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# Employability Skills in the Industry 5.0 Era: A Study with Respect to Management Education Andhra Pradesh

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**ABSTRACT**

The industry 5.0 era is in the near future and will impact the workplace and the working system. The workforce needs to be transformed to adapt the drastic changes expected in the industry 5.0 era to avoid skill gaps. The trends and requirements need to be identified well in advance to create a competent workforce to avoid disruptions. Employability of graduates will be a challenge if they are not transformed as per the industrial 5.0 requirements. The broad objective of the study is to examine whether management graduates process the required skills expected in the industry 5.0 era. Transforming the graduates industry ready by developing the required skills is the need of the hour as the new industrial era is expected to be in the year 2025(World Economic Forum 2020). The study relies on primary and secondary data, 20 Training and Placements officers were identified to gather primary data needed for the study. The study reveals that leadership skills, working with a team and formulation of strategy were top skills possessed by management graduates required by the industry 5.0. This identifies a significant gap in technical skills and problem solving skills among management graduates. Upskilling and reskilling is required to enable management graduates' industry ready. Identifying the skills required in the new era and setting strategies to attain the same is of high importance, otherwise the employability of the graduates will be a challenge.

**KEY WORDS:** Industry 5.0, Employability skills, Management Education.

## INTRODUCTION

The Industrial Revolution, expected to begin by the year 2025, will create a new business concept which integrates human intelligence with technology to bring efficiency, productivity, and sustainability. Cooperation between men, machine and technology is the core of industry 5.0 era where humans will be reskilled and upskilled to provide value addition in mass customised and personalised industrial production. The business model in the new industrial era will be a collaboration of human, artificial intelligence and robots. Robots will assist humans to do their assigned tasks and humans will be tasked with problem solving with creativity and critical thinking.

Upskilling and reskilling of the workforce is required to fill the skill gap expected in the new industrial revolution. About 85 million jobs handled and managed by humans are expected to be mechanized and 97 million new roles are required for the human-machine collaborative work (Future of Jobs Report, 2020). It is evident that the skills required in the new industrial era are entirely different from that of the present era.

Proper strategies need to be initiated to address the skill gaps as the new era of industrial revolution begins in the near future. The industry policy makers and the academia can play a massive role in addressing the skill gap going to happen in line with industry 5.0. Employability of fresh graduates will be a concern if the graduates are not moulded as per the industry 5.0 era.

**STATEMENT OF THE PROBLEM**

The employability of management graduates is a big challenge to the management education in the whole nation. The gap in the attainment of industrial/ corporate expectations is the prime reason for the stated issue. Being industry ready by acquiring the required skills expected by the industry is the one and only solution for this issue. Being industry ready in line with swifting industrial revolutions is a challenge for all the stakeholders, as change is vital for industrial survival. Industry 5.0 is not so far and knowing the required employability skills will support industry and academics to set strategies to nullify the skill gap between expectations and reality. The study is highly relevant as the employability skills expectations in the industry 5.0 era will be superior and meeting the requirements is of high importance to address the unemployability of management graduates in Andhra Pradesh.

**OBJECTIVES OF THE STUDY**

1. To examine in detail the various employability skills required for management students in the industry 5.0 era to come.
2. To examine to what extent management graduates, possess the various employability skills required in the industry 5.0 era.

**METHODOLOGY**

The study examines the employability skills required for management graduates in the industry 5.0 era. The study relies on both primary and secondary data. Primary data is collected by interviewing twenty Training and Placements officers of management institutes in Andhra Pradesh by circulating a questionnaire in Google form. Secondary data is collected by reviewing journals, research papers and thesis, magazines, and websites. Convenient sampling is used to draw 20 Training and Placement officers of management institutes in Andhra Pradesh with good academic records. A five-point scale is extensively used to gather data, and the data collected is analysed with Statistical Package for Social Sciences (SPSS).

**EMPLOYABILITY SKILLS AND INDUSTRY 5.0 ERA**

The skills and capabilities required for a person to perform a particular job is all about employability skills. This set of skills supports graduates in getting employment and to excel in their own functional domain is termed as employability skills. The skills set required is different to industries and across functional and domain areas. Identifying, developing, and enhancing the required skills well in advance will support the graduates to avoid skill gaps and will be able to mould graduates' industry ready.

As far as industry 5.0 is concerned, the required employability skills will be entirely different, in line with the swift changes in industrial concept. In the new era humans collaborate with robots to perform repetitive and dangerous

tasks, and humans are expected to be dealing with strategic decisions and solving complex problems. The new industrial era may require humans to be more creative, logical, and analytical in nature to solve complex problems and to control technology. The skills required to work with the new era will be different and may result in a huge skill gap, if the required skills in the new era are not identified and proper strategies are not taken to upgrade the current skills.

The employability skills needed for management graduates in the industry 5.0 era can be categorized as problem solving skills, technical skills, social skills, and core skills.

| Problem solving skills | Technical skills | Social skills | Core skills |
|---|---|---|---|
| Analytical thinking | Digital Knowledge | Teamwork | Leadership |
| Critical thinking | Data Analysis | Interpersonal skills | Strategy formulation |
| Design thinking | Ideation | Listening skills | Resilience |
| Creativity | Technical Design | Flexibility | Self control |

Source: Secondary Source

Table No. 1

Employability Skills of Management Graduates in Industry 5.0 Era

Problem solving skills are those skills which are necessary for finding solutions for complex problems in any work setting. Inorder to solve complex problems, the graduates are expected to possess analytical thinking, critical thinking, design thinking and creativity which are demanded by the employers in the work setting. Analytical thinking enables to breakdown the whole situation into parts and study each and every element in order to find the relations. Critical thinking is the analysis made up with the evaluation of factual evidences, whereas design thinking is a new concept which is emerging in all kind of business environment. design thinking supports quick and creative solutions for problems. The fifth industry revolution expects the most creative and quick solutions for complex problems, because the industry has to satisfy both customers' needs as well as human-machine collaboration requirements.

Technical skills are the ability to perform the task that requires some physical tools or computational methodologies. Technical skills are critical employability skills required in the industry 5.0 era, these are a set of technical capabilities and practical knowledge to perform tasks. Technical skills needed for management graduates include digital knowledge, data analysis, ideation and designing of technology. Digital knowledge refers to the production, circulation, allocation, storage, and re-use of various forms of knowledge, digital maturity has to be ensured by business entities during Industry 5.0. Data analysis plays an important role in decision making, it includes transforming and modelling of useful information. Ideation and technology usage is the most preferred skills in Industry 5.0because generating and developing new ideas with the inclusion of technology isimportant for future

jobs. Technological advancement and the usage, control will be the next prominent skill. Data from the Forum's Future of Jobs Survey shows that companies expect to restructure their workforce in response to new technologies. A set of roles are adversely emerging within specific industries. This includes Materials Engineers in the Automotive sector, Ecommerce and Social Media Specialists in the Consumer sector, FinTech Engineers in Financial Services, and the current roles revised by adding technology as a prominent factor, for instance current job role like Chief Executive Officer (CEO) will be changed to Chief Executive Technical Officer (CETO).

Social skills are any competence which allows us to interact with each other, in other words it is the ability of a person to communicate effectively and understand what others are communicating to you. Social skills are also in demand for Industry 5.0 because teamwork, interpersonal skills, active listening and flexibility in their operations will enhance productivity and efficiency in their actions. Working with a team encourages graduates to behave socially and exhibit some interpersonal skills, teamwork will also enhance enthusiasm. Humanistic orientation of industry 5.0 demands the leaders with proactive strategic thinking and serve as motivational force for others, then only the company can maintain good rapport with colleagues. Demonstrating leadership behaviour in accordance with Industry 5.0 in the organization will increase the social impact of both leaders and employees (Aprilisa, 2020:547)

Core skills are those competencies that makes a person valuable in the workplace whatever may be the role. Core skills such as resilience, active learning, time management, tolerance are the most preferable skills for Industry 5.0.

| **Employability Skills** | **N** | **Mean** | **Rank Order** |
|---|---|---|---|
| Problem Solving Skills | | | |
| Analytical thinking | 20 | 3.9 | 7 |
| Critical thinking | 20 | 3.75 | 9 |
| Design thinking | 20 | 3.1 | 13 |
| Creativity | 20 | 4.1 | 5 |
| **Problem solving Skills Total** | | **3.7** | 3 |
| Technical Skills | | | |

| | | | |
|---|---|---|---|
| Digital Knowledge | 20 | 3.15 | 12 |
| Data analysis | 20 | 3.7 | 10 |
| Ideation | 20 | 3.65 | 11 |
| Technology design | 20 | 2.9 | 14 |
| **Technical Skills Total** | | **3.35** | 4 |
| Social Skills | | | |
| Team work | 20 | 4.4 | 2 |
| Interpersonal skills | 20 | 4.15 | 4 |
| Listening skills | 20 | 4.1 | 5 |
| Flexibility | 20 | 3.8 | 8 |
| **Social Skills Total** | | **4.112** | **2** |
| Core Skills | | | |
| Leadership | 20 | 4.45 | 1 |
| Formulation of strategy | 20 | 4.15 | 3 |
| Resilience | 20 | 3.9 | 7 |
| Self-mastery (Self-control) | 20 | 4 | 6 |
| **Core Skills Total** | | **4.125** | **1** |

Source: Survey Data

Table No. 2

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The various employability skills possessed by management graduates required in the industry 5.0 era were mentioned in table no 1.1. The analysis reveals that leadership skills, working with a team and formulation of strategy were top skills possessed by management graduates required by the industry 5.0. The management graduates were weak in technology design, design thinking and digital knowledge as per the opinion of placement officers of management institutes in Andhra Pradesh. The study also reveals that the management graduates' core skills and social skills were satisfactory to work with in the industry 5.0 era, and the technical skills and problem-solving skills need to be developed to meet the industrial requirements in the industry 5.0 era.

**SUGGESTIONS**

To make the students industry ready by developing the required employability skills is of urgent importance as the new industrial era is expected in the year 2025. Making graduates industry ready by developing the required industry 5.0 skills is of foremost importance in addressing the severe threat of unemployment. The unemployment rate may tendto increase if the graduates are not industry ready. In line with the industry 5.0 requirement graduates need to be trained and transformed as a drastic change is expected to happen in the new era.

Research and funded projects need to be conducted at industry, academic and government level, with a view to identify the critical employability skills required in the industry 5.0 era. Discussions and deliberations need to be fostered at different levels by organising seminars, conferences, symposiums and workshops which may enable all stakes to be aware about the new requirements and demands in the new era.

Upskilling and reskilling is required to address the skill gap and to enable graduates industry ready, training programs and skill development programs need to be organised at different levels. Periodic evaluation of graduates and feedback of their performance may enable them to position themselves in the job markets.

The industry academic interactions are required to enable graduates to be aware about the real business scenario. Talks by industry leaders, live projects and field study will also support to bridge the employability skill gap of graduates.

To foster the problem-solving skills of the graduates, case discussions and discussing the live industrial happenings will be of immense importance. Management institutions should empower faculty members to practice and promote design thinking to enable graduates to be good at creative problem-solving. Encouraging students to go through MOOC courses and other certificate programs in business analytics, artificial intelligence, machine learning and technology related subjects will widen the technical skills of management graduates.

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## CONCLUSIONS

The era of industrial 5.0 is expected to be a scenario of human-machine integration. The fifth industrial revolution is expected to arrive within a short span of time and the most promising question is to what extent we are prepared in line with the industrial 5.0 era. The employability skills of management graduates in the new era is the research question addressed in this study. The study examines to what extent management graduates possess the various employability skills required in the industry 5.0 era. The study reveals that technology design, Design thinking, digital knowledge, ideation and data analysis were certain areas where management graduates lack skills to work with in the industry 5.0 era. Identifying the skill required in the new era and enabling management graduates' industry ready by reskilling and upskilling the required skills is of prior importance as the new era is expected to begin in the near future.

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