

# Skill Sets For Future Hospitality Jobs

## ABSTRACT

**Aim:** This paper reviews the literature on latest jobs and skills requirement in hospitality industry. The purpose of this paper is to identify the future jobs and requirements of skill set for hospitality industry in the 4<sup>th</sup> Industrial revolution.

**Methodology:** Literature were collected from various online and offline resources that related to future job requirements and skill requirements in Tourism and hospitality industry in the 4<sup>th</sup> Industrial revolution. A Critical analysis of the literature and investigation from different walks of life, namely academics, technological advancement, government, Industry was carried out.

**Results:** After critically reviewing the literature it was found that trends of jobs are changing due to the intervention of technology. To survive in the Tourism and Hospitality Industry various set of skills are required. New paradigm shift in the hospitality industry is felt. This is the needed time to adjust in line with the technological inventions and be ready to adapt. Educational institutes should take proper initiatives for development of new sets of skill among their students. In future demands of robotics, artificial intelligence and automatic service are increasing. Employees should be ready with the new technological invention in the industry.

**Conclusion:** Higher education institutes will adopt the holistic development of students through adoption of National Education Policy (NEP) 2020 and Science, Technology, Engineering and Mathematics (STEM) courses along with the arts and humanities for hospitality students. It will definitely help the students for getting new skills.

**Key words:** Skills, industrial revolution, robotics, artificial intelligence, hospitality

## 1. INTRODUCTION

The present era is well known as “the fourth industrial revolution” or “Information age” or referred to as “Industry 4.0” [1,4,13]. Fourth industrial revolution have impact on society, on the people’s life, education system, health system, communication, self-expression, lifestyles habits, ways of traveling and information habits [4]. The fourth industrial revolution has features of using smart machines, storage systems and production facilities that can automatically exchange information trigger actions between each other without human intervention. Cyber-physical system, The Internet of things (IoT), Cloud computing, cognitive computing, self-service kiosks, artificial intelligence, chatbots, voice controlled technologies, wearable and implanted technologies, face recognition, 3D printing, and many more other things and technologies are used for production and delivery of goods and services with the technological advancements [16,25]. Automation in manufacturing industry is very rapidly growing but in the service industry, it has to be unfold in its full potential [16,17,32]. Robots, artificial intelligence and service automation (RAISA) have entered in people’s lives and various companies’ uses RAISA for improving operation processes, create customer experience, expand the service capacity [18]. RAISA is already adopted in tourism and hotel industry. Online check-in, self-check in kiosks, mobile boarding passes, automated

border control gates with biometric passport/ Identity card (ID) readers, food and beverages vending machines, fully automated hotel is opened in Japan [14,18]. The purpose of this paper is to identify the future jobs and requirements skill set for hospitality industry. Madden [22] member of Forbes Councils suggested that presently five industries have best job opportunities. These are E-Commerce, cloud computing, artificial intelligence, health care and hospitality.

## **2. HOSPITALITY AND TOURISM JOBS OF THE FUTURE**

A Study conducted by the [13] regarding the future of hospitality jobs. The finding of the study shows that artificial intelligence technology is developing very fast in tourism and hospitality industry. Due to the advancement and adoption of new technology, many of the jobs will be lost. Requirement of new jobs with new skill- set will be in the demand. So education system should adopt new future and delivers the new sets of skill among the students. [18] pointed that automation has both substitution and elimination effects on jobs simultaneously. Tourism and hospitality jobs have to make the balance between the elimination of job skills and adoption of new skills for particular job after automation to increase the productivity of the employee. Seven major themes identified by the [5] after reviewing of literature for hospitality industry. Current AI technology in service front line, levels of artificial intelligence, AI- agents, human- AI service counters, theoretical frameworks of the acceptance of AI, reasons for adopting AI and potential challenges of AI are seven themes. They concluded that AI will penetrate the service industries and the future will depends upon the customers and employees acceptance of the role of technology in customer service encounters. Cost benefit, customer readiness and willingness to be served by robots, cultural characteristics of customers and service providers, the technological characteristics of RAISA solutions and other factors are important for adoption of RAISA in the hospitality industry [18]. Researchers suggested various hospitality careers for upcoming years where the digital study is required but need not to study computing. There is a range of digital careers where customer services and management skills will help us. Some of the high demand digital careers are Social media manager for hospitality businesses, Digital content creator for hospitality brands for International hotel and resort, Social media food Photography, Digital Booking specialist for the Online Travel Agencies (OTA) sector, Digital services specialist, Digital Customer Relationship Manager[9].

### **2.1 REASONS FOR CHANGING IN THE REQUIREMENTS OF FUTURE JOBS IN HOSPITALITY AND TOURISM INDUSTRY**

#### **2.1.1 Technological advancements**

In the present scenario RAISA are actively used in various sectors. So, hospitality and tourism industry are also welcoming the RAISA in the industry. A study conducted [5] and found seven themes for AI such as Current AI technology in service front line, levels of artificial intelligence, AI- agents, human- AI service counters, theoretical frameworks of the acceptance of AI, reasons for adopting AI and potential challenges of AI are seven themes. They concluded that AI will penetrate the service industries and the future will depends upon the customers and employees acceptance of the role of technology in customer service encounters. Automatic services are also helping the service providers and customers. Online check-in, self- check –in, biometric passes, vending machines etc. and many more automatic services are available in hospitality and tourism industry. So, technological advancements may be the prominent reason for changing in the requirements of jobs

#### **2.1.2 Labour cost savings**

Adoption of artificial intelligence, automatic services, and robotics in the hospitality and tourism industry would help in the savings of labour cost [17, 18, 19]. These services are available 24/7 whereas human being need some time for rest. Human being at a time handles few customers whereas RAISA technology would handle more customers in comparison to human beings. Robots could perform any tasks thousands of time without any mistake and tiredness but it may be possible with the human employee. While comparing the costs on machineries and labour, it would be possible that industry will see more benefits in adoption of technology rather than human beings. But it is well said that technology improves the operational efficiency and productivity of human employee with the help of technological intervention [9, 12, 17,18]. So the cost saving may be the reason for changing the requirements of jobs.

### **2.1.3 Customerwillingness**

Customer's readiness and willingness are very important component of acceptance technology in hospitality and tourism industry. Complexity of technology, preferences of human employee, cultural preferences, safety characteristics of technology and productivity are few factors which helps the customers to make their preferences in hospitality and tourism industry [17, 18, 19]. Sometimes customers prefer human being for the delivering the hospitality services rather than the technology. Sometimes customer resists using the technology and sometimes preferring the technology over human employee because they may be friendly with the technology. So, adoption of technology depends upon the customer's readiness and willingness also. So it may be the reasons for changing the pattern of jobs in hospitality and tourism industry.

## **3. FUTURE SKILL REQUIREMENTS IN HOSPITALITY AND TOURISM INDUSTRY**

A study conducted by [20] and found that students of hospitality sector are equipped with the skills of 21<sup>st</sup> century. They focussed and suggested that students possessed problem solving and analytic, decision making, organization and time management, risk taking and communication. [16] four specific resources are requires for university graduate. They have possess intellectual, personality, meta skill and job specific core. They also pointed that four types of skills are required after technological advancement such as mechanical, analytical, intuitive and empathetic. They also developed a theory of artificial intelligence job replacement. Industry decides between the human and machines for completing the tasks. AI replaces the according to task level not job level. They also suggested that importance of analytical intelligence will be replaced by the AI. So creative thinking and intuition in predicting data or decision making skills are much required in future. [25]Divides the skills into two parts. The first one is the necessary foundations and basics and other one is personal skills and competencies of the future. [28]Suggested that employability is combination of four different aspects such as knowledge regarding the subjects, skilful practices, efficacy beliefs and Meta cognition.[3] has suggested that at workplace skills are required to get, keep and do better. They also divides the skills into core skills, basics skills, transferable skills, generic skills, key skills, soft skills and behavioural competency skills along with the cross-curricular skills as requirements for workplace. [31]Proposed seven core skills for 21<sup>st</sup> century such as technical, informational, management, communication, collaboration, creativity, critical thinking and problem solving. They also suggested five contextual skills also such as ethical awareness, cultural awareness, flexibility, self-direction and life-long learning. Demands of these skills are high in broad range of occupation so educational institute should focuses to develop these skills among the young students.[4]Reviewed various

literatures and summarized the employability skills needed for 21<sup>st</sup> century. Digital skills, social skills, core skills and contextual skills are much required for future. Many researchers have studied and identified skills which are needed for future, like ICT competencies [7,8, 13,23,, 35], leadership skills [34], communication and critical thinking skills [6,11] For getting the success in the hospitality and tourism industry various skills are required but in the 21<sup>st</sup> century where automation exist, students should possess skills set for survival. National skills coalition report (2020) conducted a survey from the organization for economic cooperation and development (OECD) survey of adult skills. They found that one in three workers lack the foundational digital skills. Data collected from the workers (age group 16 to 64) and found that 13 % have no digital skills, 18 % have very limited skills, 35 % have baseline proficiency and the other 33 % have advanced skills [26]. Employers demand skill group among the employees such as critical thinking and analysis as well as problem solving, active learning, resilience, stress tolerance and flexibility. In addition, after COVID-19 few cross cutting skills are required in product marketing, digital marketing and human computer interaction [33].

#### **4. CONCLUSION**

The purpose of this paper was to identify the future jobs and requirements of skill set for hospitality industry. Various research papers and published reports were identified and reviewed. Through examining the literature review, it is found that technological advancements in the fourth Industrial revolution changes job requirements in the hospitality industry and also there is need to up-skilling and re-skilling the skills of hospitality professional. Many of the studies reported that in 21<sup>st</sup> century leadership skills and communication skills were the most important skills further problem solving, interpersonal , personality development, team work, positive attitude are also commonly needed skills for hospitality professionals. [10]. Few studies reported that intervention of technological advancement change the perspective of current hospitality industry. Robots, artificial intelligence and service automation (RAISA) have entered in our lives and various human jobs are changes in machine jobs [20]. In hospitality industry various automation are placed. [18] Stated that Wynn hotels in Las Vegas installed Amazon's Echo voice, self-service check in kiosks at hotels for reducing the waiting time. Few restaurants adopted automation and eliminating the need for cashier and replacing them with the tablets that they take their order and charge them directly [18]. In the hospitality industry tasks can be grouped into three broad tasks that require different set of skills. First types of task are known as routine tasks, which are repetitive and manual. These tasks may be programmed into the software and many studies argue that these tasks will be the first who will be replaced human skills. Second types of tasks where known as analytical and managerial tasks. It is purely depends upon human skills such as creativity, problem solving and negotiation. In this people will develop skills which help them to compete in the digital era like Social media manager for hospitality businesses, Digital content creator for hospitality brands for International hotel and resort, Social media food Photography, Digital Booking specialist for the Online Travel Agencies (OTA) sector. Third types of tasks are known as non- routine tasks. For accomplishment of third types of tasks hospitality personnel's requires highly adaptability, flexibility, visual recognition, good communication and emotional intelligence skills [2].

If the students possess appropriate skills to get the employment in hospitality Industry they have to acquire them. In India tourism and hospitality Industry has important role in the employment and income generation. Government take initiative to equip and train's the workforce with employable skills and knowledge. Higher technical education, Vocational education in schools, technical training in specialized institutions and apprenticeship are few

types of formal education to impart employability skills among the students [24]. Government of India proposes the New National Education Policy (NEP 2020). It focuses on the holistic development of individual. Higher education institutes focused on multidisciplinary education approach and internationalization of education. Rise of machine learning and artificial intelligence is also a great initiative by the NEP 2020 [25]. As far as the industrial revolution is concerned in the hotel and tourism industry, the requirement of RAISA skills are much needed. So today's hospitality education needs to evolve the requirements Science, technology, engineering and mathematics (STEM) courses in their curriculum along with the humanities and art. Many higher education institutes are still preparing students for jobs that might no longer exist [15]. Teachers should adjust their approaches to learning and adapt the future skillsets for students [15, 19].

## 5. LIMITATIONS AND FUTURE SCOPE

This paper only focuses on the jobs and skills requirements by the hospitality industry in 4<sup>th</sup> Industrial revolution century. After reviewing the literatures it was found that for preparation for future students should possess skills set which is demanded by the industry. Education institutes should implement the viewpoint of industry and provide the skills set to students for their bright future. In future it is also recommended that researcher conduct extensive research in future. Educational institutes will also prepare the sets of skill which is required and formed the curriculum accordingly.

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