses the challenges emerging out of any disaster. S. Manning et al (2016) put forward on the increasing responsibilities and procedures of social work, the use of psycho-social interventions, and the deterrents to service delivery in the global context. S. Mohammad Saidul Huq (2016) too has presented his ideas of having community participation (like in our neighbouring Bangladesh) and says that it is of utmost importance for disaster management or mitigation. Also, discussed here is creating and spreading awareness through community based exercises like seminars, conferences and workshops or sensitization programmes for the affected people from time to time. D. V. Thattai et al (2017) have presented cases related to cyclones and floods and
have done a comparison as to how we handle such cases in India. Siriwardana (2018) has investigated the efficiency and effectiveness of the prevailing disaster management frameworks (in our neighbouring Sri Lanka) and found miniscule alignments with the global standards in terms of mitigation frameworks that render a DMS ineffective. Inefficiency in terms of government initiatives, consistency and incorporation apart from resource management issues are unnecessarily highlighted.

In a study by Wolensky (1990) involving the local government response to disaster, it was reported that feeble attention were given to the underlying structural factors. It also said that disaster related issues are deep rooted in our societies and problems can be addressed only when structural realities are taken care of. Perez, M. and Lugo (2001) have mentioned that media along with community leaders and institutions (or groups) has played a vital in creating awareness on disaster and risk. Shaw R (2004) has linked experience, education, perception and preparedness in connection to disaster (in Japan) where it was found experience was not the critical factor in enhancing awareness, basic schooling can provide numerous ways for disaster related education. Discussions through visual aids in fact were found to have better effectiveness in this regard. The major suggestion was to entwine school education with one-self, family and community for facilitation of a culture of ‘disaster preparedness’ that help in decision-making later on when people grow to adulthood.

Dominey, D. Howes and Deanne (2004) also talk about Public Awareness and its role in Risk Education (case of Indian Ocean Tsunami). Study showed that little has been learned by the public and officers in thinking about risk mitigation. Morotti (2005) discusses about Community-based preparedness and actions for safer, healthier and more resilient communities. For reducing disaster, community participation is imminent. Also, strategies and policies were not found to be ample for emergencies, like the pandemic, but need community participation and consultation, association with partnering people or agencies at different levels and operational planning with the community. Communication materials need to be sensitized to the local environment to ensure their acceptance and understanding before any disaster. For this, sustained long term mechanisms need to be in place to garner commitment at such levels. Learnings from good practices of community based programmes need to be amalgamated into a strategic framework for desired sustainability. Successful programmes included partnership, participation, empowerment, and ownership of the local communities, necessary for underpinning sustainability.

Williams, Nocera & Casteel, (2007) studied if training interventions (in disaster preparedness) help improving skills and knowledge in disaster responsiveness. It was found that indeed they were effective in improving skills and knowledge in disaster responsiveness. Bubeck P et al (2012) in a study involving risk perceptions suggested that individual perceptions on high-risk and uncertainty need to be linked to coping education so as to result in a positive response involving protection and it was consistently related to mitigation behaviour. Joelle Levac, et al (2012) has talked about emergency preparedness in homes. It highlights individual and community accountability and roles in reducing risk and promoting resilience capacity. It pinpoints to the complexities involved in preparedness, with factors such as conditions of health, self-efficacy, support garnering through community and the nature of disaster (or emergency). Additionally, sufficient knowledge, motivation apart from resources is needed to take on various preparedness activities. Contribution to resilience has also come from social networking in modern times as of now.

RESPONSIVENESS CASES

Case-I, Japan: Japan has been quite vulnerable to natural disasters because of its topography. Still it is the best prepared nation to handle any kind of impending disaster. The key to success is nothing
else than ‘responsiveness’. The fatalities surprisingly are very small which is due to the country’s ability to educate, practice, innovate and invest (both financial and human capital-wise) apart from experiential learning. It possesses a premeditated and inclusive disaster prevention system besides a proactive legal framework.

Considering the different types of disasters, houses in Japan are constructed to comply with meticulous earthquake-proof standards set by the Government legislations. Dwelling places are piled-up with earthquake emergency kits, every smart phone here has an emergency 'alert system' installed which gets triggered few seconds prior to the impending disasters. It is meant to give users some time to rapidly look for available protection as and when necessary. Japan, having one of the most modern network of all sorts of railways (including the bullet train), has earthquake sensors embedded in trains which in case of an emergency get activated resulting in freezing any moving train in the country and brings it to a standstill. In case of any disaster hitting Japan, all TV channels immediately get connected to Government’s official earthquake coverage, making sure that citizens are well informed on mechanisms to stay safe in such exigencies. Japanese schools run regular mock disaster-related drills where school children are educated on the best possible and most effective way to remain safe. Japan helps safeguard its public against impending natural disasters by making people learn from past events too showcasing that we learn even through history.

As far as the disaster of the current pandemic CoViD is concerned, Japan found out that the virus mainly affects the aged and such persons are more in Japan than any other country around the World. Despite having a heavy density of population in urban aggregations, the mortality rate during CoViD is relatively very small. Preventive measures were adopted by the Japanese Government to prevent the mass spread of the virus. The idea was to maximize the virus containment and simultaneously minimize the socio-economic impending damage. Additionally, Japan has comparably higher healthcare system standards with a mandatory national Health Insurance for one and all.

The Government also advised people to stay indoors every weekends owing to an upsurge in cases. National Emergency was declared at few places to promote social distancing and tele-work to reduce the virus’ spread. The Government set up a ‘cluster response team’ supported with a respectable number of consulting centers. Japan applied ‘retrospective monitoring’ to get proximity to a contaminated person, while rest of the world employed the ‘prospective monitoring’ approach to understand the main source of infection. This method, claimed to be better in terms of reliability, helped in identifying the initial source of infection and also tracked all close acquaintances. Knowing the source through symptoms and that too at an early stage has been in the policy. This helps identify people in the group who are highly infectious, get them tested and hence, segregate them and treat them rather than general testing of the entire population, a smart sampling measure. The authorities succeeded through such an approach in the early phase of the virulent disease.

It was worrisome that hospitals in Japan could be a source of cluster-infection due to heavy rush of patients putting the country’s healthcare system to a litmus test. Hotels were contacted to prevent the hospital rush and non-critical patients were supposed to stay at home or in such specially designated hotels. The government also implemented robotics as an effective tool for patient care across hotels and hospitals thereby minimizing interactions with humans. High-quality medical care further helped avoid the severity of illness. Not only the structural robustness but also healthy lifestyles and unique culture are the strengths behind the early self-control. The island nation has also a low occurrence of co-morbidity due to its healthy eating practices amongst its citizens apart from regular work-out habits. The nutrition intake among the citizens in Japan, specially aged people, who are most vulnerable to this disease, are well maintained, not to mention that Japanese
citizens are the most lived human species on earth. Furthermore, the exchange of greetings between people in Japan and the rest of the world varies considerably. Japanese people tend to bow down (rather than hand-shake or embrace or any other gesture prevalent globally) that avoids any proximity. Also, an already established culture of wearing face-masks could be an important reason for the low infection witnessed in Japan. Furthermore, a tradition of hand-washing is higher right since early childhood (like in our country), which is increasingly being accepted across the world now.

Case-II, Oman: The government here has been proactive in closely monitoring the situation and taking strict measures to curb the adversity. The pandemic appropriate behavior has always been in place, since the beginning of March 2020. Wearing masks and maintaining physical distance has been a perpetual practice. Even when the cases started to decline, the rules were still in place. To ensure compliance, heavy penalty was introduced. Places of worship remained closed for most of the time. The short-time during which it was open, they made sure there was no overcrowding or gathering at these places. Temperatures were checked at the entrance and there were restrictions on the number of people entering the premises. There was even a ban on celebration and gathering for all festivals for all religion, without any biases. Similar was the case at malls, restaurants, cafes, theaters and other public places. Even open spaces like parks and beaches remained closed most of the time and when opened authorities monitored overcrowding. There was a mandatory institutional quarantine for those travelling. This also ensured some revenues for the hospitality sector which suffered due to the pandemic and it also discouraged people to travel unnecessarily.

Case-III, India (Odisha): India too is prone to various kinds of disasters owing to its tropical location on the global map. The Indian state of Odisha, located along side the Bay of Bengal, a case in point, with a population touching 5 crore people, often becomes a destination for natural disasters to come in. In 1999, a super cyclone inflicted over ten thousand loss of lives while rendering millions homeless. The cyclones ‘Phalin’ and ‘Fani’ too were no less dangerous, but for the massive pre-disaster planning undertaken by the state government which resulted in a relatively lower loss of lives. Even for handling the cyclone ‘Yaas’ of 2021, its expertise and toughness in dealing with disasters has become a showcase to not only India but the world. And Odisha is perhaps the only state to have made Disaster Management and Pandemic Management compulsory in their educational system across Institutions, yet another feather in cap!

The question is how Odisha has been so successful in safeguarding its people. This certainly can never happen overnight. Odisha gradually augmented its capacity, especially at the community level by successfully launching ‘early warning systems with last mile connectivity’, building multi-purpose cyclone shelters. The capacity to deal with natural disasters has enhanced enormously at the community level in the coastal state. In fact, preventing large scale deaths is popularly known as the Odisha model (seen earlier too during cyclonic storms which keep hitting Odisha coast) which drastically minimizes human loss at least. It also possesses a disaster-specific institutional mechanism. The state has raised 20 units of Odisha Disaster Rapid Action Force (ODRAF) comprising trained personnel with multi-disaster tackling competence, unmatched at least in India!

As fast as fighting the pandemic CoViD is concerned, Odisha was quick about segregating people coming from outside the state, including the 10 lakh migrant workers returning home, quarantining them and keeping the domestic population insulated. To ensure compliance with CoViD protocol, the population was told they would receive a financial package from the state government if they honestly reported their CoViD positive status. It also fined those who failed to follow the same. Odisha yet again showed prudence in sealing off its borders with Chhattisgarh where surge was pretty high. Not only this,
empowerment is yet another word which the Odisha Government followed. It gave collectors’ power to village ‘sarpanch’ in accordance with the provisions of Disaster Management Act, 2005, to manage CoViD affairs. Such empowerment can also be seen when the Government involved Forest, Banking, Insurance, Railway, filling station staff, call centre personnel, Government vets and livestock inspectors as Frontline workers for CoViD vaccination.

Apart from the government, many corporate giants, like Indian Oil, Odisha Hydro Power, Odisha Mining Corporation and Mahanadi Coal Field, have also extended cooperation to the Government by bearing the cost of hospitals as part of their CSR initiative. The government has also decided to spend Rs 2000 crore vaccinating those between 18 and 45 years of age free of cost. It is further expected that the Odisha government will give a special push to inoculate its entire population and it has a team of self-help groups and health workers ready to go to speed up the vaccination process.

**TRAINING INTERVENTIONS AS THE CRITICAL FACTOR**

From the discussion above, we can deduce that effective training mechanism that develops attitude, approach and application is the answer. As we have seen, effective training programmes are necessary to elicit response from public. As such, the authors prescribe a training module related to skills of an individual that could be in the categories of rescue or first-aid; collective training through Seminars and Workshops that could deal with preparedness seminar or Post disaster Review Workshop and training modules incorporating General Disaster response operations. Collective exercises can include indoor simulation exercises, outdoor skeleton exercises etc. Training may be done for selected aspects of mitigation, preparedness, plans, organisation; response operations; training; public awareness etc. Disaster Response Workshops should discuss current plans and organisation; warning; activation for response operations; information processing, emergency relief activities, coordination and cooperation with public. Disaster Preparedness Training module should have ways to train for preparedness at all levels – local, regional and national.

Extensive International experience exemplifies and stresses the importance of building citizen awareness in coping with situations of crisis. This helps build up self reliant communities, capable of a constructive role with the local body or agency in disaster management matters. Community should be taught as to how disaster identification and response should be done, how the Government intervention can be sought, how can community people help each other, how effectively participation issues can be communicated, how shelter and sustenance issues could be addressed until assistance arrives etc, being the relevant ones. The community should also understand the limitations of the Government or administrative machinery during such crisis. Hence, both should join hands to minimize the risk associated. We must understand that whatever learning occurs from one disaster needs to be used in handling the upcoming one. Training enhances transfer of learning, so evident when military takes over the operations in crisis. The example of defense organisation DRDO developing and operationalizing a
750 bed temporary CoVID hospital along with oxygen plant and piped supply to patients in grounds of Banaras Hindu University within a span of two weeks, is a case in point!

A typical disaster management cycle is depicted in the figure below. The figure suggests that disaster management is a continuous process in which learning has to be an ongoing mechanism and each disaster must lead to a better response mechanism.

CONCLUSION
Disasters are not new. However, every time they crop up, our response suggests that we are facing it for the first time. The present pandemic was no different although, pandemics have been striking periodically testing our resilience. This implies that we do not learn the right lessons. Actually our focus is largely on external support systems, like Government machinery or infrastructural facilities that have been created or even some kind of a magic wand that may appear in the wake of a disaster. Readiness, particularly of the designated human resources or the community has always been found wanting.

Basic requirement is preparing the human resources mentally, physically and materially to face the consequences of disaster. And, the best way that exists is resorting to continuous improvisations related to attitude, approach and application. It is also to be noted that once the normalcy is restored after the disaster, post-disaster rehabilitation takes a long time, as it is not in our scheme of things. There is need to think of building a security net that disruptions of such huge magnitude create in which families are rendered helpless when the main earning members lose their lives. However, this time there has been some thinking on this with creating a system for orphaned children. But, this is rather piecemeal and we need to have an institutional mechanism for the same. It has to be remembered that responsiveness, readiness and resilience are parts of the same whole. This may not be the last time when a pandemic has struck and there is need to remain padded up for any untoward scenario. The answer is creating that readiness through training.

GLOSSARY
Capacity: A combination of all the strengths and resources available within a community, society, or organisation that can reduce the level of risk, or the effects of a disaster.

Disaster: A serious disruption of the functioning of a community or a society causing widespread human, material, economic, or environmental losses which exceed the ability of the affected community or society to cope using its own resources.

Disaster risk reduction (disaster reduction): The conceptual framework of elements considered with the possibilities to minimise vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.

Hazard: A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Mitigation: Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards.

Pandemic: An epidemic of an infectious disease that has spread across a large region, for instance, multiple continents or worldwide, affecting a substantial number of people.

Preparedness: Activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations.

Resilience/resilient: The capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and
structure. It is determined by the degree to which the social system is capable of organizing itself to increase its capacity for learning from past disasters for better future protection and to improve risk reduction measures.

**Risk:** The probability of harmful consequences, or expected losses (deaths, injuries, property, livelihoods, economic activity disrupted or environmental damaged) resulting from interactions between natural or human-induced hazards and vulnerable conditions. Conventionally, risk is expressed by the notation \( \text{Risk} = \text{Hazards} \times \text{Vulnerability} \). Some disciplines also include the concept of exposure to refer particularly to the physical aspects of vulnerability. A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of risk.

**Risk assessment or analysis:** A methodology to determine the nature and extent of risk by analyzing potential hazards and evaluating existing conditions of vulnerability, that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend.

**Vulnerability:** The conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards.

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An Empirical Study of Women’s Economic Empowerment and Involvement in Decision Making

Dr. Manisha V. Jagtap*

ABSTRACT

The economic empowerment and autonomy of women can be judged by freedom available with them concerning utilization of income and spending money. And the involvement of the women in important family decisions will help to understand the level of importance she gets in a family and society. After so many efforts from government for creating awareness among the people concerning women empowerment whether it is social or economic, results are not much encouraging. The main reason behind this is the lack of self-respect, confidence and self-efficacy in the women. After conducting survey and analysis of the data, researcher found that even though women are earning member, the respect or the decision power is not given to her like men. While studying it found that 14.5% women get respect from family and society. While only 10.75% women were involved in buying/selling of land/house and less than 20% women were involved in decision regarding marriage of children.

KEYWORDS

Economic empowerment, decision making, participation, factors, involvement, family.

INTRODUCTION

The empowerment of women is essential for sustainable development and the understanding of human rights for all (Srivastava, 2009). Empowerment was seen as a tool in the search for change in their socio-economic status. Nation and individuals believe that no society can develop until women, an important part of the society, are left behind. When women get empowered, families get benefitted and directly or indirectly it positively effect on future generations (Sobha Rani, 2014). Economic opportunities increase women’s access to productive resources and prospects that includes financial opportunities, assets and wealth, upgradation of skills, and knowledge about the market (OECD,2011). A woman is economically independent when she has authority to make economic decision for her development and successfully implement the same. (Golla AM et al., 2011).

For a longer period, women were given a secondary place in family and society, which increased the need for women empowerment. Empowering women must begin their participation in different walks of life. When compared with men, the number of women

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living in poverty is more. The economic inequalities can be seen because maximum unpaid activities in families and communities are allotted to the women. Economic independence is a major factor that can contribute to empowering women (UNFPA, 2005). Economic empowerment activities can be taken such as promoting small businesses, cooperatives, job creation programs, and savings and credit groups through which they can earn their income. (Albee, 1994).

According to International center for Research on Women (ICRW), women are strong enough to change their standard of living or the economic status by getting engaged in productive activities, but also the communities and countries in which they live. However, most of the time, women’s financial contributions get ignored by the family members. She never get respect for her efforts. There is always a huge difference between the opportunities that are available to the women and men, which continue to hinder on women’s capability to uplift her standard of living. Various research conducted concern to women economic empowerment, focus on the inequality that exist in the work distribution between women and men. The only task continue to be given to women is home making with limited access to funds.

For achieving equality between women and men, the most important contributing factor nowadays is gaining attention in the economic empowerment of women.

ICRW identified certain important positive outcomes to empower women economically:

• Rapid growth of women’s participation in the income generating activities, helped the economy to reduce poverty to an significant extent.
• With access to the resources as per the requirement, women farmers can increase production, making their families less likely to be starved and undernourished.
• Ownership of property and use of it for earning money increases the bargaining power of women at home, which will reduce their vulnerability to domestic violence.

According to South African Development Community (SADC), the economic empowerment help the women to improve their own livelihood. It also helps in mobilizing their potential for sustainable growth and poverty mitigation. Women spend a maximum amount of their earning on food and education of their children, which is very essential for the well-being of their families.

Objectives

The primary objective is to study the effect of various indicators on economic empowerment of the women. The topical scope is to study women’s economic empowerment in Walwa taluka with special reference to Islampur Integrated Textile Park, Peth. It is confined to understand & study the different factors affecting and contributing to the economic empowerment of the women.

The present study has completed by using both primary and secondary data. The Primary data is collected using survey questionnaires. The well-defined questionnaires were distributed to the women employees working in two units i.e weaving unit and garment unit of the Islampur Integrated Textile Park, Peth. The secondary data is collected from the organization as well as publications such as journals, books and newspapers, also from the research projects taken up by government or private organizations. Major data is primary; wherever secondary data remains inadequate, necessary primary data were collected by conducting interviews and personal discussions of the concern officials. This extended inquiry considered important to find out, which may not arrive at by processing of secondary data.

Literature Review

Patel (2002) mentioned in his study that though the land reforms were established on principles of redistributive justice, empowerment and economic justice. It has ignored the principle of gender equity.
Malhotra, Anju, et al. (2002) the article provides an overview of current theories and different approaches to women’s empowerment. They defined empowerment as the ability of people to make strategic choices in areas that affect their lives. In this paper, the author noted that control over funds and agency are key factors that shape important steps in the process of empowerment.

Morrison et al. (2008) found that when compared with manufacturing sector the women’s hourly wages are more than the men in the tertiary sector. Esther Duflo (2011) focused on the direct relationship between women’s empowerment and economic development. According to the author, they are closely interconnected. Economic development helps to empower women, and empowered women can make a difference by making good decisions, which in turn have a positive impact on economic development.

World Survey (2014) focused on the various important issues concern with equality and sustainable development. According to this survey, making sustainable development more effective and meaningful through Women’s participation, which is possible only when there is positive transformation in gender relations and support is provided to women’s knowledge and capabilities.

ANALYSIS AND DISCUSSION

As stated previously, the circulated questionnaires were 64 and 201. It targeted on the women working in two units of the Islampur Integrated Textile Park, Peth Weaving unit and Garment unit respectively.

The reliability of the questionnaire suggests that alpha is 0.824 and 0.764 for Weaving unit and Garment unit respectively. It depict that data is reliable. In this research, researcher consider various indicators that can impact on the women economic empowerment. They are income, education, and work status, area of residence etc.

Factors affecting Women’s Economic Empowerment

Table no. 1 reveals that most of the women (67.2 %) and (56.2 %) are in young age group i.e. in 21-35 years working in weaving and garment unit respectively. The education qualification of the women working in weaving and garment unit is one of the important factors affecting on the economic empowerment. Total 53.35% of the women workers have completed their primary and 28.55% have completed their secondary education. Only 5.85% of women are either diploma or degree holder.

While considering the marital status as another important factor, total 82.45% women are married and 7.4% are single women. 4.6% are widowed and also 4.6 % are divorced working in weaving and garment unit. (Table no. 1)

When we look at the work status, it is found that total 50.25% women are working as permanent staff and 36.6% women are permanent workers. It shows that more than 80% women are permanent in their job. Area of residence is also considered as one of the factor that effects on the economic empowerment of the women. In weaving unit, 37.5% women working are from rural area. 56.3% are from semi urban and only 6.3% are living in urban area. While in garment unit, 76.1% women working are from rural area, 15.4% are from Semi urban and 8.5% are living in urban area. Thus, it shows that in total more than 50% women are from rural area and more than 30% are from semi urban area.

Factors determining Women’s Economic Empowerment

Here are certain aspects that determine the women’s economic empowerment. Income level is unique factor that explains the earning capacity of the women. How much she is contributing towards her family earning is also considered as an important determining factor. Next, though she is earning, is she allowed to do saving? Does she have an account in the bank, whether joint or independent?
Table no. 2 depicts that, in case of weaving unit, 87.5% women are in more than Rs.5000 income level and only 4.7% and 7.8% women lies in Rs.1000- Rs.3000 and Rs.3000-Rs.5000 income level respectively. While only 2 income levels exist in garment unit, 98% women are in more than Rs.5000 income level and only 2% women’s lies in Rs.1000-Rs.3000 income level. This indicates that more than 90% women’s in total are in more than Rs.5000 income level.

In weaving unit, 32% women contribute to half or more to their family earnings. More than 45% women contribute to less than half to their family earnings. While in garment unit, near about 50% women contribute to half or more to their family earnings. 39.8% women contribute to less than half to their family earnings.

Total 55.9% women are allowed to do saving while yet 44.1% restricted from saving their money.

In case of weaving unit, 39.1% and 21.9% have independent and joint account respectively. While 39.1% women yet don’t have any type of account in bank. While in case of garment unit, 80.6% and 14.4% have independent and joint account women have in bank respectively. And 5% women don’t have any type of account in bank.

**Indicators explaining the level of women’s economic empowerment**

Women’s economic empowerment can be understood by studying certain aspects or indicators like women’s self-esteem, self-confidence and self-directed action (Wu, Diana. 2013). Table no. 3 reveals the various indicators, which are as follows:

1. **Level of participation in different activities of the organization:** Total 63.6% women’s have participated in different activities of the organization. While only 19.85% showed interest or got a chance to organize the activity and remaining 16.55% women are involved in any other activities of the organization.

2. **Participation in meetings:** In weaving unit, more than 45% women are participating in meetings, more than 25% are only attending meeting. Demanding participation is available only to 18.8% women. While in garment unit, more than 50% women are participating in meetings, more than 25% are only attending meeting. Demanding participation is available only to 12.4% women’s and remaining 9.5% women are engaged in other activities.

3. **Role and responsibility:** In weaving unit, 59.4% women responded that their role and responsibility has increased while 34.4% women said that it has decreased. Only 6.3% women said that has remained unchanged. While in garment unit, 58.7% women responded that their role and responsibility has increased while 35.3% said that it has decreased.

4. **Respect in family, in society and in company:** Total 38.35% as income earner, the women get respect in family, society and in company. 34.1% women responded that they are getting respect as income earner in family and company. While 14.5% women’s get respect from family and society. And 13% women said that society and company do respect them as income earner and not family.

5. **Level of domestic violence:** It is observed that the overall level of domestic violence has decreased. In case of weaving unit, 42.2% women said that domestic violence has decreased while 10.9% women responded that it has increased. At the same time 42.2% women accepted that now there is no domestic violence. While in case of garment unit, 36.8% women said that domestic violence has decreased while 6.5% women responded that it has increased. 45.8% women accepted that there is no domestic violence.

6. **Bargaining and negotiating power at society:** Total 55.05% women responded that their Bargaining and negotiating power at society has decreased while 37.9% women said that it has increased.
7. **Availability of time for personal leisure and child care:** Discussing about work life balance, 75% women from weaving unit responded that the availability of time for personal leisure and child care has decreased while 17.2% women said that it has increased. 7.8% women said that there is no change in it. While in case of garment unit, 77.6% women responded that the time for personal leisure time and child care has decreased while only 8% women said that it has increased.

8. **Ability to generate income affects your lifestyle:** As an earning member, total 37.8% women agreed that it highly effect on their lifestyle while 17.2% women responded that there is very less impact on their lifestyle. 43.55% says that to some extent it has affected on their lifestyle.

**Involvement in Important Family Decisions**

*Women’s economic empowerment can be seen by her involvement in important family decisions (Table no.4).*

**Hypothesis No.1**

Above table shows the relationship between income level and indicators of women’s economic empowerment. The Pearson’s r shows that decision on income utilization and decision of spending money is near to zero. This means that there is a weak relationship between the variables. A null hypothesis gets accepted, i.e. there is no relation between income level of women and their economic empowerment.

**Sig (2-Tailed) value:** There is statistically significant correlation between Income level and Decision on income utilization. That means, increases or decreases in one variable significantly relate to increases or decreases in second variable. But we find that there is statistically no significant correlations between income level and decision of spending money.

**H0:** There is no relation between income level of women and their economic empowerment.

<table>
<thead>
<tr>
<th></th>
<th>Correlations</th>
<th>Decision on Income Utilization</th>
<th>Decision of Spending money</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income level</td>
<td>Pearson Correlation 1</td>
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<td>.119</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
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<td>.052</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>265</td>
<td>265</td>
<td>265</td>
</tr>
</tbody>
</table>
Hypothesis No. 2

Above table shows the Pearson’s r for educational qualification and indicators of women’s economic empowerment is near to zero. This means that there is a weak relationship between the variables. A null hypothesis gets accepted that is the educational qualification of women is not correlated with their economic empowerment.

Sig (2-Tailed) value: We find that there is statistically significant correlation between educational qualification of women and Decision on income utilization. Also, there is statistically significant correlation between educational qualification of women and decision of spending money.

**H0: There is no significant relationship between women’s educational qualification and women economic empowerment.**

<table>
<thead>
<tr>
<th></th>
<th>Educational Qualification</th>
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<th>Decision of Spending money</th>
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</thead>
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<tr>
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<td>.210**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
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<td></td>
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<tr>
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<td>265</td>
<td>265</td>
<td>265</td>
</tr>
<tr>
<td>Decision of Spending money</td>
<td>Pearson Correlation</td>
<td>.119</td>
<td>.478**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.052</td>
<td>.000</td>
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</tr>
<tr>
<td>N</td>
<td>265</td>
<td>265</td>
<td>265</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Hypothesis No. 3

Above table shows the Pearson’s r for place of residence and indicators of women’s economic empowerment is near to zero. This means that there is a weak relationship between the variables. A null hypothesis gets accepted, i.e., the place of residence of women is not correlated with their economic empowerment.
Sig (2-Tailed) value: We find that there is statistically significant correlation between place of residence and decisions on income utilization. Also, there is statistically significant correlation between place of residence and decision of spending money.

**H0: There is no relation between Place of residence and women economic empowerment.**

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Place of Residence</th>
<th>Decision on Income Utilization</th>
<th>Decision of Spending money</th>
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</thead>
<tbody>
<tr>
<td>Place of Residence</td>
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<td>.166**</td>
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<td>Sig. (2-tailed)</td>
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<td>.172**</td>
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<tr>
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<td>265</td>
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<td>265</td>
</tr>
<tr>
<td>Decision on Income Utilization</td>
<td>Pearson Correlation</td>
<td>.166**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.007</td>
<td>.478**</td>
</tr>
<tr>
<td>N</td>
<td>265</td>
<td>265</td>
<td>265</td>
</tr>
<tr>
<td>Decision of Spending money</td>
<td>Pearson Correlation</td>
<td>.172**</td>
<td>.478**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.005</td>
<td>1</td>
</tr>
<tr>
<td>N</td>
<td>265</td>
<td>265</td>
<td>265</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

Hypothesis No.4

Above table shows the Pearson’s r for work status and indicators of women’s economic empowerment is near to zero. This means that there is a weak relationship between the variables. A null hypothesis gets accepted, i.e. the work status of women is not correlated with their economic empowerment.

Sig (2-Tailed) value: We find that there is no statistically significant correlation between work status and decision on income utilization. But there is statistically significant correlation between work status and decision of spending money.

**H0: There is no significant relationship between women’s work status and their economic empowerment.**

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Work Status</th>
<th>Decision on Income Utilization</th>
<th>Decision of Spending money</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Status</td>
<td>Pearson Correlation</td>
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<td>.032</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.608</td>
<td>.141*</td>
</tr>
<tr>
<td>N</td>
<td>265</td>
<td>265</td>
<td>265</td>
</tr>
<tr>
<td>Decision on Income Utilization</td>
<td>Pearson Correlation</td>
<td>.032</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.608</td>
<td>.478**</td>
</tr>
<tr>
<td>N</td>
<td>265</td>
<td>265</td>
<td>265</td>
</tr>
<tr>
<td>Decision of Spending money</td>
<td>Pearson Correlation</td>
<td>.141*</td>
<td>.478**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.021</td>
<td>1</td>
</tr>
<tr>
<td>N</td>
<td>265</td>
<td>265</td>
<td>265</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).
While only 27.65% are involved in buying medicines/seek medical treatment decision & 19.85% are involved in decision regarding purchase of clothes, books and stationery.

4. Decision Making for Major Family Activities:
Decisive power with women in important family matters is very significant that helps to know the women’s economic empowerment. While studying, it is found that only 10.75% women were involved in buying/selling of land/house. And less than 20% women were involved in decision regarding Marriage of children.

Indicators of Women Economic Empowerment

Researcher tried to relate economic empowerment of women with their decision-making power along with utilization of income and spending of money. During study, Total 55.2% women responded that their husbands take decisions with respect to income utilization. 16.5% women take decisions themselves and only 25.8% said that they collectively take decisions concerning income utilization (Table 5). In case of decision of spending money, only 25% women of weaving unit take decision of spending money without any influence. While only 19.4% women of garment unit take decision of spending money without any influence.

Hypothesis Testing

Findings and conclusion

While doing the study of Women’s Economic Empowerment in Walwa Taluka, the researcher arrived at certain findings. In the paper, almost all the important aspects concerning to it are covered like income, education, work status, decision regarding spending money and acquisition of assets etc. After the consistent investigation of the objectives of the study, and from the analysis and the discussion in the proceeding pages where researcher tried to apply the framework of Statistical tools and techniques, it can be said that the women working in Islampur Integrated Textile Park are not significantly economically empowered. As these women are earning money now, they are involved in decision making concern with utilization of income. But when it comes to the actual spending of money, then their role is very limited. Also, the place of residence is also an important aspect, which effect the economic empowerment of the women. Most of the women working in two units of Islampur Integrated Textile Park are from rural and semi urban area. Educational qualification of women and their work status also correlate with their economic empowerment which is measured by responses received by the researcher while conducting survey w.r.t involvement of women in decision on how to spend money.

Acknowledgement

The researcher acknowledges the support received from the officials of Islampur Integrated Textile Park, Peth, for conducting interview of the women working in both units, i.e. weaving and garment.

References

Table 1: Frequencies of Factors affecting Women’s Economic Empowerment

<table>
<thead>
<tr>
<th>Factors</th>
<th>Weaving unit</th>
<th>Garment Unit</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upto 20 Years</td>
<td>4.7</td>
<td>6</td>
<td>5.35</td>
</tr>
<tr>
<td>21-35 Years</td>
<td>67.2</td>
<td>56.2</td>
<td>61.7</td>
</tr>
<tr>
<td>36-50 years</td>
<td>28.1</td>
<td>35.8</td>
<td>31.95</td>
</tr>
<tr>
<td>More than 50 years</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Educational Qualification</td>
<td></td>
<td></td>
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<tr>
<td>None</td>
<td>14.1</td>
<td>10.4</td>
<td>12.25</td>
</tr>
<tr>
<td>Primary</td>
<td>60.9</td>
<td>45.8</td>
<td>53.35</td>
</tr>
<tr>
<td>Secondary</td>
<td>20.3</td>
<td>36.8</td>
<td>28.55</td>
</tr>
<tr>
<td>Diploma/ degree</td>
<td>4.7</td>
<td>7</td>
<td>5.85</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>7.8</td>
<td>9</td>
<td>8.4</td>
</tr>
<tr>
<td>Married</td>
<td>82.8</td>
<td>82.1</td>
<td>82.45</td>
</tr>
<tr>
<td>Divorced</td>
<td>4.7</td>
<td>4.5</td>
<td>4.6</td>
</tr>
<tr>
<td>widowed</td>
<td>4.7</td>
<td>4.5</td>
<td>4.6</td>
</tr>
<tr>
<td>Work Status</td>
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<tr>
<td>On contract</td>
<td>9.4</td>
<td>6.5</td>
<td>7.95</td>
</tr>
<tr>
<td>Permanent Worker</td>
<td>23.4</td>
<td>49.8</td>
<td>36.6</td>
</tr>
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<td>Permanent Staff</td>
<td>67.2</td>
<td>33.3</td>
<td>50.25</td>
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<tr>
<td>Any other</td>
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<td>10.4</td>
<td>5.2</td>
</tr>
<tr>
<td>Place of residence</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>6.3</td>
<td>8.5</td>
<td>7.4</td>
</tr>
<tr>
<td>Semi-Urban</td>
<td>56.3</td>
<td>15.4</td>
<td>35.85</td>
</tr>
<tr>
<td>Rural</td>
<td>37.5</td>
<td>76.1</td>
<td>56.8</td>
</tr>
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</table>
Table 2: Frequencies of Factors determining Women’s Economic Empowerment

<table>
<thead>
<tr>
<th>Factors</th>
<th>Weaving unit</th>
<th>Garment Unit</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Level Per Month</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000-3000</td>
<td>4.7</td>
<td>2</td>
<td>3.35</td>
</tr>
<tr>
<td>3000-5000</td>
<td>7.8</td>
<td></td>
<td>3.9</td>
</tr>
<tr>
<td>More than 5000</td>
<td>87.5</td>
<td>98</td>
<td>92.75</td>
</tr>
<tr>
<td>Contribution to the Family Earning</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>10.9</td>
<td>6.5</td>
<td>8.7</td>
</tr>
<tr>
<td>Less than Half</td>
<td>46.9</td>
<td>39.8</td>
<td>43.35</td>
</tr>
<tr>
<td>Half or more</td>
<td>31.3</td>
<td>45.8</td>
<td>38.55</td>
</tr>
<tr>
<td>All</td>
<td>10.9</td>
<td>8</td>
<td>9.45</td>
</tr>
<tr>
<td>Allowed to do Savings</td>
<td></td>
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<td></td>
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<tr>
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<td>39.8</td>
<td>44.1</td>
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<td>51.6</td>
<td>60.2</td>
<td>55.9</td>
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<td>Type of saving account</td>
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<td>39.1</td>
<td>80.6</td>
<td>59.85</td>
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<td>22.05</td>
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</table>

Table 3: Frequencies of Indicators measuring the women’s Economic empowerment

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Weaving unit</th>
<th>Garment Unit</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement in Company’s Activity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization</td>
<td>20.3</td>
<td>19.4</td>
<td>19.85</td>
</tr>
<tr>
<td>Participation</td>
<td>62.5</td>
<td>64.7</td>
<td>63.6</td>
</tr>
<tr>
<td>Any other</td>
<td>17.2</td>
<td>15.9</td>
<td>16.55</td>
</tr>
<tr>
<td>Level of participation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attending Meetings</td>
<td>29.7</td>
<td>27.4</td>
<td>28.55</td>
</tr>
<tr>
<td>Participation meetings</td>
<td>45.3</td>
<td>50.7</td>
<td>48</td>
</tr>
<tr>
<td>Demanding Participation</td>
<td>18.8</td>
<td>12.4</td>
<td>15.6</td>
</tr>
<tr>
<td>Any Other</td>
<td>6.3</td>
<td>9.5</td>
<td>7.9</td>
</tr>
<tr>
<td>Roles and responsibility in family and community</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased</td>
<td>59.4</td>
<td>58.7</td>
<td>59.05</td>
</tr>
<tr>
<td>Decreased</td>
<td>34.4</td>
<td>35.3</td>
<td>34.85</td>
</tr>
<tr>
<td>No Change</td>
<td>6.3</td>
<td>6</td>
<td>6.15</td>
</tr>
<tr>
<td>Respect as Income earner</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In the family and society</td>
<td>15.6</td>
<td>13.4</td>
<td>14.5</td>
</tr>
<tr>
<td>In the family and company</td>
<td>34.4</td>
<td>33.8</td>
<td>34.1</td>
</tr>
<tr>
<td>In the society and company</td>
<td>14.1</td>
<td>11.9</td>
<td>13</td>
</tr>
<tr>
<td>In the Family, society and company</td>
<td>35.9</td>
<td>40.8</td>
<td>38.35</td>
</tr>
<tr>
<td>Level of domestic violence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased</td>
<td>10.9</td>
<td>6.5</td>
<td>8.7</td>
</tr>
<tr>
<td>Decreased</td>
<td>42.2</td>
<td>36.8</td>
<td>39.5</td>
</tr>
<tr>
<td>No change</td>
<td>4.7</td>
<td>10.9</td>
<td>7.8</td>
</tr>
<tr>
<td>Nil</td>
<td>42.2</td>
<td>45.8</td>
<td>44</td>
</tr>
</tbody>
</table>
### Table 4: Frequencies of Involvement in Important Family Decisions

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Weaving unit</th>
<th>Garment Unit</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Decision making for self needs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase of cosmetics</td>
<td>18.8</td>
<td>11.9</td>
<td>15.35</td>
</tr>
<tr>
<td>Buy medicine, seek medical treatment alone</td>
<td>32.8</td>
<td>28.9</td>
<td>30.85</td>
</tr>
<tr>
<td>visit to family and relatives</td>
<td>21.9</td>
<td>26.4</td>
<td>24.15</td>
</tr>
<tr>
<td>visit outside the village/town/city alone</td>
<td>3.1</td>
<td>4.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Any other</td>
<td>23.4</td>
<td>28.4</td>
<td>25.9</td>
</tr>
<tr>
<td><strong>Decision making for Family needs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase of daily needs and utensils</td>
<td>31.3</td>
<td>29.9</td>
<td>30.6</td>
</tr>
<tr>
<td>Production Activities like Grow food grains, rare livestock, made handicrafts</td>
<td>34.4</td>
<td>27.4</td>
<td>30.9</td>
</tr>
<tr>
<td>Buying and selling food grains, handicraft, livestock</td>
<td>6.3</td>
<td>14.4</td>
<td>10.35</td>
</tr>
<tr>
<td>borrowing/ lending in cash or kind</td>
<td>26.6</td>
<td>27.9</td>
<td>27.25</td>
</tr>
<tr>
<td>Any other</td>
<td>1.6</td>
<td>0.5</td>
<td>1.05</td>
</tr>
<tr>
<td><strong>Decision making for children needs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase of clothes, books and stationery</td>
<td>20.3</td>
<td>19.4</td>
<td>19.85</td>
</tr>
<tr>
<td>Going to school</td>
<td>46.9</td>
<td>39.3</td>
<td>43.1</td>
</tr>
<tr>
<td>Buy Medicines/seek medical treatment</td>
<td>25</td>
<td>30.3</td>
<td>27.65</td>
</tr>
<tr>
<td>Any other</td>
<td>7.8</td>
<td>10.9</td>
<td>9.35</td>
</tr>
<tr>
<td><strong>Decision Making for Major Family Activities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regarding buying/selling of land/house</td>
<td>12.5</td>
<td>9</td>
<td>10.75</td>
</tr>
<tr>
<td>Regarding rent in/rent out of land</td>
<td>39.1</td>
<td>32.3</td>
<td>35.7</td>
</tr>
<tr>
<td>Regarding Marriage of children</td>
<td>14.1</td>
<td>22.9</td>
<td>18.5</td>
</tr>
<tr>
<td>Any other</td>
<td>34.4</td>
<td>35.8</td>
<td>35.1</td>
</tr>
</tbody>
</table>
Table 5: Frequencies of Indicators of Women’s Economic Empowerment

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Weaving unit</th>
<th>Garment Unit</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision on income utilization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Your Self only</td>
<td>15.6</td>
<td>17.4</td>
<td>16.5</td>
</tr>
<tr>
<td>Husband only</td>
<td>78.1</td>
<td>32.3</td>
<td>55.2</td>
</tr>
<tr>
<td>You And your husband collectively</td>
<td>6.3</td>
<td>45.3</td>
<td>25.8</td>
</tr>
<tr>
<td>Other elder family members</td>
<td>--</td>
<td>5</td>
<td>2.5</td>
</tr>
<tr>
<td>Decision of spending money</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Without Any influence</td>
<td>25</td>
<td>19.4</td>
<td>22.2</td>
</tr>
<tr>
<td>With some but Less than decisive influence</td>
<td>32.8</td>
<td>29.9</td>
<td>31.35</td>
</tr>
<tr>
<td>Decision Made jointly i.e. 50% or Greater</td>
<td>35.9</td>
<td>42.8</td>
<td>39.35</td>
</tr>
<tr>
<td>With total influence</td>
<td>6.3</td>
<td>8</td>
<td>7.15</td>
</tr>
</tbody>
</table>
Kash Model: An Integrative Approach to Curriculum Development for Management Education in Technical Institute

Prof. S. Rangnekar*, Dr. Meenakshi Harraw Verma**

ABSTRACT

Course curriculum is the basic guideline which decides the teaching pedagogy in any institution. While developing any course curriculum, the most important aspect that needs to draw the attention is the planning and selection of items which prepares students for such challenges. Any institution that wants their management graduates to be equipped with competency and skills to handle routine as well as unusual business and work conditions, need to go through extensive planning and training to device methods and material to be taught. Knowledge, Attitude, Skill and Habit (KASH) have been considered the four basic dimensions of teaching-learning environment that largely encompass the needs of the learners.

The KASH learning model captures the holistic view of learning combining knowledge, attitude, skill and habit and helps to enhance the level of absorption of learning among management graduates. The integrative approach has been adopted to design and develop Management Education Curriculum in technical institutes based on KASH Model. In this paper, Integrative approach to curriculum development, based on KASH Model, for learning perspectives for management education has been studied to propose new guidelines to design MBA curriculum in technical institutions.

KEYWORDS


INTRODUCTION

Bounds (2009) states that institutions and employers are of the opinion that education should help students gain knowledge and basic skills. Knowledge and skills required for employability can be developed through appropriate curriculum. He, further, said that higher education institutions must cater to the needs of the changing environment by developing learner-centred quality curriculum. He quoted an example of competence-based curriculum which produces candidates for the future management tasks. In academic institutions, the theory and practice of curriculum development has always been a debatable issue. This is because curriculum is defined and interpreted by different experts in different ways. Curriculum development has been differentiated from curriculum design. ‘Education’ and ‘Curriculum’ has always been defined differently in theory but these are always inter-related and inseparable in practice. Therefore, designing an appropriate curriculum for

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any program of study or training is like a foundation stone. Fish (2013) quoted that integral education is meant for holistic development of a person. Therefore, integral education is about developing a whole person, so the approach to curriculum management (designing, implementing, assessing) should encompass both technical skills and the development of the learner as a whole person (Fish, 2013). Curriculum is critical in providing high quality educational programs and services; however, there are gaps between how curriculum is developed and how curriculum is supposed to be developed in theory. This dilemma is further complicated by the fact that there are huge differences between the curriculum published by the educational institutions and the curriculum actually taught by the teachers in their classrooms. Curriculum is considered as a foundation stone for the “well-being and effectiveness of higher education” (Barnett & Coate, 2005). Regardless of how curriculum is defined and what are its scope and importance, it is one of the most significant matters in higher education; however, little attention has been given to the evolution of curriculum, its review and transformation in the institutions of higher education (Hyun, 2006, 2009). This notion is further strengthened by the fact that there is a dearth of research works on the subject and the literature that exists is mostly focused on the design of the curriculum (Hicks, 2007). Developing an integrative curriculum has become a globally discussed issue and challenging for all institutions of higher education.

RESEARCH METHODOLOGY
The present study is based on an analysis of literature review to find an integrative approach to curriculum development for management education in technical institutes. It also presents a theoretical-conceptual framework which could be used for defining the process of curriculum design (development, implementation and evaluation) by all stakeholders in the educational institutions.

CURRICULUM DESIGN
Jon Wiles and Joseph Bondi (1989) define that curriculum as a set of values which are activated through a developmental process which culminates in the form of classroom experiences of students. Krug (1957) said that curriculum consists all the means of instruction to provide opportunities for learning experiences to students that lead to desired learning outcome. Ronald C. Doll (1988) opines curriculum means the formal and informal content and process which help learners to gain knowledge and understanding, develop skills, and modify attitudes and values under the auspices of that school.

Curriculum Development
Curriculum development can simply be stated as development of curriculum for any program of study. According to Rogers and Taylor, “Curriculum development describes all the ways in which teaching or training organization plans and guides learning. This learning can take place in groups or with individual learners. It can take place inside or outside the classroom. It can take place in an institutional setting like school, college, training centre, or in a village or a field. It is central to the teaching-learning process.”

Curriculum development is a process involving the activities such as:

- Conceptualizing the curriculum;
- Selecting and organizing the content, material and learning experiences;
- Suggesting the method and ways of providing these experiences; and
- Evaluating the learning outcomes in terms of attainment of desired educational objectives.

According to Smith (2000), a curriculum can be ordered into a procedure:

Step 1: Diagnosis of needs.
Step 2: Formulation of objectives.
Step 3: Selection of content.
Step 4: Organization of content.

Step 5: Selection of learning experiences.

Step 6: Organization of learning experiences.

Step 7: Determination of what to evaluate and of the ways and means of doing it.

In the process of curriculum development, important aspects to be considered has been portrayed in the following figure by M.A. Khan (et.al. 2015)

**INTEGRATIVE APPROACH**

![Figure 1: An Integrative Approach to Curriculum Development](image)

*Source: Khan, M.A., & Law, L. (2015)*

Integrative approach to curriculum is a need of the hour, as no single approach is perfect for a course of study. To define integrative approach in words of Robin Fogarty (et al), a curriculum approach that purposefully draws together knowledge, skills, attitudes and values from within or across subject areas to develop a more powerful understanding of key ideas. Curriculum integration occurs when components of the curriculum are connected and related in meaningful ways by both the students and teachers. Integrative approach to curriculum design is described as an approach to teaching and learning that is based on theory and practice. The content and teaching pedagogy can be categorised in two sections: planned and spontaneous which would, further, need benchmarking process to be explored as the underlying guideline for the integrated approach to curriculum design.

**Benchmarking**

A benchmarking process needs to be identified for finalising the curriculum on the basis of the integrated approach. Benchmarking enables curriculum development in a more systematic method that is dependent on various stakeholders such as students, alumni, the business community, accrediting body, faculty and administrators. It may involve formal and informal discussions with the stakeholders and surveys too.

The steps adopted for the benchmarking process in this research are -

- Identifying the purpose, vision and mission of the course;
- Finding out the stakeholders’ (students and industry) needs and expectations;
- Comparing-top-ranking B-school syllabus content and identify unique subjects being taught by them;
- Identifying the needs and limitations of the institute and faculty;
- Integrating KASH Model of learning to select, design and develop MBA curriculum in technical institutes; and
- Defining pedagogical methods/techniques and evaluation pattern.

**Process of Curriculum Development**

The curriculum development for management graduates in technical institutes has been conceptualised in co-relation among different variable of teaching-learning practices in the classroom. The
figure describes that Curriculum Development is dependent on Contextual Environment, Institutional Leadership, Graduate Competencies, Pedagogical Methods. Curriculum Development has significance co-relation and dependency on the four elements which are inter-dependent of one-another.

![Figure 2: Curriculum Development Elements](image)

To elaborate further –

**Contextual environment**

The Educational environment can be classified into two categories, i.e., internal environment and external environment. Internal environment refers to the institutional discipline, culture and organisation whereas external environment includes outside the classroom environment where a student can learn, may be industry or community or other educational institutes. The structure, organisation and functioning of other educational institutes affect the functioning of other at par educational institutes. Learning devoid of its context is irrelevant and meaningless. This defines the context in which learners develop their Knowledge, Attitude, Skills and Habits.

**Institutional leadership**

Institutional leadership defines the policy and guidelines formulated which are institution-specific. Irrespective of the structure and organisation of the institute, it is the leadership which matters a lot. Institutional Leadership need not to be traditional and theoretical anymore, rather it must be dynamic, participative, pragmatic, strategic and towards the approach of servant leadership. Institutional leadership must be society oriented with high ethical value system to ascertain that it functions for the common good of the society and designs its curriculum keep in view this prime objective. It considers that the content items are so incorporated in the curriculum that it helps the students to grow holistically.

**Competency Development**

Competencies can be classified in two categories: hard skills/technical skills and soft skills/social skills. Graduate competencies are a mix of hard Vs. soft skills, technical Vs. human skills/social skills. Competency is the combination of skills, abilities and knowledge to perform a specific task (The National Centre for Education Statistics (NCES) of the U.S. Department of Education, 2002). The combination of knowledge, attitude and skills enables professionals to comprehend and execute their responsibilities for attaining the organisational goals for the ultimate good of the society. As per Bloom’s taxonomy, Habit formation is defined under the psychomotor domain of learning which means that habits are formed consciously and unconsciously through practice and repetition. Without developing consistency and sustainability in habits, it is difficult to place the knowledge and attitude in the right context at the right time for achieving desired goals.

**Pedagogical Methods**

Pedagogical strategies define the method and techniques of teaching practices. It systematically and logically describes the work of a teacher. It is the art and science of teaching (Webster’s College Dictionary, 2010). Pedagogical Strategies not only define the teaching methods but incorporates learning goals too. For management education in technical institute, pedagogical methods can be divided into two broad categories: Formal and informal methods.
Table 1: Formal Vs. Informal Methods of Teaching

<table>
<thead>
<tr>
<th>Formal Methods</th>
<th>Informal Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom lectures</td>
<td>Open classroom discussion</td>
</tr>
<tr>
<td>Report writing</td>
<td>Verbal presentations</td>
</tr>
<tr>
<td>Case based learning</td>
<td>Brain storming</td>
</tr>
<tr>
<td>Collaborative learning</td>
<td>Role play</td>
</tr>
<tr>
<td>Project based learning</td>
<td>Simulation games</td>
</tr>
<tr>
<td>Report writing</td>
<td>Memory based learning</td>
</tr>
<tr>
<td>Problem oriented learning</td>
<td>Observations</td>
</tr>
<tr>
<td>Service based learning</td>
<td>Field visit and study tours</td>
</tr>
<tr>
<td>Research based learning</td>
<td>Social meeting/ gathering</td>
</tr>
<tr>
<td>Examination and evaluation</td>
<td>Interviews</td>
</tr>
<tr>
<td>MOOC, NPTEL, SWAYAM</td>
<td></td>
</tr>
</tbody>
</table>

A course that is designed and taught using combination of these methods, is called to have been designed on the basis of integrative approach. Training and evaluation of the teacher is the key to successfully adapting these methods in the classroom.

DEFINING AND INTERPRETING KASH MODEL

Education is all about gaining knowledge and applying it for the common good of the society. Today, knowledge and technology has become synonyms for each other. Knowledge without technology is not relevant in today’s time. Whereas, management is a skill or managing resources. It is the art of executing knowledge for achieving the desired goals. When we talk about technology, we talk about knowledge. When we talk about management, we talk about skills.

- Technology = knowledge + expertise
- Management = skills + attitude

The future management education is to empower management graduates with –

- Knowledge
- Attitude
- Skill
- Habit

While knowledge can be gained directly in classroom setting through shared system, skills are learnt and attitude is imbibed even beyond the classroom. Habits are the manifestation and expression of gained knowledge, learnt skills and imbibed attitude.

The following table describes the KASH Model

Table 2: KASH Elements Description

<table>
<thead>
<tr>
<th>KSA</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Condition of being aware of something (facts or concepts)</td>
</tr>
<tr>
<td>Attitudes</td>
<td>Feeling, emotions, beliefs, or values about something</td>
</tr>
<tr>
<td>Skills</td>
<td>Ability to perform tasks or activities measured in time and precision</td>
</tr>
<tr>
<td>Habit</td>
<td>Aspects of behavior that is repeatedly and consistently done without effort or conscious thought.</td>
</tr>
</tbody>
</table>

DOMAINS OF EDUCATIONAL LEARNING

KASH model is based on the principles of Bloom’s Taxonomy. Benjamin Bloom, an educational psychologist, has promoted higher forms of thinking in education such as analysing and evaluating concepts, processes, procedures and principles rather than
remembering facts. It is most often used in designing educational, training and learning processes. Blooms Taxonomy describes three domains of learning (Bloom, et al. 1956) – cognitive (Knowledge), affective (attitude), psychomotor (skills).

These three are considered as the major domains of educational learning

**Cognitive domain**

The cognitive domain involves knowledge and the development of intellectual skills (Bloom, 1956). This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities and skills. There are six major categories of cognitive process starting from the simplest to the most complex Synthesis. The categories can be thought of as degrees of difficulties. That is, the first ones must normally be mastered before the next one can take place.

**Affective domain**

Benjamin Bloom has defined the affective domain as one of the three domains with the other two i.e. the cognitive domain and the psychomotor domain. The affective domain (Krathwohl, Bloom, Masia, 1973) includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations and attitudes. The five major categories are listed from the simplest behaviour to the most complex.

**Psychomotor domain**

The psychomotor domain (Simpson, 1972) includes physical movement, coordination, and use of the motor-skill areas. Development of these skills requires practice and is measured in terms of speed, precision, distance, procedures, or techniques in execution. Thus, psychomotor skills rage from manual tasks, such as digging a ditch or washing a car, to more complex tasks, such as operating a complex piece of machinery or dancing.

---

**Table 3 : Domains of Learning**

<table>
<thead>
<tr>
<th>Cognitive Domain (Knowledge)</th>
<th>Affective Domain (Skill)</th>
<th>Psychomotor Domain (Attitude)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Comprehension</td>
<td>• Awareness</td>
<td>• Observation</td>
</tr>
<tr>
<td>• Application</td>
<td>• Respond</td>
<td>• Manipulation</td>
</tr>
<tr>
<td>• Analysis</td>
<td>• Valuing</td>
<td>• Limitation</td>
</tr>
<tr>
<td>• Synthesis</td>
<td>• Organisation</td>
<td>• Practice</td>
</tr>
<tr>
<td>• Evaluation</td>
<td>• Integration</td>
<td>• Habit formation</td>
</tr>
</tbody>
</table>

According to Bloom’s Taxonomy, Habit formation is the final dimension of psychomotor domain. But in further studies, Habit formation has been studied as an independent domain of learning. William James (1890) defines that “habit covers a very large part of life”. Further, with the behaviourist traditions of Thorndike’s (1998) law of effect, Hull’s (1943) formalised drive theory and Skinner’s (1938) operant conditioning, Habit as a construct of learning acquired specific meaning and importance. Habits are different from other automatic and implicit processes of classical conditioning. Once habits form, perception of the relevant context cues automatically activates the mental representation of the habitual response. Exposure to cues might be deliberate, as when sitting at a computer in order to activate thoughts of work. Or exposure can be inadvertent, as when a chance sighting of a fast-food outlet activates thoughts of eating. We assume that the memory representation of a habit response is cognitively richer than a mere motor program that controls response execution. Given that human cognition is based on integrated sensorimotor units (Hommel 2009), a habitual response will be represented in terms of response features as well as perceptual features. Once habitual responses are activated, people can act on the response in mind without making a decision to do so. That is, habit performance follows relatively directly from the perception of context cues and thoughts about the behavior, reflecting the tight linkage between an internal action representation and the action itself (James 1890). Given that everyday habits develop as people go about pursuing
life goals, habit formation is closely intertwined with goal pursuit. Nonetheless, an implication of the basic context-response mechanism underlying habits is that behavior becomes less responsive to current goals and planning as habit associations strengthen.

KASH Parameters of Learning

Knowledge

Knowledge incorporates models and ideas learnt while studying in an institute. It can be categorised as follows.

- Basic knowledge: functional learning and listening, learning methodologies, observing, grasping power, analytical reasoning, mathematics, science, oral as well as written communication;
- Resource Management knowledge: financial controls and budgetary analysis, material resources, human resources, and time;
- Management practices knowledge: planning, organizing, staffing, controlling, coordinating,

<table>
<thead>
<tr>
<th>S.No</th>
<th>Knowledge attributes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Globalization</td>
<td>Industry and Market awareness, PESTLE (Political, Economical, Social, Technological, Legal, Environment)</td>
</tr>
<tr>
<td>2</td>
<td>Organization Behavior</td>
<td>Human Psychology, Interpersonal dynamics, Conflict management, organisation culture, team behaviour, change management</td>
</tr>
<tr>
<td>3</td>
<td>General Management</td>
<td>Planning, Organizing, Controlling, Coordinating</td>
</tr>
<tr>
<td>4</td>
<td>Statistics</td>
<td>Correlation, Regression, Probability, Hypothesis testing, Parametric and Non parametric tests.</td>
</tr>
<tr>
<td>5</td>
<td>Marketing</td>
<td>Pricing, Promotion, Brand Management, Consumer Behavior analysis</td>
</tr>
<tr>
<td>6</td>
<td>Supply chain Management</td>
<td>Manufacturing Flow Management, Procurement, Product development and commercialization, return management</td>
</tr>
<tr>
<td>7</td>
<td>Accounting</td>
<td>Fintech, Finance, Cost Management</td>
</tr>
<tr>
<td>8</td>
<td>Quality</td>
<td>Total quality management, quality measurement tools</td>
</tr>
<tr>
<td>9</td>
<td>IT Enabled Management</td>
<td>Enterprise Resource Planning, E-Commerce Modelling</td>
</tr>
<tr>
<td>10</td>
<td>Project Management</td>
<td>Project planning, Implementation, Monitoring and Control</td>
</tr>
<tr>
<td>11</td>
<td>Entrepreneurship</td>
<td>Idea Generation, Feasibility Study, Funding</td>
</tr>
<tr>
<td>12</td>
<td>Technology Management</td>
<td>Integrated planning, optimization, control of technology</td>
</tr>
<tr>
<td>13</td>
<td>System Thinking</td>
<td>Analysis and modelling of dynamic situation</td>
</tr>
<tr>
<td>14</td>
<td>Human Resource Management</td>
<td>Training and Development, Recruitment, Job analysis and design, Employee welfare</td>
</tr>
<tr>
<td>16</td>
<td>Micro economic issues</td>
<td>Demand supply, Theory of Production, Market structure, Competition</td>
</tr>
<tr>
<td>17</td>
<td>Decision Science</td>
<td>Decision Making Process, optimization</td>
</tr>
<tr>
<td>18</td>
<td>Macroeconomic issues</td>
<td>Inflation, Trade Cycle, Stagflation, Exchange Rate, Balance of Payment</td>
</tr>
<tr>
<td>19</td>
<td>Corporate Laws</td>
<td>Legal aspects of business, stakeholders</td>
</tr>
<tr>
<td>20</td>
<td>Business Ethics</td>
<td>Rules, standards, codes, Theories, virtues, models</td>
</tr>
</tbody>
</table>
coordination, training, negotiation, client servicing;

- Knowledge of system and organizational structure: Leadership, decision making, system investigation examination and, estimation; and

- Knowledge of technology: machinery maintenance, choice and establishment, machinery operation, control, checking, examination and programming, quality control, fixing, specialized plan, and investigating (Eldredge, 2006).

Following table shows the knowledge attributes that a management graduate is supposed to learn and that must be included in course curriculum by selecting items for the syllabus and pedagogical techniques to be adopted.

### Table 5: Attitude Attributes of Learning

<table>
<thead>
<tr>
<th>S.No</th>
<th>Attitude attributes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Optimistic</td>
<td>Believe or hope of positive, desirable future events</td>
</tr>
<tr>
<td>2</td>
<td>Proactive</td>
<td>Creating or controlling situation, not just responding</td>
</tr>
<tr>
<td>3</td>
<td>Empathetic</td>
<td>Placing oneself in situation of others</td>
</tr>
<tr>
<td>4</td>
<td>Openness to Feedback</td>
<td>Takes feedback in positive note</td>
</tr>
<tr>
<td>5</td>
<td>Discipline</td>
<td>Behaviour in accordance with certain rules and regulations</td>
</tr>
<tr>
<td>6</td>
<td>Integrity</td>
<td>Honesty, loyalty, commitment to the organization</td>
</tr>
<tr>
<td>7</td>
<td>Initiative</td>
<td>Ability to begin, proceed tasks independently</td>
</tr>
<tr>
<td>8</td>
<td>Enthusiasm</td>
<td>Intense energy, interest</td>
</tr>
<tr>
<td>9</td>
<td>Self Confidence</td>
<td>Self Believe, intrinsic motivation</td>
</tr>
<tr>
<td>10</td>
<td>Visionary</td>
<td>Planning the future with wisdom</td>
</tr>
<tr>
<td>11</td>
<td>Adaptability</td>
<td>Able to adjust in new situation</td>
</tr>
<tr>
<td>12</td>
<td>Team spirit</td>
<td>Willingness to perform as part of team</td>
</tr>
<tr>
<td>13</td>
<td>Ethics</td>
<td>Moral values, judgement</td>
</tr>
<tr>
<td>14</td>
<td>Fairness</td>
<td>Impartial, no favouritism or discrimination</td>
</tr>
<tr>
<td>15</td>
<td>Perseverance</td>
<td>No give up attitude</td>
</tr>
<tr>
<td>16</td>
<td>Modesty</td>
<td>Refrain from ego, or superiority</td>
</tr>
<tr>
<td>17</td>
<td>Resilient</td>
<td>Withstanding unfavourable situation</td>
</tr>
<tr>
<td>18</td>
<td>Inquisitive</td>
<td>Curiosity, interest in learning new things</td>
</tr>
<tr>
<td>19</td>
<td>Calmness in adversity</td>
<td>Lack of strong emotions</td>
</tr>
<tr>
<td>20</td>
<td>Emotional stability</td>
<td>Ability to remain balanced</td>
</tr>
</tbody>
</table>

**Attitude**

An attitude is “a moderately continuing association of convictions, sentiments, and conduct propensities towards socially critical items, gatherings, occasions or images” (Hogg and Vaughan, 2005). It has been distinguished that desire to learn, team work, ethical and moral values are the vital parameters characterizing the employability level of an individual (O’Neil et al., 1992).

Following table shows the Attitude attributes to be developed among management graduates.

**Skills**

Skills has been characterized as any mix of mental and physical characteristics which are helpful to
industry and require extensive preparing to obtain. Skills, which are important to possess in order to perform given roles and responsibilities, are known as Employability skills. Employability skills are the essential abilities which are basic for getting, keeping up and making admirably on a showing with regards to (Robinson, 2000). These are additionally called occupation preparation abilities (K and Raj, 2013).

Following table shows Skills attributes that management graduates must possess.

**Habit**

Habits can be defined as dependable and stable way of behaving (James, 1890). Habits are expected outline of behaviour either cognitive or emotional predictable according to the conditions (Jones, 1952).

It should be rational, dynamic, efficient and significant to characteristic and roles of an individual (Bakare, 1997). Jones, further, associated habits with learning stating responses are predicted according to the situations or underlying acquired sets that operates at the time of learning. Habits are psychological characters to reiterate previous responses, and are acquired steadily as people counter in a recurring situation (Wood, 2007).

Techniques or methods of effective learning which encompasses skills such as time management, note making, examination organization technique, reading and writing skills are known as study habits (Percival and Ellington, 1984). Organization of time, syllabus and other resources of learning are also termed as study habits (Christensen at al, 1991). Learning of anything that requires precise repetition of attained

<table>
<thead>
<tr>
<th>S.No</th>
<th>Attitude/attributes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Oral Communication</td>
<td>Expressing information, views verbally</td>
</tr>
<tr>
<td>2</td>
<td>Written Communication</td>
<td>Expressing information, views in writing</td>
</tr>
<tr>
<td>3</td>
<td>Listening Skills</td>
<td>Giving others opportunity to speak, active listening</td>
</tr>
<tr>
<td>4</td>
<td>Problem Solving Skills</td>
<td>Analysing problem and then decision making</td>
</tr>
<tr>
<td>5</td>
<td>Eye for detailing</td>
<td>In depth analysis of situation</td>
</tr>
<tr>
<td>6</td>
<td>Negotiation Skills</td>
<td>Convincing, persuading others</td>
</tr>
<tr>
<td>7</td>
<td>Conceptual Skills</td>
<td>Visualizing/Understanding a problem and solutions</td>
</tr>
<tr>
<td>8</td>
<td>IT Skills</td>
<td>Knowledge of MS Office, relevant software</td>
</tr>
<tr>
<td>9</td>
<td>Analytical Skills</td>
<td>Reasoning, quantitative aptitude</td>
</tr>
<tr>
<td>10</td>
<td>Body Language</td>
<td>Communicating effectively through gestures</td>
</tr>
<tr>
<td>11</td>
<td>Interpersonal Skills</td>
<td>Maintaining robust relationships in personal levels</td>
</tr>
<tr>
<td>12</td>
<td>Common sense</td>
<td>Judgement in practical matters</td>
</tr>
<tr>
<td>13</td>
<td>Time Management</td>
<td>Conscious and effective use of time</td>
</tr>
<tr>
<td>14</td>
<td>Delegation Skills</td>
<td>Assigning responsibility to subordinates</td>
</tr>
<tr>
<td>15</td>
<td>Conflict Resolution Skills</td>
<td>Resolving, peaceful ending of disagreement</td>
</tr>
<tr>
<td>16</td>
<td>Resourceful</td>
<td>Imaginative, creative in resolving problems</td>
</tr>
<tr>
<td>17</td>
<td>Multi-tasking</td>
<td>Perform more than one activity at a time</td>
</tr>
<tr>
<td>18</td>
<td>Innovative</td>
<td>Introducing novel, original ideas</td>
</tr>
<tr>
<td>19</td>
<td>Preventive</td>
<td>Intended to terminate something before it happens</td>
</tr>
<tr>
<td>20</td>
<td>Organizing</td>
<td>Coordinating, structuring task</td>
</tr>
</tbody>
</table>
study skills are known as study habits (Anwana and Cobbach, 1989). Study habits can be both productive as well as unproductive. Positive habits leads to excellent academic performances and increases the chances of employability; whereas unproductive habits hinders learning and achievement (Good, 1998). Students having good study habits inculcate them in their behavior which enables them to perform them in assignments given; the cycle is also applicable in job front (Tussing, 1962). Study habits are the embraced path the students follow to attain mastery over the subject, it involves planning of private reading time (Azikiwe, 1998). Study habits is a resultant of environment at both at home and education institute, reading and note taking habits, planning of work, general attitude, skills already possessed, pattern of concentration, preparation for examination (Patel, 2016). Study habits ensures learning effectiveness (Pauk, 1982).

The proposed curriculum based on KASH Model

The proposed curriculum has been designed and developed on KASH Model of learning. An attempt has been made to integrate the learning attributes under the umbrella of four sub attributes viz Knowledge, Attitude, Skills and Habit. The proposed model helps to quantify teaching and learning in a given environment. The KASH learning model captures the holistic view of learning combining knowledge, attitude, skill and habit and helps to enhance the level of absorption of learning among management graduates. The integrative approach has been adopted to design and develop Management

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Habit / Attributes</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Punctuality</td>
<td>Fulfil task before or on time</td>
</tr>
<tr>
<td>2</td>
<td>Goal setting</td>
<td>Identifying the goal and reaching them in set time frames.</td>
</tr>
<tr>
<td>3</td>
<td>Deterministic</td>
<td>Philosophical believe that all outcomes are determined by causes related to external will</td>
</tr>
<tr>
<td>4</td>
<td>Regular assessment</td>
<td>Continuous monitoring of the assigned task</td>
</tr>
<tr>
<td>5</td>
<td>Reading</td>
<td>Action of study, scrutiny</td>
</tr>
<tr>
<td>6</td>
<td>Following news</td>
<td>Updated about current affairs</td>
</tr>
<tr>
<td>7</td>
<td>Self-development</td>
<td>Gradual development of skills, abilities</td>
</tr>
<tr>
<td>8</td>
<td>Network Building</td>
<td>Building connections in workplace</td>
</tr>
<tr>
<td>9</td>
<td>Social Media Presence</td>
<td>Self-brand validation and publicity</td>
</tr>
<tr>
<td>10</td>
<td>Ownership</td>
<td>Act, right of possession, authority</td>
</tr>
<tr>
<td>11</td>
<td>Maintaining schedules</td>
<td>Completing tasks in deadlines</td>
</tr>
<tr>
<td>12</td>
<td>Exercising</td>
<td>Maintaining physical fitness</td>
</tr>
<tr>
<td>13</td>
<td>Sleep Habits</td>
<td>Ability to fall and stay asleep</td>
</tr>
<tr>
<td>14</td>
<td>Eating Habits</td>
<td>Healthy eating, table manners</td>
</tr>
<tr>
<td>15</td>
<td>Meditation</td>
<td>Concentration, prayer</td>
</tr>
<tr>
<td>16</td>
<td>Win-win thinking</td>
<td>Blue ocean orientation</td>
</tr>
<tr>
<td>17</td>
<td>Innovative solution</td>
<td>Original, effective solutions, thinking out of the box</td>
</tr>
<tr>
<td>18</td>
<td>Energetic</td>
<td>Vibrant, involving great enthusiasm</td>
</tr>
<tr>
<td>19</td>
<td>Practicality</td>
<td>Feasibility, Realism</td>
</tr>
<tr>
<td>20</td>
<td>Unbiasedness</td>
<td>Impartial, Rational, Fair</td>
</tr>
</tbody>
</table>
Education Curriculum in technical institutes based on KASH Model.

**The Process Adopted for Designing the Proposed Curriculum**

The proposed curriculum has been designed on the basis of following steps –

1. Conceptualisation
2. Comparison
3. Needs Analysis
4. Expectation Analysis
5. Objective Formulation
6. Selection of Content
7. Organisation of Content
8. Planning the Learning Outcome
9. Pedagogy
10. Examination and Evaluation

**Figure 4: The Process of Proposed Curriculum**

**Integrating Curriculum Design and KASH Model**

The four elements which have been considered as the basis for the curriculum design for Management Education in Technical Institutes – contextual environment, institutional leadership, competency development and pedagogical methods - have been incorporated with the three learning domains of KASH Model i.e. Cognitive, Affective and Psychomotor, which focus on the knowledge, attitude, skills and habit. The parameters of Knowledge, Attitude, Skills and Habit have been elaborated, as these are considered important for a holistic personality of a management graduate.

**CONCLUSION**

The conceptualisation of the management education curriculum in technical institute has been done on the basis of the current and future requirement of the industry and corporate. Job creation factors have also been considered by introducing the start-up orientation and entrepreneurship. The syllabi of the global top-ranking universities have been studied, discussed and compared with the current syllabi of management education in India.

It has been proposed that the graduates are recommended for integrative electives, which will provide the specialisations in more than two areas. This will help in developing employability skills and opportunities for jobs and entrepreneurship. The candidates/graduates from engineering background will be able to opt for subjects in different departments of engineering. The graduates will be having the techno-managerial and techno-preneurship orientation. The technical skills, human skills, conceptual skills and analytical skills are focussed for developing the competency and for convenience. For convenience to work with others, the attitude development is focussed and will raise motivational level of graduates. As a result, employee engagement and organisational citizenship behaviour is prompted for managerial effectiveness. The happiness index of campus is also recommended with the help of developing hobbies as a part of the competency. The industrial linkage is encouraged for exposure of industrial skills by online projects and summer/winter/major projects. The
knowledge creation, storage and distribution have been introduced by core subjects, specialisation, open electives and by earning additional credits. In implementation of KASH Model in course curriculum designing, the habit/hobbies are also suggested so that individual candidate personality can match with the one's professional area. An attempt has been made to create work-life balance and enrichment while receiving the education. The optimism and talent acquisition and development with the help of course curriculum, pedagogical methods/techniques are also suggested to remove the barriers/unseen situations like pandemic.

The course curriculum is designed to meet the planned and unplanned changes or situation like social/political/economical/legal and technological. The current pandemic situation can also be taken as an example to develop lessons for facing the situation. The economic reports and educational policies are also taken into consideration for developing course curriculum.

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Self-Directed, Informal and Project-Based Adult Learning

Thanikachalam Vedathiri*

ABSTRACT

The rural people of Tamil Nadu State, India have learned managerial skills through self-directed, non-formal, and project-based learning strategies. A qualitative study has been undertaken to investigate the learning processes adopted by rural people. The study reveals that the rural people use planning of temple festivals which result in Leadership Development, Team Development, Project Planning, Planning Programming Budget System (PPBS), Continuous Monitoring of the Progress of the Teams, Suggestions for Overcoming the Obstacles and Bottlenecks, Fixing Revised Targets, Implementation, Project Impact Studies and carrying out the improved planning for the next year. This includes the selection of a new leader who should be more-dynamic and full of integrity. The inner strengths of their approach are Decentralization of Authority, Formation of High Performing Teams, Empowerment of the Teams, Financial Management, Continuous Evaluation of Achievement, and Resolving the Conflicts within the Groups. High-performing teams are recognized and rewarded. The process continues for subsequent years. The second generation is being educated through professional programs.

KEYWORDS

Self-directed learning, Informal learning, High performing teams, Quality circles, Continuous monitoring, Evaluation of the progress, Achievement motivation, and Rewarding.

INTRODUCTION

Normally most of the villagers in Tamil Nadu could not undertake higher education due to shortage of finance, long-distance travel, and absence of mission. Many villagers would complete middle schools, due to free education and the nearby location of the schools. A few complete high schools. However, many of them have achieved very well in their personal life and professional activities. Many established small-scale units and manage them very well. Many took contract works and flourished. The secrets are unknown in their managerial capacity for a long-time. Hence, a qualitative study has been undertaken to identify the management development processes adopted by them.

Objectives of Research

1. To identify the process used by the successful villagers in acquiring managerial skills through self-directed, informal, and project-based learning.

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2. To review the process of leadership development, the formation of high-performing teams and sustenance of motivation.

3. To identify the situational factors that are prevailing in the villages.

4. To develop a transformation model for extending advances in agricultural productivity.

5. To suggest the use of the successful practices in self-directed learning in MSMEs

**Literature Survey**

Open Government (2005) implemented focused learning strategies for creating a continuous learning environment and prepared an individual development plan (IDP). It identified an individual's learning and development goals. Then the manager and the individual jointly develop the IDP. This development process contains training, education, and development activities (formal and informal) to acquire the competencies needed to meet IDP goals.

Mesut Akdere and Simone Conceicao (2006) evaluated the integration of human resource development and adult education theories and practices. They suggested assisting employees to respond to the forces like rapidly changing technologies, adjusting to the diverse work environment. They suggested investing in human capital through continuing education.


Javal, Pourkari, et al (2016) have evaluated the role of self-directed learning on human capital in public organizations. The training and development programs are to be planned to supplement and complement self-directed learning to ensure the needed human capital.

David Handel (2020) concluded that the adults who tend to have the greatest success in their careers, who contribute the most to the betterment of society, and who achieve the highest degree of self-actualization are, by-and-large, self-directed lifelong learners. According to David Handel (2020), the success of humanity depends on the maturation of our youth into self-directed lifelong learners as the norm rather than the exception. A self-directed learner has developed a set of skills required to fulfill their never-ending lifelong education. According to David Handel, learning how to learn begins with how we learn. With that knowledge, we can leverage the evidence-based cognitive science strategies and tactics that facilitate learning more efficiently; retrieval practice, spaced repetition, the spacing of knowledge-acquisition, and interleaving. They are all at the core of learning how to learn. These practices
are further enhanced when we master the ability to focus, do deep work, and develop the habits that eliminate distractions when we need to get work done. All these can be addressed through education and training. The traits of successful self-directed lifelong learners include grit, drive, and self-esteem; the kind of self-confidence comes from mastery but also supports the quality that successful adults need: have zero fear of looking stupid.

Janice Burns, head of Global Talent Development (GTD) and Organizational Effectiveness, developed responsive, agile, and personal solutions that would meet the MasterCard organization’s evolving demands along with employees’ self-directed solutions. This development process consists of 1) Recognizing that learners are in the driver’s seat, 2) Become comfortable with the shift from push to pull, 3) Use design thinking, 4) Use technology to drive employee-centric learning, 5) Realign and reengage, 6) Adopt a learning architecture that supports an expanded vision for development, 7) Adopt a learning architecture that supports continuous learning.

Lara Albert (2021) described learning agility as a concept that amplifies a human instinct to learn, adapt, unlearn, and relearn. With opportunities for growth increasingly available in the flow of work, the human instinct for continuous learning amplifies a fluid interplay between how employees make meaningful contributions to their organizations and engage with their colleagues. HR organizations have to develop a more engaged workforce and resilient business.

The village people adopted self-directed learning through various group activities and systematically enriched their skills and later transferred to their real life. These are presented in the following sections.

**Case Selected**

Tamil Nadu is the tenth largest Indian state and the sixth-largest by population. The state was ruled by several empires, including the Chera, Chola, and Pandian kings which shaped the state’s culture. The state is known for the celebration of umpteen festivals (Tamil Nadu Tourism). Tamil Nadu villages celebrate some of the unique festivals to reflect the rural charm and simplicity of the people (Indianetzone, and Vineet Verma). Cultural festivals are also part of temple festivals. There are four to seven villages deities. Most of these village deities have their shrines in the village. There is no elected caretaker and no land is allocated for the maintenance of deities. One of the deities is called guardian spirits or local village gods (Wikipedia). The village folks celebrate annual festivals through collecting donations from the people, business houses, and town folks who migrated from the village. Successful planning is the main driver for leadership, team development, project management, Planning-Programming-Budgeting-System (PPBS), and performance appraisal and conflict resolution.

**Population**

Around 500 people in ten villages are the population for this study. The population in each village is around 2000 to 3000. In each village elementary schools are run by the local government. In bigger villages, middle schools are run by the government. Most of them in the age group of 21 to 60; completed up to 8th grade; natives of the villages; maintain friendly relations with each other; the average income of the capital is Rs. 5460/- per month. Their primary occupation is agriculture, small business, and weaving. They cultivate paddy, sugarcane, groundnuts, vegetables, and fruits. They speak their mother tongue (Tamil) and good at communication and take independent decisions about agriculture, sales and investments. They also consult others to solve their problems. They follow the Hindu religion. Most of them possess motorcycles. They draw water for agriculture from the village surface reservoir on a turn basis based on the landholding. There is no conflict in sharing the
reservoir water based on the land holding capacity. They maintain farm animals like bulls, cows, goats, and buffalos. They know the agroclimatic conditions of their villages and choose the right paddy varieties. They borrow from the District Cooperative Bank. They did not venture into modern agriculture using mechanized processes. They attend some field demonstrations conducted by the State Agriculture Department/ Cooperative Sugar Mills.

Sample

Five male members from each of the ten villages have been selected randomly. Totally 50 members constitute the sample. The income of them varies between Rs 3570/- to Rs. 6840/- per month. Average education is 8th standard. The average age is 36 years.

Village Annual Festivals

After discussing with 50 villagers in three sittings in small groups, it is learned that they are united to conduct the annual festival of village deity through a dedicated team of volunteers. Based on the discussions on the purpose of the festival, they stated that “gods tame evil and devil forces and converting them to good powers”. They plan the annual major festival after the harvests are over in the month of January. In addition, many smaller festivals are celebrated on a small-scale in different periods.

Stages of Planning the TempleFestival

Planning Meeting

Six months before the festival, a senior member of the village convenes a meeting. The normal time taken for planning is three months. A senior member with 30 years of experience would be the leader for organizing. He would convene a meeting of the heads of the families for the first planning meeting. The agenda is to plan a festival in the month of January. However, the month may vary for other villages. Based on the previous years- experience they fix a budget, collection strategy, items, target dates, and final meeting for implementation.

Allocation Works

Works are allocated first based on the previous experience of the members, and their capacity to plan and execute. Each team would consist of 8 to 10 members. The senior member would conduct the meeting and explain the process of planning and execution. The younger members would contact artists, suppliers, donors and other volunteers. They estimate the cost of the subproject and place it before the subcommittee for its review and approval. The leader would modify the program and suggest new a source of funds. Some of the significant works are i) Fund Collection, ii) Decoration, iii) Musicians and religious discourse providers iv) Fireworks, v) Decoration, vi) Food Arrangement, vii) Water Supply, viii) Lighting, ix) Temple Cleaning, x) Charoite Repairs, xi) Performing Artists, xii) Overall Protection, xiii) Finance and Stores Management. The group has to select a leader and additional members who can take up some specific tasks. The senior member acts as chairman. The group has to meet every two weeks and check against the earlier target fixed both for time and cost.

Target Amount for Each Work

The group estimates the budget and sources on additional fund through new donors, reduction of expenditure through value analysis. They have to maintain a clear account of all original bills and expenditures. The group has to follow PPBS.

Method of Subcomponent Planning

The members are empowered to plan their work. If large funds are needed, they have to get approval from the Project Management.

Project Management

All the senior members are responsible for the overall project. If there is any unforeseen event, if
the festival is to be stopped or postponed the larger group is responsible. The accounts are maintained by the group. If there is any unforeseen expenditure, the manager would advance if the whole group decides in favor. The teams are empowered to add or leave any member. They can have a flexible structure.

**Finalization of Targets, Project Funds and Dates**

After one month, teams come with the target, adequacy of funds, and the readiness to complete two weeks before the festival. Sometimes they fine tune the planned outcome.

**Implementation**

Every team is confident of implementation with quality. If it is impossible, changes are suggested. Additional members from other teams also join to work. Only in extraordinary situations, decisions to drop that activity is taken by a larger group. They conduct two days of religious discourses for two hours each day which consists of popular historical/religious events, short stories, and moral guidelines. People are enriched in managerial skills and planning capacity of new ventures.

**Team Spirit**

The teams have to work together and put all their efforts to implement the festival. A final check will be exercised by the senior members. The success is due to delegation, empowerment of the teams, and guidance to overcome all bottlenecks and obstructions. The final festival will be video graphed for future use.

**Final Audit**

The final audit will be undertaken after one week of the festival completion. An expert team would be constituted to conduct the audit. The errors are to be rectified within two weeks. The savings would be carried to next year. All teams would get recognition for their efforts and accomplishments. The savings could also be used as capital and the needy people can borrow at a very nominal rate of 6% per annum. Care would be taken to have any shortfall in the income.

**Identification of Excellent Teams**

The excellent teams would be identified through the performance at a very input cost. Also, they will get oral feedback from the guests who attend the festival. The team members would be rewarded with token gifts. Any negative feedback will also be discussed and remedial measures would be taken. If the savings are more, a certain amount would be granted for other festivals in the same year. Teams would have their own quality circles to analyze the problems and suggest solutions.

**Identification of a Suitable Leader for the Next Year Festival**

All the members would collectively elect a leader for the next year festival which will be based on the communication skills, empowerment of the teams, support is given, appreciative appraisal, recognition of well-performing teams, decentralization of decision making, flexibility in planning the events, and human resource management skills displayed. The teams would also give authority in choosing new members or drop some members. They can also join other teams.

**Second Generation**

The second generation is being educated through professional education. They are motivated to utilize modern agricultural equipment and cash crops. They plan to use tractors, power tillers, etc. They take harvesters on lease. They were trained in command area development. They have sunk borewells for irrigation.

**Third Generation**

The third generation has been educated in various
professional colleges and they are all well employed. Around 25 engineers have completely absorbed in various government departments and seven have joined the software industry.

Utility of the Captive Population

Technology Transfer from Agriculture Department

In the last 40 years, around 40000 farmers joined the festival. The State Agricultural Department can utilize the opportunity to improve the productivity of agriculture. They can conduct workshops on the introduction of new hybrid varieties, plant protection, the introduction of agricultural machinery, water management, soil testing, small-scale dairy technology, fruit processing, postharvest technology, advances in veterinary science, and inland fisheries. They can develop a training package from seedling to marketing.

Lessons Learned

The success of the festival will lead to new lessons in their business/ profession. Even though none of the villagers studied any management programs, they learned through self-directed, non-formal, and project- based learning. Significant key lessons are:

1. Strategic management,
2. Belief in the team leaders and the members,
3. Continuous monitoring of the performance of the teams
4. Timely support to overcome the bottlenecks
5. Effective Communication and social interactions,
6. Informal learning,
7. The integrity of all members,
8. Empowerment of the successful team leaders,
9. Internal conflict resolution,
10. Supportive and super leadership,
11. Tolerance for initial failures,
12. Timely suggestions to overcome difficulties,
13. Appreciation for excellence and rewarding the highest achievers,
14. Continuous evaluation of progress,
15. Quality circles to resolve the problems and identification of the best solutions,
16. Smooth transition to next year,
17. Planning, Programming, Budgeting System (PPBS),
18. Collective decision making,
19. Ultimately a learning organization has emerged,
20. Strategic planning of the second generation through professional education,
21. Group funding for higher education,
22. Normative and re-educative strategies for growth,
23. Counselling, coaching, and mentoring,
24. Group participation in canal improvement and command area development,
25. Sharing the success stories.

Impact of Lessons Learned

The villagers have learned the best management principles when they started transforming their careers. Almost all of them were very successful in their business ventures like contract works, microenterprises, horticulture, plantation, brick manufacturing, preparing milk products, fruit processing, ornamental fish culture, vegetable marketing, post-harvest technology, establishing rice mills, weaving, etc.

Opportunities for Facilitating the Rural Economy

The rural environment is very conducive during the festival season. The Extension Agriculture Department can use this positive opportunity for the introduction of proven rural technologies. The Agriculture Department can introduce new hybrid seeds, plant protection methods, postharvest technologies, marketing through demonstrations, social interactions, the Extension of Research, Development, Diffusion, and Adoption model, and Empirical and Rational Model of Change Strategy.
The rural population will be ready to accept the innovations that are based on the protected marketing.

**Achievements of the Efforts taken by Rural Population**

- Established a Senior Secondary School
- Established a Skill Development Center through a Community Polytechnic Program and provided space for a workshop
- Established a mini-library
- Developed a black-topped road
- Established an extension center for Kendra Krishi Vidyalya
- Improved the agriculture productivity through irrigation management
- Rinking-Water supply through Water Board
- Maintaining a temple tank for farm animals
- A cooperative agricultural machinery lease unit
- A hybrid seed production center
- Cooperative Milk Production Center
- Cooperative Marketing unit for Farm Products

**Conclusions**

**Transformations to Engineering Education Administration.**

Agricultural College and Research Institute in the region has to develop non-formal programs in emerging rural technologies, training of the farmers, industry- institute-society- partnership, undertaking taluk specific research projects, extension units, Continuous Process Development in Soil and Water Conservation, Drainage, Conjunctive use of Ground Water, Farm Management, Agricultural Productivity, and Rewarding Excellent Farmers. The extension faculty members of the Agriculture units can immensely benefit from the “lessons learned”.

MSME enterprises can create a learning organization based on self-directed learning to implement strategic planning with the full cooperation of the Industry Department. The faculty development programs can be improved based on the self-directed learning strategies. Board of Governors and Directorate of Technical Education can utilize the continuous faculty development. They can plan rural relevant outcome-based courses in small-scale industries.

The Ministry of Education can introduce continuous training of their faculty and encourage the undertaking of consultancy projects for MSMEs. They have to empower high-performing faculty teams, constantly review the progress and resolve the obstructions and bottlenecks for growth.

There is a need for strategic planning and human resource development towards excellence. The high-performing faculty teams are to be supported and empowered to undertake sponsored research and development, planning consultancy projects in rural technologies, and patenting the intellectual properties.

**References**


A study of HRD Activities in Education Sector of Indira Gandhi National Open University (IGNOU)-STRIED

Sarani Bhaumik*

ABSTRACT

In every academic organization, professionals are working in a system to perform various activities and operations. Loyal, properly-trained, skilled, efficient, methodical, systematic and knowledgeable group of educationists bring stability and success to an academic sector. For long run, survival academicians need continuous development and upgradation. Human Resources Development (HRD) means development of intellectual resources, which are the techniques to upgrade available personnel through appropriate methods, such as training, knowledge development through proper modes and channels, provide assistance, transfers and give opportunities for professional & overall career growth. The study investigates identification & assessment of HRD in IGNOU-STRIED is to know about the applications in HRD, to benefit the university with continuous development procedures and sort out problem zone for rectification to maintain efficiency.

KEYWORDS

Skilled, well-trend, academicians, manpower, HRD.

INTRODUCTION

In an academic institution, a substantial count of human being means professionals who are working in system to perform various activities and operations. This is managed as human resources or personnel employed. An academic sector requires intellectual assets known as academic persons and administrative human capital for the running several activities.

Loyal, properly-trained, skilled, efficient, methodical, systematic and knowledgeable group of academicians & administrative personnel bring stability and success to an academic sector. This recommends the significance of skilled and updated human capital in academic sector. Individuals and the academic organization in which they work are inter-related and interdependent. Academic organization proceeds towards affluence only by availing its available human resources intentionally. In parallel, hire hands get multiple monetary and additional advantages through the wealth and profitability of their academic organization.

Human Resources Development (HRD) is a process
to progress and prosper obtainable human capital through appropriate technique like training, knowledge development through proper modes, provide assistance, required appropriate transfers and give opportunities for professional & overall career growth. HRD schemes develop a group of properly-trained, capable and efficient knowledgeable and skilled academicians & administrative personnel. Such group of professionals initiates an important asset of an academic sector. One academic establishment is non-identical from another, mainly due to the workforce working therein. The human capital should be foster and used for the benefits of the academic establishment.

OBJECTIVES

The objective of the study relating to identification & assessment of HRD in IGNOU is to know about the applications in HRD, to benefit the university with continuous development procedures and sort out problem zone for rectifications to maintain efficiency.

Purpose & scope of Professional Progress in academic sectors:

Human Resources Development (HRD) is a kind of mechanism to progress available work force through appropriate methods like proper training, due time promotions, transfers for betterment and provide opportunities for overall growth. HRD schemes build a group of properly-trained, effective, capable and efficient skilled manpower like academicians & administrative personnel of academic organizations. Such kind of group comprises a vital strength of an academic sector. Particular academic institution is non-identical from another, mainly due to the workforce working therein. The human capital should be foster and used for the benefits of the academic organization as well as the society.

Human capital is highly precious assets in administration and management and requires being optimal utilized systematically & competently. The main reason behind it is achievements; security and advancement of an academic organization, depending on its understanding in acquiring, appropriate employment and flourishing the professionals for the betterment of the institution. In the major analysis, it is the employees, who represent people, who bring favourable impacts & ensure a development of proper ambience and culture that lead to the proper growth & prosperity as well as development within the academic institution. HR is a highly obtaining beneficial asset & all inclusive performance of the institution & academic sector depends upon the proportion to which it is efficiently utilized and developed.

HR is unquestionably vital even in this era of comprehensive use of IT. This is the main reason that the human brain which has magnitude to think, react and assess everything. Academicians are intellectual asset, and administrative staffs are backbone of an academic organization. Academic institution management invest proper funds on proper training & development of professionals and this advises the significance of human capital & its endowment in progress of various segments. Efficiently managed academic organizations in our country give special importance and good attention to HRD.

Maximizing academician ability is the stepping stone for any educational reform. The idea generally is welcomed now a days, covers not only before service training, but in regular intervals developmental schemes and organizes during service training for all academicians during the total period of their careers. Regrettably, hardly any country that attaches due significance to employee retraining needs. Academicians training, thus, need to be scrutinized in the proximity of continuously changing needs, both with respect to foundation and lifetime oriented skills and to future employment essentials.

1) To impart training to academicians to evolve them into inspiring teachers.

2) To induct the newly placed academicians by providing inputs on policies, practices and
procedures of the university.

3) To enhance the research capabilities of academicians and scholars by inculcating sound research methodology.

4) To expose academicians to the information communication technologies (ICT), to make them effective in academic delivery.

5) To train academicians to improve their efficiency and effectiveness.

6) To nurture leadership capabilities of the academicians, to prepare them for future responsibilities.

Ameliorating the quality of academic practice is the point of entry for any sector renewal strategy. It necessitates that, service academician training schemes, however effective it may be, will be adequate by itself to compose academicians for their full length of career. Uninterrupted upgrading will be mandatory and necessary now days. During service, proper training for academicians, will be feasible for a powerful mechanism to elevate proficiency levels and retain academicians side by side. New trends in academic practices, inhabits at best a modest area in Education Ministry programmes.

Before, service training always targets the learning and acquiring knowledge of the many related subject affair and generally neglects the pedagogical approach and practical feature of academic practices. Continuing during service training should be scrutinized in the context of an international perception, taking into narrative the twin proportion of skill-developing, namely before and during service training and skills development. The interconnected functions of each should be elucidates in view point of the desired comprehensive skill and knowledge profile of the polishing teacher and of the assumptions of the Education Ministry.

Case-let: IGNOU-STRIDE

The Indira Gandhi National Open University which is famous in name of IGNOU, The People University is a large Central Government University which is established in 1985 by an Act of Parliament, has regularly endeavor to raise a comprehensive expertise society through inclusive academic practices. The IGNOU has contrived a momentous impression in the field of higher academic sector, public education and perpetual professional skillful improvement. IGNOU, the people university, is devoted to quality in training, enlightening, teaching, research-experimentation, and extension activities, and take measure as an indigenous resource centre for prowess and infrastructural support in the Open and Distance Learning (ODL) practice.

Staff Training and Research Institute of Distance Education (STRIDE)

Division of Distance Education in 1986, after the foundation of IGNOU in 1985, is to give provision of training to various official bureaucrats of the Indira Gandhi National Open University (IGNOU).

Staff Training and Research Institute of Distance Education (STRIDE) has been organizing academic research & training activities for IGNOU, State Open Universities which is known as SOUs, as well as, distance educational organizations in India. STRIDE is also serving the distance mode learning training, research activities and capacity building needs of the 45 countries. Huge number of training initiatives have been successfully conducted by Staff Training and Research Institute of Distance Education (STRIDE) since 1985 and many major experimentations and research projects have been flourishing and successfully completed.

STRIDE performs the following activities

1) Recommended academic projects to evolve human capital in distance mode teaching learning within country, as well as, major developing countries.

2) Regulate, conduct and coordinate many training programmes in various levels for educational, non-educational, and other professional executives functioning in open and distance
academic organizations.

3) Develop instructional design for various packages for training and many resourceful informative study materials for training and coaching of various categories of official executives & representatives, who are actively associated in the distance mode academic organizations and follow that culture of learning structure and arrangement.

4) Strategic planning and policy conducts and supporting many research and scholarly exercise and intellectual programme assessment in open and distance academic practises, for developing the standard of distance mode educational culture and for scheme and rule development.

5) Devote national and universal counselling and consultancy assistance on distance and open mode academic practises and furnish proper training for endogenous development as well as sustainable oriented systems expansion in government and private academic institutions and consortiums.

6) Take action as an information and knowledge resource centre for distance and academic practices in the country and foreign countries, including publication of training materials on open mode of learning.

7) Publishes universally mentioned Indian publications of distance & open mode of academic practices to circulate facts, figure, and statistics about theory related practice, investigation and research in distance and open and academic practices.

8) Recommend and provide a professional developmental scheme for educational & instructional capacity building programme for IGNOU’s academic counsellors as well as other related academic organizations.

The objectives of STRIDE are

1) To point out training related needs of various selected segments previously involved and those anticipated, to get involved in distance and open mode of academic practices;

2) To bloom a resourceful latest data, figure, and statistics, training oriented high quality stuffs, courses and proficiency and make such resourceful information accessible whenever needed;

3) To design and develop training plan as well as training related information and materials to satisfy the essential needs of various categories of individuals and open and distance academic & training organizations;

4) To develop proper plan, implement and execute training and staff developmental scheme for the recognized target segment and academic institutions, through various fruitful plan of action leading to finalize completion of certificates, diplomas and degrees;

5) To encourage research projects in distance and open education at the various major levels in order to enhance the training courses and successfully conduct procedure and encounter the provocation of the expanding academic environment;

6) To provide research based courses to qualified eligible segment leading to MPhil and PhD degrees;

7) To acknowledge to the requirements of energetic systems of academic practices and evolution of using Information Communication Technology (ICT) and digital library.

Methodology

My study is based on primary data, which are collected from relevant sources. Data from different processes of IGNOU Kanchrapara Study Centre (2803) are collected to accomplish the entire work. Appropriate protocol is maintained. The survey instrument (questionnaire) is finalized following pilot tests.

Process of Data collection

a. Coordinator & Asst. Coordinators
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<th>Age Group</th>
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<th>Teaching levels</th>
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<th>Do you know the big picture vision of your organization (IGNOU)?</th>
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<th>How many in-service training programmes have you attended?</th>
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<th>What type of trainings have you attended?</th>
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<td>i) 25-29</td>
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<td>i) Masters</td>
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<td>i) Arts</td>
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<td>i) Under graduate</td>
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<td>ii) 4yrs-6yrs</td>
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<td>ii) Post graduate</td>
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<td>ii) No</td>
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</table>
b. Departmental (STRIDE) personnel concerned with Training & Development from HRD.

**Tools for Data Collection:**

i. Questionnaires
ii. Manual
iii. Unstructured interviews & Interactions

**Size of sample**

- Coordinator = 01
- Asst. Coordinators = 04
- Academic Counselor = 20

Total interviewed = 25

**Questionnaire Survey:** Questionnaire has been designed to obtain information for further in-depth investigation to form basic data, keeping in view the HRD climate accordingly.

**Scheduled Interview:** Everyone from the group was interviewed.

Structured Formats are being used by IGNOU on different assessments, manuals etc.; provided essential data for the present work.

**Total sample size 25.** All IGNOU’s academic counsellors are associated with various academic sectors like government and private colleges, as per IGNOU’S norms. ormance, Management Research News, 30 (3),

<table>
<thead>
<tr>
<th>Criteria to use when selecting in-service training programmes?</th>
<th>i) Importance of your own job/professionalism</th>
<th>17</th>
<th>25</th>
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<td>ii) Importance for the educational institute</td>
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<td>iii) Personal growth &amp; development</td>
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<td>iv) Obligatory participation assigned by the educational policy.</td>
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19) Post Graduate Diploma In Teaching & Research In Management (PGDTRM), IGNOU, Text books, New Delhi, 2011

**Analysis:**

1) In entire study I found, maximum 35-39yrs age group academicians are associated with IGNOU.

Out of 25 samples, 04 samples are of age group between 25-29yrs, 05 samples are of age group between 30-34yrs, another 07 samples belongs to age group 35-39yrs. Rest 09 samples belongs to above 40yrs.

2) In this study I found, maximum male head count is highest rather than female.

Out of 25 samples, 17 samples are of male and 08 samples are of female, no transgender samples are found.
3) In this study I found, maximum no of academicians having only master’s degree as their highest qualification.

Out of 25 samples, 12 samples only having master’s degree educational qualification, 05 samples are having M.Phil degree qualification, and 08 samples are having Ph.D. Other types of qualification holders are not found.

4) In this entire study, I found maximum no of academicians belonging to Department Of Arts and teaches various subjects of arts like, Hindi, English, History, Sociology, etc.

Out of 25 samples, 10 samples belongs to arts department, another 08 samples belongs to commerce department. They teach basic commerce papers, International business & operations, etc.

5) In this study I found, maximum samples belong in the position (designation) as Asst. Professor in their work field.

Out of 25 samples, 15 samples are Assistant Professor, another 07 samples are Associate Professor and rest 03 samples are belongs to Professor Designation.

6) In this study I found, maximum no of academicians having above 10 yrs of working experience in their respective field.

Out of 25 samples, 02 samples are having 1yr-3yrs of working experience, another 06 samples are having 4yrs -6yrs of working experience. Another 07 samples are having 7yrs-9yrs of working experience, rest 10 samples are having more than 10yrs of working experience.
In this study I found, maximum no of academicians teach only degree courses.
Out of 25 samples, 03 samples teach under graduate courses, another 16 samples teach post graduate degree courses, rest 06 samples teach post-graduate diploma courses as well.

In this entire study I found, maximum academicians are aware about IGNOU’s internal working process as well as policies.
Out of 25 samples, 22 samples are having clear picture about IGNOU’s internal working process, rest 03 samples are not aware about it.

In the entire study I found, maximum no of academicians have attended 1-2 training programmes till date.
Out of 25 samples, 10 samples have attended 1-2 training sessions till date and 06 samples have attended 3-4 training sessions. Another 04 samples have attended 5-6 training sessions in their present tenure of career. Rest 05 samples have attended more than 6 training session till date.

In the study I found, distance learning is most popular mode of training among academicians.
Out of 25 samples, 02 samples have attended pedagogical workshops till date, another 19 samples
have chosen distance learning process as a mode of training, and another 03 have attended training for trainer sessions and rest 01 sample has attended other mode of training session till date.

11) In this entire study I found, maximum academicians select their training programme, as importance of their own job related development.

Out of 25 samples, 17 samples are selecting service training programmes based on importance of their own job, 01 sample is selecting service training programmes based on importance for the educational institution, 05 samples are selecting service training schedule formulated on personal growth & progress. Rest 02 samples are attending service training programme as obligatory participation assigned by the educational policy of the organization.

Conclusion & Recommendation:

Now a days, academic is very versatile and challenging sector. To meet the needs of other stakeholders associated with this sector, academicians must update themselves to satisfy the needs as well as successfully perform multitasking job role. So, HRD in academic sector plays a vital role for overall betterment of this sector. The theory, strategies and practices relating to HRD in IGNOU, are mainly related to the core area of training & development. The important components of human resource development are training, education and development. The four core areas of human resource development of IGNOU are organization development, training & development, appraisal systems and career advancement. The transformation to a more complex and technology-driven work environment demands a well planned orientation of the existing workforce, not only in the ways in which they work, but also in the aspects related to ‘how’ and ‘what’ they learn. The workforce also has to, by situational necessity, get acquainted with their new roles and occupations which are increasingly challenging. This inevitably calls for commitment on the part of organizations towards human resource development for optimization of employees’ performance outcomes.

In STRIDE, IGNOU training and development has to necessarily undergo a metamorphosis, and will have to increasingly focus on the multifaceted competencies of people in the use of state-of-the-art technology and in the ways in which they interact within the university. STRIDE, IGNOU has given its effort towards making better use of existing Human Resources and making whatever preparation are necessary to ensure that University needs are sorted efficiently.

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Why Industry is Losing Faith in Health, Safety, and Environment Awards?: Professionals Rethink

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ABSTRACT
Health and safety systems are at the crossroads as hundreds of people are killed while working every year. The paper questions, whether the HSE awards have to recognise or promote best safety practices in organisations? Safety awards in industry are for business excellence and/or the safety excellence is a critical moot question that needs to be probed. For many decades, these awards were so popular in industry. What are the reasons that now people in industry are losing faith in these awards? This article explores the underlying reasons for the same through this qualitative research involving 250 HSE professionals. Ten aspects of these safety awards have come out in the findings of this research, the implications of which are discussed for promoting safety culture.

KEY WORDS:
Safety, health, HSE, professionals, awards, criteria, behaviour, India

INTRODUCTION
Why do we need the awards at the very first place other than the recognition or benchmarking, when the safety systems are functional, being implemented and total employee participation is active in risk-correction at all work areas of the site or plant. Possibly, these awards are granted to the organisations when all these safety systems are in place but not fully functional for enabling the total inter-dependent safety culture. Secondly, the safety awards in industry are used to balancing between the business excellence and the safety excellence, more so for promoting the business excellence and less for the safety excellence. This divided focus of the management is a prime reason behind the people being killed at every work site, despite these HSE awards (ILO, 2020).

Every year, people are invited to most prestigious awards, celebrating health and safety excellence across all industries in more than 50 countries worldwide (British Safety Council, 2020). The Confederation of Indian Industry’s SHE Award is to evaluate an Organization’s interest towards the well being of its employees through adequate measures, not only for the Regulatory requirements, but also as a part of the Management’s commitment towards ensuring that the workforce is adequately protected through effective Safety, Health & Environment measures (Confederation of Indian Industry, 2020). ICC National Occupational Health & Safety Awards

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recognize best practices in OHS (Indian Chamber of Commerce, 2020). The National Safety Council awards are given annually to individuals and organizations that have demonstrated leadership in keeping people safe at workplaces (National Safety Council of India, 2020). Federation of Indian Chambers of Commerce and Industry emphasizes safety systems excellence awards every year or Industry (FICCI, 2020). The Government of India instituted National Safety Awards (NSA) in the year 1965, to recognize safety performance of Industries to maintain the interest of both the managements and the workers in accident prevention (DGFASLI, 2020). The National Safety Council is America's leading non-profit safety advocate, to focus on eliminating the leading causes of preventable injuries and deaths. The Council offers the variety of individual, team and corporate awards. Employers providing exemplary off-the-job safety and health programs are eligible for the Community Safety Award (NSC, 2020). The safety awards programs provide companies, a means to gauge their program against the industry it does business in.

Critically speaking, there are huge numbers of at-risk behaviours at every site and the companies still receive safety awards. This highlights doubts about the validity of such awards (Kaila, 2011, p2135). Industry achieves awards every year in HSE despite the fact they practice at-risk behaviours daily violating procedures which lead to incidents on regular basis. There are gaps in practices, manuals and standards. At the same time, there is also a mushrooming of awards agencies around. There is a need and scope to explore the lacuna and improve further.

Research / Objectives
To explore the perceptions and reasons, whether the people in industry are losing faith in HSE awards, and to suggest the scope for improving various aspects of HSE awards management.

Methodology
Open-ended questions based interviews and personal in-depth discussions with 250 HSE, medical, education, management, mental health professionals were conducted through remote data collection techniques over 3-months (July-September 2020) in India from diverse locations and organisations. Their responses related to questions on HSE awards were collated and thematic data analysis was used to reflect and analyse the results. The responses of these professionals are presented in the following 10 themes as tabulated.

Results and Discussion
Overall, 80% of the study participants agreed that they are losing interest or lost interest as the HSE awards are only documents-based, and also it would depend on the type of national or International, private or government agencies providing these awards, and their evaluation criteria, but the commercial awards are being avoided.

Ten insightful aspects of HSE awards have come out in research findings as below.

1. Awards are Ornamental with no much value - 80%
2. Rationale of Awards is not clear - 84%
3. Criteria, fee and assessment are important - 100%
4. Much scope of improvement in being fair - 84%
5. Reputed Awarding Agencies matter - 54%
6. Authentic Awards do value - 51%
7. Management perspective - 75%
8. Self-realisation is the key - 69%
9. Seeking awards for Safety Culture - 52%
10. Awarded sites also met serious incidents - 50%

Awards are Ornamental with Little value
The value of safety awards is being questioned as being only ornamental for organisations. The responses received from 80 percent of the HSE professionals indicate that there is not much value in the HSE awards. They have become ornaments
to showcase. According to a safety head, “I have all and sundry associations giving safety awards without doing any review. I do know, where just after fatal incident, the organisations showcase safety awards from Delhi association”. An objective and thorough methodology of assessment are needed to bring in faith for these awards. The safety awards to Massey Energy and Transocean were questioned after the coal and oil disasters (The Rural Blog, 2020). The value addition of awards schemes that exist in the Occupational Health and Safety area is very limited (Health and Safety Laboratory, 2020). These schemes can result in safety behaviours, if they are focused, well implemented, evaluated.

*Rationale of Awards*

ILO updates seem to question the logic or the genuineness of these awards. While there is an increase of accidents corresponding to over 6000 deaths every single day and increased ill health despite all HSE efforts, then why are the companies being recognized with awards (ILO, 2020). Organisations are not only losing faith in safety awards, they are generally worried about so many useless awards (about 84% all types of awards), being pushed for commercial purposes these days. Majority corporates are over particular and don’t even participate in many such awards. Many organisations lack in sincere, honest, and ethical approach in filling-up the awards application. Even, the awarding agencies are interested in nothing more than the commercial aspects.

*Criteria, fee and assessment are important*

Nearly 100 percent of HSE professionals emphasised that the safety awards should be provided to organisations and the people who really demonstrate safety at field. If mechanism of giving safety award is not sound, then one can face above problem of losing faith in safety Awards. People are losing faith. Nowadays safety awards are linked with entry fees. In some awards, even assessment processes are also not up to the mark. But yes, some awards are really worth due to their assessment process.

Some agencies are following assessment which are based on application: a) No data verification and site assessment. b) assessment based on application and data verification.

Third assessment has steps below which are quite comprehensive.
1. Application assessment & data verification;
2. Site assessment by independent bodies;
3. Final presentation by organisation for best practices

The University of Iowa (2020) suggested the review criteria to include annual safety reviews, implementation of corrective actions, departments not to be penalised for reporting incidents, engagement to improve safety culture, and innovations in safety practices.

*Much scope of improvement in being fair*

Much uncertainty exists regarding the effectiveness of safety awards (Goodrum & Gangwar, 2010). A safety head stated, “recent days, there are some open biases, and also some real achievers are recognised. I see it from my own experience. We got to be non-judgmental in evaluating the contributions”. Nearly 84 percent HSE professionals agreed that there is a huge scope of improvement in this area. It is crucial to guide organisations to provide fair information about safety performance even if it is not favourable (WorkSafe, 2020).

*Reputed Awarding Agencies matter*

Nearly 54 percent of the HSE professionals expressed that the people believe in grabbing reputed organisation awards like CII, FICCI, NSC, BSC which can bring laurels to their organisation. The award can be a big motivational tool. The main goal of the NSC awards is to support the broader mission to save lives and prevent injuries, from the workplace to any place (Safety and health magazine, 2020).
**Authentic Awards do value**

Is Indian industry losing faith in the safety awards? “I don’t think so”, says an EHS Vice President of Dorf Ketal. “I am going to introduce one new award. If people are guided correctly they are keen to work upon exact requirements in safety improvement and can achieve these awards (Personal communication, 2020). About 51 percent of the HSE professionals expressed that the authentic and quality awards like that of NSC, OISD, Ministry are always welcoming. Rewards are a recognition towards demonstrated commitment to safety of an organisation ensuring that the workforce is adequately protected through effective HSE measures (Confederation of Indian Industry, 2020).

**Management perspective**

People still have faith in safety award. Such awards boost morale of employees. Also it marginally increases faith of employees in their own safety systems. However sometimes, the management takes it in a different perspective. About 75 percent of the HSE professionals expressed that nowadays, management is mostly sales focused, believing in statistics to answer to the board. They believe that big companies like L&T and Tata, the awards can be purchased based on providing rosy information. Management think that awards for safety would help build safety culture and keep workers working safely but it disinterests everyone except the award winner as management perspective is to use awards for sales promotions (Burns, 2020).

**Self-realisation is the key**

Over the years, the awards have motivated companies for adopting best safety practices and systems in their sector benchmarked with the best in the industry (FICCI, 2020). But, one has to be very critical if these best practices are only documents-based. According to a veteran EHS Director, “It depends on which safety award we strive for, getting 5-star BSC rating is also easy, as it has become more of business than an endeavour to improve industrial safety. Most of the safety awards are data-based which is not the correct picture of the safety performance”. Nearly 69 percent of the HSE professionals expressed that the self-realisation and purpose behind safety drive itself is an award for industry If each milestone achieved is celebrated, as safety is a journey, achieving every milestone brings self-satisfaction and self-appreciation to keep us motivated for safe practices.

**Seeking awards for Safety Culture**

Make ‘working safely’ on continuous manner will set a standard. Whereas this will make a benchmark for the organisation in a period of time. Then that will become the culture for the organisation. Setting standard and establishing the system will give you the guidelines to work more safely. Continuously working in a safe manner will be leading to the better culture, by following others to follow and adhere to the same. Many (52%) corporate professionals opined that they are promoting safety culture in their sites across Indian locations so that they could apply and achieve national safety awards. They are working hard to strategically plan and approach these awards. It is like planning forward, implementation backwards. Toronto Construction Association’s (2020) Outstanding Safety Culture Award, recognizes a company that treats safety protocols, with a genuine sense of urgency and is innovative and rigorous about ensuring workplace safety is of paramount importance.

**Awarded sites also met serious incidents**

Nearly 50 percent of the HSE professionals agreed that there are many serious incidents that happened in the sites across the globe that were certified and awarded by the national and international agencies. This implicates several aspects, that the awards are possibly limited to feel-good factor or appreciation, or whether the sites get complacent after receiving these awards. The major fire at Indian Oil Corporation’s (IOC) Jaipur terminal was caused by the non-observance of normal safety procedures.
(Business Standard, 2013), whereas this site had achieved all national and international laurels and certifications.

Conclusions, Recommendations and Implications

CONCLUSIONS

1. There exists a large number of HSE awards in order to recognise the work places with safety excellence, nevertheless incidents and fatalities keep increasing. Whether these awards deliver what they stand for, is a million dollar question. Each country has hundreds of work-related fatalities every year. For example, 110 Australian workers were killed at work in 2020 till 10 September. In 2019, 182 Australian workers were fatally injured while working. Whereas, 3,751 workers were fatally injured while working from 2003 to 2018 (Safe Work Australia, 2020). Hence, we need to go beyond than just the face value of these safety awards which are actually meant to add a huge value to a work place for ‘people’s safety’.

2. As high as the 80% of HSE professionals perceived that the industry is losing interest/ have lost interest in safety awards for many reasons, which need to be pondered over. The reasons are that these awards are ornamental, and useless. Rationale, criteria, fee and assessment are important for improvement in being fair. While providing information, reputed awarding agencies, authentic awards management perspective, self-realisation, seeking awards for safety culture, and the awarded sites also met serious incidents. The International Stainless Steel Forum introduced a Safety Award Programme which invited members to submit good ideas from their Safety Programmes, which are circulated among members, following the principle that people would learn from the accidents of others (Core Sector Communique, 2020).

3. Whether industry is losing faith in the Safety Awards? The mixed perspective is that whereas the people who are working in the developing organisations are being benefited, as for applying of any new tenders, company wants to use the accreditation for their order bookings. Secondly, whereas the developed organisations are concerned, sometimes, they do not have conviction for the awards, they look for results on their own HSE implementations. They mainly focus on ISO kind of certifications to enhance their systems and implementation. The DuPont Safety and Sustainability Awards invite organisations that successfully implemented innovative ways of safeguarding employees, communities and the environment, while also contributing to the economic and social health of society (DuPont Sustainable Solutions, 2020).

4. The management’s focus is clearly to achieve business rather than safety by bringing in the national and international HSE awards and accolades. Every corporate has these awards in their cupboards, nevertheless the fatalities did not stop. Beside awards, we have so many experts everywhere, then why so many accidents are happening regularly. Hence, one view is clear and crystal that awards are not meant to say that the organisations have achieved safety excellence by availing these awards. Preventing workplace fatalities is a necessary goal of safety management system, but quite often, the employers fail in their leadership roles and approach towards fatality prevention and the unthinkable happens and someone dies at the work (Walter, 2020).

RECOMMENDATIONS AND IMPLICATIONS

1. SRC & Johnston (2019) observed that the safety culture was more than just working safely; it was about celebrating our successes and continuously improving. The critical question is that when organisations on an average have almost 30 percent at-risk behaviours, which obviously mean they lack in the safety culture, how could they be considered for safety awards. On the other hand, awards agencies ought to consider the behavioural aspects of safety, behaviour that is the root cause of almost all incidents (Kaila, 2020). In this regard, if the accounting of at-risk behaviours are not part of awards criteria, then these awards are not valid, and incidents would surely occur,
even after receiving the best safety awards. Unsafe practices/at-risk behaviours are the early warning signs of a potentially serious incident and the zero initiative ought to include steps like: targeting zero injuries, empowering individuals, creating a positive reporting culture, reporting of near misses, managing workplace incidents, commitment to sustaining a safe workplace, communicating openly, influencing long-term change (Webcke, 2020).

2. Moreover, most of the safety awards defy the fundamentals of the occupational safety and health (OSH) which is generally defined by the ILO as the science of the anticipation, recognition, evaluation and control of hazards arising in or from the workplace that could impair the health and wellbeing of workers, taking into account the possible impact on the surrounding communities and the general environment (Alli, 2008). In principle, a safety award based on well-rounded evaluation is needed to determine the extent to which it is intended to capacitate workers to be safe and productive at workplace (Wegman & McGee, 2004). Safety awards criteria must include the field-level increase of safety awareness till the last person at work areas for enhancing more robust safety systems for everyone at site (Yumpu, 2020).

3. The awards lack much in application value, ethical standards, value for life etc. Most progressive companies affirmed that their business excellence is almost 100 percent. However, the HSE excellence is nearly 70-80 percent, but they received all kind of awards, which is questionable in view of value for human life and zero-harm focus. It is clear that the safety awards and safety culture do not seem to fit together. We need to understand the safety awards in the pretext of existing safety culture in the industry which poses a critical question as to the purpose that awards serve. Safety policies and procedures differ so much in practices in every plant. According to a veteran Vice President (HSE) of an MNC, “Bent for profits of the managements over-writes safety culture, ‘safety first’ even becomes 2nd/3rd, it is ok, but safety takes last seat in favour of business”.

Many safety culture awards are available with a well defined criteria (SAFE Work Manitoba, 2020) but incidents keep happening on regularly which does not support the rationale/effectiveness of the HSE awards. The safety awarded workplaces need to be simply safe with zero incidents at all times for all persons reporting for work daily.

4. The work sites are not totally safe, how come they get awarded, as most companies revealed their safety culture management score is around 80 percent on the basis of following ten points criteria measurement (Kaila, 2020).

- There is a strong belief in BBS (Behaviour Based Safety) concepts of all employees and management. BBS is rolled out among all employees at the site/plant.
- BBS is adopted as corporate policy/value and in employee performance management.
- BBS is being practiced on daily basis by all employees and Associates.
- Online observations reporting in each department including contractors.
- Each department has got rid of the reactive and dependent safety cultures.
- Motivational rewarding for best observers and department every month.
- People at site don’t bypass unsafe behaviour, rather spot-correct it.
- Departments are aware of the Hot Spots
- Departments have action plan to address the Hot Spots
- HOD is motivating employees and associates for BBS

To reach a score of 100, certain improvement action plans are needed especially for contractors staff to move from dependent safety culture to independent and inter-dependent safety cultures. For a new action plan to make safety culture as way of life, there is a need to linking BBS to CSR, communities and colonies around as well as homes. Building a Safe System is a holistic, long-term exercise, and is based on shared
responsibility (ITF, 2016).

**According to a HSE Strategist, the HSE awards need to consider the following:**

a) Vision Zero can be achieved only if the BBS processes are meticulously followed.
b) BBS - A Key element needs to include in HSE as the Key element in all industries.
c) HSE guidelines need to be redefined in light of this global pandemic with BBS playing key role.
d) BBS influencing HIRA strategies inculcating responsible behaviour in the minds of workers.
e) BBS trainings shall be mandatory in the training calendar of every Industry.

According to AFCONS company - Gopalpur Port Project, the Winner in CII (Confederation of Indian Industry) eastern region Safety, Health & Environment Award 2019-2020 beating 9 Construction companies, “if you follow BBS guidelines, you can win every platform”. A senior professor of the National Institute of Industrial Engineering (NITIE) stated, “BBS reinforces the traditional safety systems aiming towards zero incidences in the workplace”.

5. Also, it needs to be noted that there is low concern for safety for the contractors staff. The absence of workplace protections reflects on the efforts to undermine worker safety (Leibenluft and Olinsky, 2020). Most organisations admitted that they are able to develop safety culture for their employees but failed to do so for contractors’ workmen. Then how they receive the awards when the benefit of safety culture has not reached unto the last person in the premises of the company. Hence, there needs to be a planned intervention to step up safety awareness among the low-paid contractual persons.

6. Practically, the corporates are not ready for safety awards, as they have not established safety culture at sites for which they are awarded. There are a widespread failure to take the safety regulations seriously (DORRELL, 2020). Also the awarding agencies take this opportunity to award them for vested commercial interests. Proactively, either the companies must achieve the safe workplaces and then go for awards, and/or the awarding agencies must enable, support and develop the safety cultures and then award these aspiring applicants for awards. Many corporates stopped taking interest in these awards rather are trying hard to remain focused on developing safe workplaces for their workforce as nobody likes to get even a first-aid injury.

7. Finally, the serious implications of the findings of this research can be imagined in terms of fake awards based on rosy information of safety leading to incidents of fire or fatalities sounding very critical in nature. While this scenario endangers lives of people to the unmitigated risks that the employees and contract staff are exposed to. The role of the HSE is questioned in preventing accidents at work which would lead to more injuries and possibly lost lives (PFM, 2020). Also, with these fake/so-called HSE awards being received based on mere documentation leading to better image of the company for more sales promotions, and insurance coverages for being awarded/certified sites, are some complications and violations of business ethos.

8. The benefits that the effective Board level ethics, organisational vision, leadership and direction of occupational health and safety can bring in terms of health and safety of people and the overall business performance, are inseparable. Then why is it that the business excellence is far ahead, and the HSE excellence is far behind which puts the lives of employees at greater risks, killing people each year. The organisations aspiring for awards and the HSE awards agencies need to revisit this imbalance seriously in terms of ground realities of safe practices (Health and Safety Executive, 2020).

9. Remember, you may be taking somebody’s life by awarding an unsafe organisation. Thus, it is recommendable in view of the above proceedings of this paper that a company (which does not have a safe culture or has a past record of incidents and fatalities) should not be awardable, and awarding
such an entity should be unlawful and to be avoided by the awarding agencies. It is hoped that these implications shall be interpreted positively as a piece of research information towards a scope of improvement in HSE awards for corporate safety and human life.

10. In view of the above discussions, there is strong need felt for local governments’ control over the wrongful selection criteria on the safety awards, and installing corrective action on agencies awarding companies with unsafe HSE cultures, in the larger interest of the society for developing safe systems based on innovation and excellence (Australian Government, 2020) and finally, to probe a vital question as to why so routinely the ethics of human safety are being sandwiched and bypassed between business profits and safety excellence, and someone gets killed.

References


EMPLOYABILITY : A Study on Changing Paradigms
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INTRODUCTION
“Changing Paradigms of Employability in IT industry”
This document is a Practitioners view on the changing phenomenon of “employability” because of the phenomenon called “Fourth Industrial Revolution” driven by technological advancements like digital and automation revolution in IT Industry.
This insight may help us identify the factors which would impact the future employability of IT Talent Pool for the benefit of industry and country and how HR/ Training/ Talent Management Professionals can play the role of a “Strategic Talent Partner” in grooming a “future ready” and “malleable” IT workforce for the Digital Age.

THE CHALLENGE!
The incredible frequency and intensity of change in today’s work environment amplifies the importance of organizational and individual flexibility. It is a reality of today’s workplace that organizations and the people that occupy them need to keep adapting to survive. This is because the employee- employer relationship is no longer a long-term phenomenon but based on value exchange between them.
The above phenomenon has now started manifesting itself in the most amplified manner as an existential crisis or transformational opportunity in Indian IT industry today, faced with immense revenue and margin pressures caused by vanishing cost arbitrage coupled with the looming threat of sudden redundancy of its workforce due to huge changes in technology and skills needed as a result of Digital revolution.
While the signals of such a scenario emerging was not unknown the speed at which reality has stuck, the scale of impact and the apparently inadequate preparedness of the industry to deal with the situation has resulted in the current crisis. Talented Manpower (Skills and Capabilities) being the most critical asset of this industry this crisis clearly falls in the realm of HR /Training / Talent Management Functions to step up and ensure that industry has a sustainable mechanism to ensure “workforce readiness” of talent pool to meet future business demands.

THE EXPECTATION
As we find ourself in the threshold of next phase of industrial revolution, Corporate world for the first time is looking for thought leadership and guidance from the Talent Management / Training / Human Capital Functions to create a self-sustaining “Talent Refactoring” ecosystem which can help companies to groom/ repurpose the existing talent pool to make it “future proof” workforce and create a sustainable talent pipeline equipped to meet the business needs of Digital Age. This catapults the HR/Training/ Talent Management functions to the centre stage of Corporate strategy. *
This contrasts with earlier phases of industrial

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revolution where, core engineering, finance and economics functions were the key driver functions of the revolution.


**THE FUNDAMENTALS OF EMPLOYABILITY**

Let us start with understanding the fundamental concepts of Employability…………………

A summary of numerous research studies defines “Employability” as a “capability” to execute a work as per defined standards. It is an outcome of optimal blend or amalgamation of competencies which include Hard Skills, Soft Skills and Personal Attributes (collectively called “Competencies”) which makes a person productive in any job endeavor.

While hard and soft skills are trainable to a great extent, personal attributes are an outcome of how the incumbent is moulded based on the society, education, environment, culture, and family he or she comes from, and as such, is less modulable.

Thus, a person who has excellent employability skills would mean, his or her readiness to start making meaningful contributions in the respective job role at expected standards based on a combination the above explained competencies.

Thus, the Core of Employability is “Competency”

**EMPLOYABILITY IN DIGITAL AGE – A Paradigm Shift**

The traditional concept of “Employability” is undergoing a paradigm shift in this Digital Age mainly in two distinct dimensions:

- Employability Competencies needed to secure employment are changing rapidly in resonance to changes in technology / industry*
- Employability Competencies needed to remain “employable” is also changing at different stages of career *

*Let us analyze each dimension*

Employability, defined as one’s ability / competency to identify and realize meaningful occupational opportunities within and between organizations, is critical for success in career in today’s VUCA environment. This fundamental nature of “employability” is undergoing change in this era of “Fourth Industrial Revolution” in IT industry, driven by globalization, integration of fields ranging from Nano technology to Genetics one amplifying another and technological advancements like Autonomics, Digital revolution and Robotic Process Automation (RPA).

The hard skills component of employability is no longer a static phenomenon but dynamic in resonance to “labor market” and “technology” changes. As such the “Competencies” (Knowledge, skills, and Personal Attributes) expected from employees in today’s IT industry is changing at rapid pace, making Employability of workforce a itself “dynamic” phenomenon.

Due to rapid automation and digital revolution, many skilled transactional jobs done by humans earlier, like, back-office documentation processing, IT Call Support, process driven activities and administrative work, basic programming, testing etc. have become automated giving in to higher efficiencies and lower cost. As a result, possessing those skills are no longer “employable”

Interestingly, the future of work / employability seem to be favorable for those who possess holistic job
skills, not only task-oriented or technical skills but, non-transferrable competencies or “human centric skills”

- like Agile Mindset, Learnability, understanding the stated and more importantly implicit needs of customer, out of box thinking, Project Management Skills, empathy, multitasking based on context, Problem solving attitude, Influencing skills etc.*

As another Important dimension, Employability also is changing from being a competence exhibited and assessed during the time of joining a job to become an ongoing phenomenon to be sustained and displayed over lifetime career and, the skills needed for remaining “employable” CHANGE at different stages of career

*WEF - “Future of Jobs” Research studies and” Jobs Reset Summit “

* HFS Research

*HBR “Is your Workforce Ready”

EMPLOYABILITY IN DIGITAL AGE – The “New Normal”

In Summary

““niche high end digital / Tech skills which may undergo changes every few years”

And

“competencies which would need a human intellect and contextual discretion, and not “doable by a machine” and that which would also change at different stages of career “

Thus a strategy to continuously bridge these “Competency or Skill Gap “has thus become the “New Normal” of employability.

EMPLOYABILITY IN DIGITAL AGE – Talent Refactoring as Business Strategy

So, the key to sustained employability is bridging the “Competency / Skill Gap “.

In today’s Digital age the onus has shifted to the employee to acquire the knowledge, skills, and abilities and keep oneself updated and relevant to the industry to be employable.

However, it is also business critical imperative for companies to create a strategy of Talent Refactoring Ecosystem wherein the existing talent pool can be repurposed, and all resources needed by employees to upskill / reskill themselves isbe made available. With sudden high demand for digital skills and dynamic Labour market, the demand supply ratio of talents with niche skills is very skewed in hiring market. Hence companies have no option but to “Grow their own timber”, to meet business demands, remain resilient and ahead of the curve in business, in view of the rapid changes in technologies and agility with which workforce need to be kept “future” ready.

Research Studies have also proven that if reskilling is not undertaken companies may also lose their key talent significantly *Lack of employee preparedness
has been proved to have direct huge cost impact on company also * Industries with more skilled talent see higher stock returns and less disruption^*. It has also been proven that if companies provide opportunities to reskill they retention and engagement is 60% more and probability of creation of Hi Potentials is 8 times more.*

This calls for organizations to define a clear “Talent Refactoring / Upskill / Reskill Strategy” and leverage the digital IoT technologies itself to create a Talent Refactoring / Learning Platform which would have all futuristic features of a NXGN application like agile, user friendly, self-navigable, accessible from different ecosystems and multiple devices etc.

*Gartner Shifting skills survey

*Accenture

^Coursera Global Skills Index 2020

TALENT REFACTOING FRAMEWORK- A Self-sustaining TalentPipeline ecosystem

What does Industry Analysts say?

Brandon Hall Group’s 2020 learning strategy research illustrates some of the issues companies are experiencing surrounding learning: 54% cite a lack of alignment between learning and business outcomes, and 43% say earners are not sufficiently engaged “People are already learning from experience and from each other, every hour of every day. The problem L&D function has today is trying to find ways to optimize and support learning, whereas, in the past, it has been focused on producing content.”

Donald Taylor- L&D Guru – Learning and Performance Institute Among the top 5 challenges for L&D Leaders as identified by Learning and Performance Institute for next decade is “Encouraging Learning in the flow of work is imperative to maintain a high-performing organization. Learning professionals want to see successful examples of resources and platforms that support immediate learning without disrupting the flow of work ”

The above findings clearly prove that the role of HR / Talent Management / Training functions has to transform from creation of content and Training Schedules. tracking mandatory training hours as employee benefit without correlating it with the skills needed by business etc. as in the past to be a strategic business enabling function by clearly aligning all training efforts to create a talent pipeline to meet business needs. In future with gig and virtual workforce this calls for creation of a technology-based Talent Refactoring ecosystem for employees to self-learn and upskill themselves and craft their career path in alignment with business needs.

The following steps can guide in upgrading the existing Learning Management Systems of Companies, to a full-fledged Talent Refactoring Ecosystem

**Step 1: Change in Training Strategy Outlook:**
Training to be repositioned from being perceived or projected as a “Employee benefit “to key “Strategic Business Lever” for dual benefit of business and career growth.

**Step 2: Create an integrated Talent Refactoring Framework**

Upgrade the current LMS with essential elements in this framework. Grooming a Digital workforce for future can happen only in an ecosystem which itself is digital!

- Carefully curated multimedia learning content from credible accredited institutions / industry experts with emphasis on practical application and skill / competency proficiency acquisition made available and accessible anytime anywhere
- Bridge Programs to migrate from Adjacent Skill to Core Skill with mapping
- Practice platforms providing practical exposure through Guided Projects, Internships, Experience sharing/ Case studies etc.
- Discussion Forums / Chat bots to clarify and develop deeper insight from empaneled experts
- Calibrated In Course Assessment Mechanism to assess proficiency acquired and have self-improvement options.

**Step 3: Connect with Career Pathing**

- Award Skill Tags Credentials like “API Professional”, “Cyber Security Designer”, “Scrum Master” to signify specialization.
- Automatic Career Path progression and deployment mechanism of Certified Professionals to suitable Career / Role Opportunities.

**Step 4: Reward and Recognition**

Formulate Reward and Recognition mechanisms like Skill based pay and Fast Track Career Growth opportunities for Certified Professionals

**Step 5: Talent Refactoring Metrics to guide Org Business Strategy**

Clearly defined metrics on following areas would help management to create a Skill Heat Map of the Enterprise which would reflect their readiness to take up new digital projects. This can in turn help in finalizing the Org Strategy and goal on the desired revenue share from projects which would need new age skills based on gap from the revenue generated from such projects thus ensuring Business resilience to the changing demands of industry

- Comprehensive Skill Taxonomy outlining Core skills and adjacent skills needed
- Availability of Tailored Courses and Bridge Courses
- Employee Participation Metrics – related to courses completed, certifications
- Assessment metrics – Proficiency Scale, Time to Skill,
- Deployment Statistics to assess Talent Pipeline

Such Innovations and work practices may change from time to time, but the fundamentals of human behaviour were discovered by our ancestors thousands of years ago

“Paadham Aacharyaathadhathethe Paadham Sishyaswamedhayaa Paadhamsahabrahmachaarya Paadhampaalakremeyana”

(“One’s chosen path is culmination of teacher’s guidance, inherent aspiration, influence of other peers and time”)

Ancient Indian Vedic Proverb
Case Study on Environment Protection through Training in Biomining and Bio Remediation – Legacy Waste Treatment

Dr. Anupam Jain*
Er Alok Gupta**

ABSTRACT

With the improvement in the living standard and the development of the technology our whole world is fighting with the waste and its disposal. Why now, from last few years, we are bothered about the waste and its management? Previously, the world was not focusing on the treatment of the waste. The waste generated from the different resources are being gathered by the municipalities or local bodies, the waste either dumped in the landfills or dumped in the dumping grounds. But passing of the years, these dump sites has taken the shape of the huge mountains or garbage heaps. These waste or garbage heaps are contributing to global warming (by polluting air, water & soil). Since 2016, India has started great efforts in Waste management system by implementing different waste management rules 2016. One of the major role which was taken into account was the treatment of legacy waste. Legacy waste Management / treatment is one of the fastest ways to reduce the national emission.

KEYWORD:
Legacy waste, Bio-mining, Bio-remediation, Municipal waste, Training

INTRODUCTION

Urban India population generates 54.75 million tonnes of municipal solid waste yearly. Before the rules 2016 the method used for disposal of the waste is open dumping. Continuous use of these open dumping sites these sites have grown huge and acquired large area in hectares, becoming a source of pollution. These sites generate many toxic gases, black liquid which degrades the air as well as the land fertility. These heaps also generate the green house gases which are 21 times more harmful for the environment as compared with carbon dioxide.
(CO2) contributing in global warming. Financial disadvantage is, these dumpsites have taken costly urban land. As per the report of CPCB (2016 – 2017) more than 2120 legacy waste sites are there in India in its 23 states. Previously these dumping sites or areas were outside the cities, but as the expansion of the cities, they are coming inside or in middle of the cities.

India has started with Swatch Bharat Mission in 2016, after drafting and implementation of the waste management revised rules, which overcomes the old waste management rules of 2000. India has started with managing the waste from the source of waste generators, also the main point that is considered in the rules is the waste collected/ collection/ storage should be in segregated form (bio degradable waste, solid waste, plastic waste, hazardous waste, construction & demolition waste, etc). The treatment or management of waste as well as use of the waste is easy and more effective when it is in segregated form. The definition has also changed the term from garbage to waste.

**Legacy waste**

Definition – in short the “old dumped un-segregated waste from many on a dumping ground”. Legacy waste is also called as “Aged Waste”. The waste from many years were carried from the towns, cities and collected at a particular place known as dumping area / site. Old and most prevalent method is open dumping. These areas are determined by old municipalities and nagar palikals of different cities. Generally, these dumping places are used to through the waste in a non-segregated manner by the governing agencies.

The growing of the population and rapid increase of urbanization is leading a significant increase in municipal solid waste in India. The density of the legacy waste is around 250 kg/m³ to 400 kg/m³. The characteristic and composition of the legacy waste plays an important role in designing its treatment system and the method to be adopted for its disposal. The method must be cost effective and more over environmentally friendly. Till now, no data is maintained in the old municipal practices of waste handling. Due to this, no criteria are there to tell the characteristic of the legacy waste.

The solid waste management rules – 2016, suggested the disposal of the legacy waste and bring down them to the ground level and if legacy waste is land fill, to excavate it and treat it also by using the Bio Mining / Bio remediation process.

**Table 1 : Population Table showing cities with dumping sites**

<table>
<thead>
<tr>
<th>Population Class of Cities</th>
<th>Total Legacy Waste at dumpsite in Tons</th>
<th>Number of Cities</th>
<th>No. of Dumpsites</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;20 Lakh</td>
<td>6,67,17,223</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>10-20 Lakh</td>
<td>1,88,89,538</td>
<td>33</td>
<td>35</td>
</tr>
<tr>
<td>5-10 Lakh</td>
<td>2,20,80,203</td>
<td>46</td>
<td>51</td>
</tr>
<tr>
<td>3-5 Lakh</td>
<td>1,03,38,668</td>
<td>56</td>
<td>60</td>
</tr>
<tr>
<td>1-3 Lakh</td>
<td>2,40,83,948</td>
<td>322</td>
<td>351</td>
</tr>
<tr>
<td>Grand Total</td>
<td>14,21,09,581</td>
<td>472</td>
<td>517</td>
</tr>
</tbody>
</table>

SWM - Rule15 clearly states that “investigate & analyse all old dumpsites and existing operational dumpsites for their potential for bio-mining and bio-remediation and wherever feasible, take necessary actions to bio-mine or bio-remediate the sites”
Methods of treatment of Legacy Waste as per guidelines CPCB & MHUA

The treatment and disposal of legacy waste, as per the guidelines created in 2016, started with some pilot methods. In which 2 methods started as the pilot projects were Bioremediation and Capping method, but after seeing the impact both the methods with years passing. Bioremediation was considered as the successful and more effective method.

Before choosing the method – a) the survey of dumping ground to be done by drone, or total station survey. b) the composition analysing to be done. c) study of the site environment, presence of metal part, air flow rate, soil condition, etc. d) impact of the treatment system on the surroundings.

Below we have shown the difference between both the methods.

**Applicability of Bioremediation and Capping:**

<table>
<thead>
<tr>
<th>Bioremediation</th>
<th>Capping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicable where the ownership is well defined</td>
<td>Applicable only in cases having:</td>
</tr>
<tr>
<td>Where working space is available in the dumpsite.</td>
<td>lack of resources</td>
</tr>
<tr>
<td>Where linkage with utilization of remediation by-products are available</td>
<td>lack of working space</td>
</tr>
<tr>
<td></td>
<td>Lack of linkage for utilization/disposal of segregated components.</td>
</tr>
</tbody>
</table>

1. **Capping model without Land recovery** – this is a very simple method but more technical components are involved. In this model the dump site is been converted in a green area, by covering the dump with the soil and making the provision of gas collection, the drainage system on the surface. But NGT had made clear for the use of bioremediation method over capping method. The below pick shows the dumping site before the treatment and after the treatment.

![Figure 2: Before and after land site at Nasik, Maharashtra](image)

2. **Model with partial land recovery** – in this method the partial recover of the material is done approx. 50% to 60%, and the left over or non-usable material is further heaped and the capping is done for the remaining heap. Only some part of the land is recovered but not of much use. Not much advantageous as disposal of the segregated waste is a great challenge. Only useful part is the reduction of waste volume.

3. **Model with complete Land recovery** – in this method the complete waste is segregated with use of heavy machines and equipments. The waste segregated recovers the valuable from the bio degradable wastes, C&D waste and that can be easily manageable by recycling or recovering methods. Remediation of dumping site eliminated the foul odour from the environment, removes the diseases arising factors, reduces the air pollution, eliminating the dump fire, reduction in greenhouse gases, availability of the landbank. The below pick shows the bio remediation system adopted to clear the dumping site and made it usable.

![Figure 3: Land conservation at Poonamallee, Tamil Nadu](image)
Training on Process of Bio – Mining

In this case study, we will give training on the process involved for the economical bio-mining/bio-remediation in detail. This training will help the engineers and the concern member of the waste management and Environmental protection consultants. The process discussed in this training is also approved by CPCB (Central Pollution Control Board) and also by MHUA (Ministry of Housing and Urban Affairs).

The steps involved in mining are as follows:-

i) Survey of the dumping ground or the dump area, Checking and enlisting the characteristic of the waste & calculating the quantity of the waste – volume of the waste is analysed by the Total station survey, countering survey, site excavation, site measurement, drone survey. Density of the waste is also calculated by taking sample of the waste by NABL labs. The involvement of the survey engineers will be very helpful. The soil analyst can calculate about the present condition of the soil and the effect of the leaching on the soil also the present status of the pollution in the soil. The analysing of the ground water and the near about water testing will also be useful.

![Survey by Drone](image)

Figure 4 : Survey by Drone

ii) Excavating or mining the waste – the top layer generally contains the fresh or less aged waste, so, mining and heaping is not necessary for those type of sites. But when the aged hump of waste is there, then the waste is to be moved by excavating the heap from the sides and moving the waste to another location and making the windrows of 2 mtr height.

![Excavation of old dumping site](image)

Figure 5 : Excavation of old dumping site

iii) Stabilizing the waste – before screening, the stabilizing of the waste is necessary as this process involves the composting (can be speed by spreading the bio culture/ herbs / biological sanitizer / using a dilution of 5% fresh cow dung) of the bio degradable waste present in the waste. The waste after every 3 to 4 days must be turned up and down and again the spraying of the bio culture must be done. This helps in decomposing the waste fast. At this time, raking of the garbage can also be done by the waste pickers. The lifting of the waste at time of turning also loosens the waste and make it fit for screening. This process reduces the volume of the waste by 40% to 50%. The process can be repeated for 2 to 3 weeks but can be stopped early if there is no reduction of volume or no heat is generated from the heap or no smell from the heap or no formation of leaching. This completed process is stabilization.
iv) **Screening of the waste** – as the waste is stabilized it is again lifted with help of JCB and transferred to the screening site. The big screens known as trommels, rotary screen, gravity screens, vibrating screens, disc or star type. In simpler works, the screens are used to sieve the waste particles in different sizes. Generally, the size of the sieves are 4 mm to 7 mm, 30mm to 50 mm, 100mm to 80mm and 150 mm above. The design or selection of the sieve depends on the characteristic of the waste under mining. The different sieved material is collected at different sites.

Air density separators are also used to light fraction materials such as plastic. The light material are being separated from the heavier waste. Similarly cyclone separators are also used to separate lighter waste by using the centrifugal action. The material is separated on the walls of the separator. Other type of separators are Ballistic separator and magnetic separators.

v) **Utilizing the screened waste** – the recyclable products should be sent for recycling, non-recyclable material to be provided for the road use or for RDF to big boilers or cement plants.

The recovered fine particle to be used as the soil conditioner by checking the pH value.
use of fossil fuel but also a way of alternative fuel. Another huge part is C&D waste which can be used in making M sand for which central & state government have made the policy. Semi compost can be again treated and used as soil conditioners and can be packet and sell by compost agencies.

The training is teaching the companies of the country and world the steps involved in treating the legacy waste present in the old dumping sites and to over come these sites and reducing the waste. The steps considered in this training is already been successful done in many cities of India. The steps considered may changes depending on the topography, altitude, region of the cities situated in different region of the country. Alteration and additions in the steps may also vary depending on the soil and the climate condition of the cities. May also vary with the type and nature of the population of the city.

**Terms used in this case study with their meaning**

1. RDF – Refuse Derived Fuel
2. C&D waste – Construction & Demolition waste
3. Bio remediation — the process of removal of biodegradable waste and making the waste loose and fit for screening is bio-remediation.
4. Biodegradable waste — waste can be decomposed in presence of air or in absence of air.
5. FCO—Fertilizer (Control) Order, 1985
6. NABL - National Accreditation Board for Testing and Calibration Laboratories
7. MOEF - Ministry of Environment and Forests

**Sample cost calculation of bio mining after studying the executed project by different ULB’s of different states in India.**

**Table 2 : Calculation of the standard cost involved in Bioremediation**

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Description of item</th>
<th>Real Cost Involved (INR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Excavation Transportation, windrow formation, Biocellum slurry &amp; stabilization costs 4 weeks</td>
<td>180</td>
</tr>
<tr>
<td>2</td>
<td>Stabilized Garbage transportation to processing unit and processing costs (.100mm, 30mm &amp; 10mm Rotary screens)</td>
<td>080</td>
</tr>
<tr>
<td>3</td>
<td>Solid combustible fuel (SCF/RDF) removal and disposal costs (up to 150kms) or Carbon plant M/C tender qty-2 Lacks Mt</td>
<td>200</td>
</tr>
<tr>
<td>4</td>
<td>Construction &amp; debries removal costs</td>
<td>30</td>
</tr>
<tr>
<td>5</td>
<td>Process inert to land fill Transportation &amp; landfill maintenance costs</td>
<td>30</td>
</tr>
<tr>
<td>6</td>
<td>Bio soil (&lt;10mm) disposal costs</td>
<td>30</td>
</tr>
<tr>
<td>7</td>
<td>Power costs &amp; Firefighting, Dust control costs</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>Manpower costs</td>
<td>30</td>
</tr>
<tr>
<td>9</td>
<td>Machinery Recovery costs</td>
<td>50</td>
</tr>
<tr>
<td>10</td>
<td>Miscellaneous costs &amp; Interest Costs</td>
<td>40</td>
</tr>
<tr>
<td>11</td>
<td>Contingency costs Weightbridge, shed, E.B work, civil, electrical work</td>
<td>30</td>
</tr>
<tr>
<td>12</td>
<td>Sub Total Cost</td>
<td>720</td>
</tr>
<tr>
<td>13</td>
<td>Company Profit</td>
<td>100</td>
</tr>
<tr>
<td>14</td>
<td>Misc. Expenses (Funds Etc)</td>
<td>100</td>
</tr>
<tr>
<td>15</td>
<td>Grand Total</td>
<td>920</td>
</tr>
<tr>
<td>16</td>
<td>GST@12%</td>
<td>110</td>
</tr>
</tbody>
</table>
Practicing widely to encourages circular economy on large scales globally.

- Reduces GHG emissions by conserving natural resources.
- Approved by Basel Convention for disposing of Hazardous & other types of Wastes.
- Recommended by CPCB for co-processing of higher heat value material from SWM.
- Provide clean & Green Environment to next Generation.
- Reduced carbon emissions and Minimizes the extraction of fossil fuel consumptions and preserving the natural environment.
- ULB’s should approach nearby heat energy requirement companies for use of solid recovered fuels derived from Legacy waste Management.
- ULB should support for convincing other Govt organization for usage of soil conditioner to better usage.
- ULB’s will be benefitted by reducing the volumes of minimum 65 to 75% of heat-based waste streams by establishing these RRC’s.
- ULB will be benefitted by way recovering the valuable lands and also benefitted on ecological and environmental accepts.

Conclusion

Bio-mining will divert 60 to 70% of the garbage or waste from old Landfill sites and segregated at thereby reducing the following burdens to ULB. Also, the Costs associated with garbage disposal will be reduced, for example, for 1000 Mts, garbage will be diverted from Landfill, which will provide better and environmentally aesthetic conditions of ULB. Land required for Landfilling will be minimized up to 85 to 95%. Most Valuable worth of Land can be protected from Landfills. Reduces risk of surface water and groundwater contamination from landfills and fires from Landfills, thereby protecting the environment and also providing environmental benefits like reduction of Extraction of fissile fuels, reduction of Co2 emissions and CGH emissions will be reduced.

Provides local green job to the needy people.

References

- AJRA Vol. V Issue III www.ijcms2015.co ISSN 2455-5967 -- “Role of Bio Gas Plant for Empowering the Women Communities in Rural Area of India” -- by Er. Alok Gupta & Dr. Anupam Jain -- page no 12.1 to 12.4
Range - Why Generalists Triumph in a Specialized World
by David Epstein

Reviewed by S R Nair*


We live in a specialist’s world. In everything we do, we are advised to go deeper and deeper to specialise, so that we have the ultimate knowledge on what we do. ‘Total competency, full focus and specialisation’, the mantra goes like this. In management theories ‘core competency’ had become a critical asset for professionals, thus, making him a specialist.

Here is a book by David Epstein, which glorifies the generalists than the specialist. He had taken considerable examples of people and situations to emphasise his argument. In these times of specialisation, we can only take the book with a pinch of salt, for the experts always said that specialisation is critical for meeting career and life ambition.

After reading the book, we have to appreciate that there are two ways of living, either as a specialist or as a generalist; both could be interesting and exciting. This book highlights achieving success as a generalist and we see so many successful people in this category; Aristotle, Leonard da Vinci, Bertrand Russell, Noam Chomsky etc., all big names! When Daniel Epstein argues that generalists can see the big picture, can see the forest for the trees, can tell us deeper stories of our times and are more apt to see the macro picture; what about it? And he has question to ask such as: How do you make systemic change to avoid extinction without generalists? Without generalists in place, how do communities survive economic downfall? At the highest level of society, how do you prioritize without generalists? He emphasises that a society that is atomized by

* Mentorguru, National Council Member, ISTD Kochi Chapter
specialists stays on only because of the integration done on it by the generalists.

David Epstein, the author of this book, has been translated into 21 languages. He is a master’s degree holder in environmental sciences & journalism and he worked as an investigative reporter for Pro Public and also as a senior writer for Sports Illustrated. Another successful publication of him is ‘The sports gene’ and that was before this book.

This book busts the theories of ten thousand hours of deliberate practice for becoming successful & the tiger moms. It encourages readers to try lots of things, doing them broadly and failing many times. It suggest a mind-set of not going down any single rabbit hole to the exclusion of everything else in this life, which is another way of saying that in general, specialists are unable to see beyond their own domain. Someone widely read, having wider experiences and knowing many things about different fields; can have much greater chance to make creative connections that most others will miss. It’s not about knowing any one thing. It is on the ability to see the forest than the trees. About seeing and intuitively getting the bigger picture. It’s about grasping out trends, and tossing out the bad ideas!

As a sports journalist, David Epstein uses the example of Roger Federer, one of the all-time greats of Tennis, in this book. As a young kid, Roger didn’t focus on tennis and didn’t get fancy coaching or strength training. He played a range of different games including Soccer, Badminton, Skateboarding, Swimming and Table Tennis. Until he was a teenager, he didn’t start playing competitive Tennis. Even his parents did not encourage him to take up Tennis. But once he became a Tennis Pro, he turned into one of those rare, preternatural athletes who appear to be exempt, at least in part, from certain physical laws! This, Epstein attributes to the wider level of experiences and learnings that Roger Federer has had in his formative years, as he embraced diverse experiences and perspectives while he progressed, before becoming a Pro. Epstein also cites Charles Darwin, the creator of the most fundamental book of science, ‘On the origin of species by means of natural selection’. Before Darwin got aboard the HMS Beagle and sailed to the Galapagos, he had trained not only in natural history but also medicine, theology, philosophy, and geology which helped him to have the acuity to analyse and conclude the origin of species.

Another interesting finding of Epstein is that a lot of successful people, in various domains, did have unusual career paths. He observes this as a natural process. He says, “Our work preferences and our life preferences do not stay the same, because we do not stay the same”. This leads to the observation against too much focus on personality traits in work environments because the reality is that personality tends to change over the time.

Bill Gates recommended ‘Range’ as one of the 5 good books to read for a lousy year 2020. Gates liked the book very much and has this to say about the book and the author “Epstein provides a good framework for understanding why polymaths are so important for innovation. He writes that when great innovators are studied, the researchers find “systems thinkers” with an ‘ability to connect disparate pieces of information collected from multiple sources’ and who read more and more broadly than other technologists”

The book poses a serious question on how can we back from a culture that focuses too much on specialisation. The general criticism of ‘Range’ is that Epstein creates an impression of being too critical of specialists. Against this, Bill Gates gives good advice. “If you’re enthusiastic about a hyper-specialized field like molecular biology or quantum physics, go for it. However just give some room yourself to explore what your colleagues and friends in other fields are learning”, says Gates.

I find the ‘Range’ as a myth busting book. However, it is a very slow read, as one needs time to digest the hypothesis that Epstein throws at you, chapter by chapter. I recommend it as a must read all thought leaders.
Indian Journal of Training & Development

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the period April 2021_______to March 2022______)

(ii) I enclose a cheque No._____________ dated________ drawn on_____________________
for Rs. 4779/- (Entrance fee Rs. 300/- And Rs. 3750/- as Life Membership Subscription and
18% GST Rs. 729/-).

5. **FOR SPOUSE LIFE MEMBERSHIP**

(i) I enclose a cheque No._____________ dated________ drawn on_____________________
For Rs 5900/- (Life Membership Subscription Rs 5000/- and 18% GST Rs. 900/-)

6. **FOR PHYSICALLY CHALLENGED PERSON (50% CONCESSION)**

(i) I enclose a cheque No._____________ dated________ drawn on_____________________
for Rs 944/- (Entrance fee Rs 300/-, Annual Subscription Rs 500/- and 18% GST Rs. 144/- for
the period April 2021_______to March 2022______)

(ii) I enclose a cheque No._____________ dated________ drawn on_____________________
for Rs. 4779/- (Entrance fee Rs. 300/- And Rs. 3750/- as Life Membership Subscription and
18% GST Rs. 729/-).

I certify that the above information is true to the best of my knowledge and belief. The Membership is
liable is to be cancelled if the information furnished is found to be incorrect.

Date_________________________ Signature_________________________

(i) Please send A/c Payee Cheque in favour of “Indian Society for Training & Development, New
Delhi”

(ii) Photocopy of this form can be used

| The fee can also be paid through National Electronic Fund Transfer (NEFT) for which bank details are under: |
|---|---|
| **1. Name of the Account:** Indian Society for Training & Development | **Name of the Account:** Indian Society for Training and Development |
| **2. Name of the Bank:** INDIAN BANK | Name of the Bank: Axis Bank |
| **3. Address:** Mehruli Institutional Area, Katwaria Sarai, New Delhi-16 | **SB Account No:** 920010070728956 |
| **4. PAN No :** AAATI0450L | **Branch:** Vasant Vihar, New Delhi |
| **5. NEFT/IFSC/RTGS Code: IDIB000M089 | **NEFT/IFSC/RTGS Code:** UTIB000473 |
| **6. SB Account Number:** 405039697 | |
| **7. MICR Code :** 110019018 | Quick link for membership fee: https://rzp.io/l/ChyMFCKlmO |

**Note:** While remitting the payment, please do send the payment details advice to us for confirmation of the payment, which is mandatory.
(Please type or write in Capital Letters)

**Personal Particulars**

1. Full Name: ________________________________________________________________

2. Address for Correspondence___________________________________________________________
   Pin

   Tel.______________________ Mobile ______________________ Email: ___________________________

3. Date of Birth: ____________________________

4. Gender (Tick only): Male ☐ Female ☐

5. Academic Qualifications______________________________________________________________

6. Professional membership _______________________________________________________________

7. Details of present appointment_________________________________________________________
   Position held__________________________________________________________________________
   Name of company/Organisation___________________________________________________________
   Nature of Business________________________________________________________________________
   Office address____________________________________________________________________________
   Pin

   Tel _______________________________________ Mobile: _________________________________________

   Email: ____________________________________________________________________________________

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**FOR OFFICE USE ONLY**

Entrance Fee received Rs____________                         Date of Admittance by the
Subscription received Rs____________                          National Council_________________
For the year 20____________                         Membership No.__________________
# Indian Society for Training & Development

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B-23, Qutab Institutional Area, New Mehrauli Road, New Delhi-110016  
Tel: 011-41688772, 49077807 (M)|9911326953 | Email: diploma@istd.in

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