

Emotional Intelligence Skills in the Age of AI: A Review

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Abstract

Emotional intelligence (EI) is becoming really important in today's workplaces, especially with automation and Artificial Intelligence (AI). As AI and automation redefine job roles, EI skills will become essential for employees at all levels. While machines excel at logic-based tasks, understanding and responding to human emotions remain elusive for AI. Therefore, cultivating EI becomes paramount to stay relevant in the evolving job landscape. This article gives a review on five papers regarding the role of EI in today's world. It was found that EI is a key skill for all jobs, not just for managerial roles. Many people understand that EI is important, but not many companies are actually doing anything about it, especially for non-managerial employees EI is not even taken into consideration in performance review. In this paper it is shown how anyone can learn to improve their EI ability, and thus become good in every day social tasks and have a higher probability of success in the real world. In conclusion, in a world where as automation reshapes the workforce landscape, organizations must adapt by prioritizing emotional intelligence as an essential competency for employees at all levels. The adoption of EI-focused practices and technologies will help organizations build a more emotionally intelligent workforce, ensuring resilience and success in an evolving work environment.

Keywords: Emotional Intelligence, Artificial Intelligence, Machine Learning

Introduction

Emotional intelligence refers to the ability for people to recognize and perceive emotions effectively in everyday life. Daniel Goleman, psychologist, science journalist, and an expert on emotional intelligence, and Richard E. Boyatzis, author, professor and an expert in leadership development and emotional intelligence, group these skills into four main categories as follows:

Self-Awareness:

It indicates a person's ability to understand ones own and others emotions and feelings.

Self-Management:

It indicated how much a person is able to control their emotions and react appropriately.

Relationship management:

Ability to emotionally connect with others. Having an influencing personality, ability to resolve conflicts.

Social Awareness:

It indicates the ability to read any situation and emotions of people around, e.g. via empathy and organizational awareness

Emotional intelligence development has seen a rise in organizations since some years, it is also becoming a critical skill for employees at all levels. Automation and AI are bringing new opportunities in the job

market while also making some human jobs redundant. As a result, today's workforce is experiencing significant disruptive shifts, As AI starts to take a significant stand in the industry, organizations have to make AI more human like in behavior thus making it Emotionally intelligent, like wise for humans to survive this AI competition they have to develop good EI to survive any situation.

Literature Review

Capgemini Research (2019)

To understand whether organizations and its employees recognize the importance of Emotional intelligence a study was conducted by Capgemini in 2019, 750 Executives and 1500 employees were interviewed.

The objective of this research study was to demonstrate the following:

- Why emotional intelligence is set to become a “must-have” skill in the next one to five years.
- The need for organizations to take steps to build emotional intelligence.
- The benefits that emotional intelligence offers to the organization and workforce.
- Strategies for organizations to build a workforce displaying high levels of emotional intelligence.[1]

Key Findings:

- 74% of executives and 58% of non-supervisory employees believe that EI will become a ‘must-have’ skill.
- 61% of executives and 41% of non-supervisory employees believe that it will become so in the next one to five years.
- The financial service industry will see the highest demand for EI skills.
- Companies in which employees have high EI skills generally perform better than their competitors, they have market share and less employee attrition.
- A study was conducted on the hiring practices of sales agents for L’Oréal based on certain EI skills. The study discovered that employees with high EI skills outsold other salespeople, on an annual basis, by \$91,370, resulting in a net revenue increase of \$2,558,360.[1]

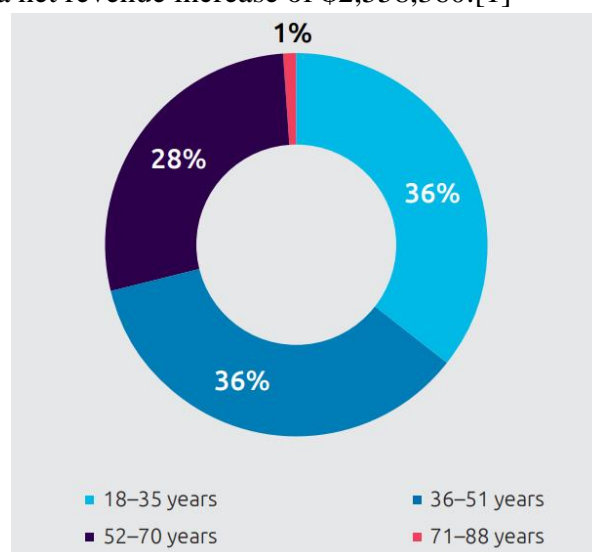


Figure 1. Respondents age group¹

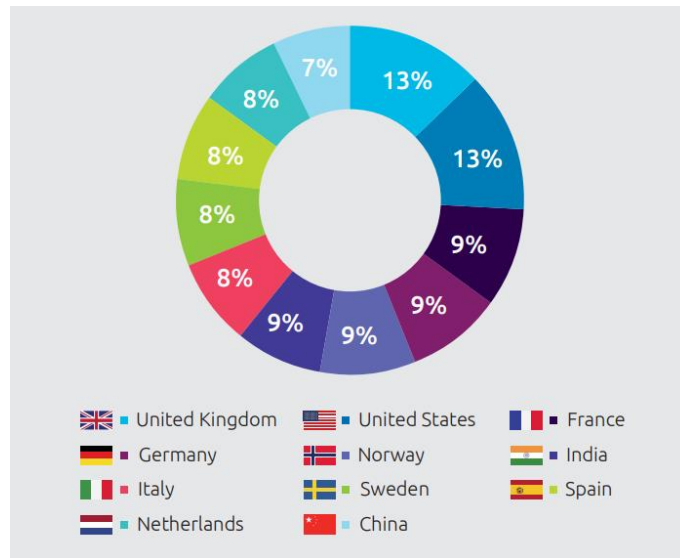


Figure 2. Percentage Respondents by Country¹

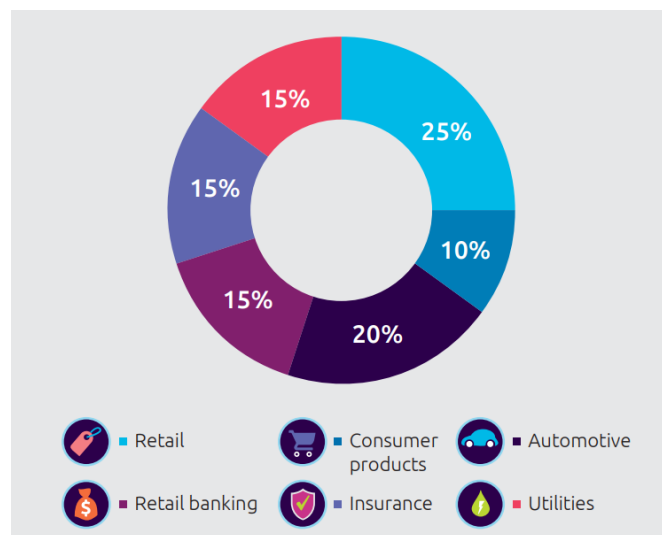


Figure 3. Percentage Respondents by industry¹

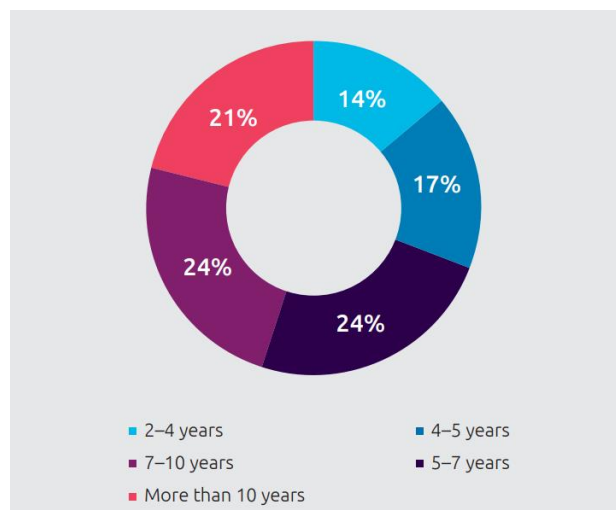


Figure 4. Work experience of respondents¹

Sahiti. S. (2019)

Artificial Intelligence (AI) has become a transformative force in the technology industry, offering solutions to a wide range of challenges and enhancing efficiency. However, to bridge the gap between machines and humans, AI needs to evolve towards replicating human intelligence more comprehensively. This paper explores the integration of emotional intelligence (EI) into AI systems, emphasizing the potential for AI to benefit from EI in various fields, including medical, consultation, education, and more. By infusing AI with emotional intelligence, it can not only narrow the divide between humans and machines but also provide advanced solutions to complex problems. This integration enables AI to comprehend and respond to human emotions, creating opportunities for improved interactions and problem-solving.[2]

The paper discusses the implementation of EI in AI and its capacity to enhance solutions, extend the scope of AI applications, and mimic human-like behavior. It highlights the importance of emotional clarity in decision-making and analyses how AI can address pressing societal issues such as discrimination, mental health, education, and inequality through the lens of EI. Furthermore, the research delves into the impact of AI on various sectors, including healthcare, gaming, education, and more. It highlights AI's contributions to these fields and its potential to revolutionize them further when combined with emotional intelligence.[2]

The study also touches on the challenges and limitations of AI, such as its vulnerability to manipulation and misuse. It underscores the need for responsible AI development and ethical considerations.

In conclusion, the integration of Emotional Intelligence into AI systems holds great promise for enhancing machine-human interactions, improving problem-solving capabilities, and addressing societal challenges. As AI continues to advance, leveraging Emotional Intelligence can lead to more empathetic, efficient, and human-like AI applications across various industries. Additionally, incorporating Emotional Intelligence into AI systems can also help mitigate biases and discrimination by promoting fair and unbiased decision-making processes. This can contribute to creating more inclusive and equitable AI technologies that benefit diverse population. Furthermore, the integration of Emotional Intelligence can foster trust between humans and AI, ultimately paving the way for greater acceptance and adoption of these technologies in society. Additionally, incorporating Emotional Intelligence into AI systems can help mitigate biases and ensure fair decision-making processes. By understanding and responding to human emotions, AI can avoid perpetuating discriminatory practices and promote inclusivity. Furthermore, prioritizing responsible AI development and ethical considerations will be crucial in harnessing the full potential of Emotional Intelligence, while minimizing the risks associated with its implementation. By incorporating Emotional Intelligence, AI systems can better understand and respond to human emotions, leading to more personalized and tailored experiences. This not only improves user satisfaction but also opens up opportunities for AI to assist in areas such as mental health support or customer service. However, it is crucial to establish clear guidelines and regulations to ensure that Emotional Intelligence in AI is used responsibly and ethically, avoiding potential biases or invasions of privacy. [2]

Abeer Hmoud et. al. (2011)

This study investigates the impact of the influence exerted by interpersonal self-awareness, self-confidence, self-discipline, intrapersonal empathy, optimism, and social responsibility on technology learning process levels (TLP). A comprehensive questionnaire survey was undertaken, encompassing 124 voluntary respondents drawn from 10 IT organizations situated within Jordan. The findings uncovered that the intrapersonal sub-dimensions of Emotional Intelligence (EI) accounted for a significant 30% of the variance in the foundational levels of TLP. It was further established that self-discipline emerged as the sole variable capable of forecasting TLP levels across basic, average, advanced, and world-class categories, while optimism demonstrated a noteworthy predictive capacity for TLP levels, with the exception of the average tier.[3]

Technology learning (TLP) is essential for developing a company's strategy, recognizing opportunities and problems, and raising technology awareness. The four stages of TLP—basic, average, advanced, and world-class—require different strategies and procedures. Since the industry has changed from one that is centered on manufacturing to one that is centered on services, emotional intelligence (EI) has attracted a lot of attention. The intrapersonal and interpersonal elements of EI are its two main components. The three intrapersonal EI qualities that are particularly important for boosting learning effectiveness and productivity are as follows:

- Self awareness
- Self confidence
- Self discipline

Despite fast technological change and a varied workforce, organizational efficiency depends on emotional well-being. EI is associated with the underlying mechanisms that support innovation as well as the phases of innovation, including creation, implementation, and stabilization. Self-awareness, self-confidence, and self-discipline are examples of intrapersonal EI aspects that have a beneficial impact on technology learning levels. These qualities interact with empathy, optimism, and social responsibility; empathy makes it easier to understand the emotions and needs of others; optimism encourages an optimistic outlook; and social responsibility includes participating in social groupings in a cooperative and productive way.

For managers and employees alike, teamwork is crucial to Emotional Intelligence and learning. Organizational dynamics are significantly influenced by the emotional climate, which also supports the learning process. Organizational learning is closely related to emotional intelligence skills such as emotional awareness, facilitation, knowledge, and regulation.

In this study, 124 participants representing various executive echelons were drawn from ten Jordanian IT organizations. The results showed that the diversity in basic TLP levels was significantly explained by intrapersonal EI aspects, particularly self-awareness, self-confidence, and self-discipline. Employees who are adaptable and have the ability to control their emotions and impulses are qualified for tasks at the average, advanced, and world-class TLP tiers, such as strategic engagement and acquiring cutting-edge equipment. With the exception of the average tier, which linked with the social responsibility variable, optimism emerged as the only interpersonal EI characteristic significantly predictive of TLP levels. The findings provided empirical support for the fascinating correlations between TLP levels and EI aspects, which were hypothesized to exist.

It constitutes a pioneering effort in exploring the intricate relationship linking EI and TLP levels, offering empirical substantiation for an intriguing parallel between the two domains. The pragmatic implications of these findings suggest the inclusion of EI competencies in the processes of selecting and advancing IT personnel, alongside the strategic design of TLP training initiatives.

In conclusion, this study underscores the potential of emotional intelligence to forecast a spectrum of technology learning levels. By elucidating the connection between emotional intelligence and organizational and technology learning principles, it provides valuable insights for enhancing technology change management initiatives. The implications extend to the selection and advancement of IT personnel, as well as the design and implementation of specialized workshops and training programs tailored to emotional intelligence competencies.[3]

Athanasios S. et. al (2018)

This study explores emotional intelligence (EI), a complex concept that is important in many different areas of life. It comprises a broad spectrum of cognitive and emotional skills that have an impact on different facets of interpersonal dynamics and human cognition. We can draw on important theories of intelligence, such as Spearman's two-factor theory and Thurstone's cognitive abilities framework, which help explain the deep relationship between EI and general intelligence, to comprehend its complex nature.[4]

Emotional intelligence (EI) encompasses more than just feelings; it also includes cognitive skills like planning, reasoning, adaptability, abstract reasoning, understanding of ideas, language competency, and learning. Complementing social intelligence, emotional adaptability, emotional acuity, empathy, practical intelligence, and motivating variables are these cognitive elements of emotional intelligence. EI also includes personality attributes like self-control, sometimes known as ego strength, which entails the ability to postpone satisfaction, endure frustration, and control impulses.

Popular theories of intelligence have historically concentrated on general intelligence (G) and specialized intelligence (S), notably from Charles Spearman's two-factor theory and Louis L. Thurstone's model. While other theories, such as Guilford's Structure of Intellect theory, introduced additional dimensions and made distinctions between convergent and divergent thinking, Thurstone's framework identified seven key cognitive characteristics.

Modern psychometric models that distinguish between fluid intelligence (GF) and crystallized intelligence (GC), such as the Cattell-Horn (GF-GC) and Carroll Three-Stratum models, have shed light on the architecture of human intelligence. Traditional ideas of intelligence were questioned by Robert Sternberg's triarchic theory of intelligence, which included analytical, creative, and practical intelligence. Similar to this, Howard Gardner's Multiple Intelligences (MI) theory argued that the human brain has a variety of distinct intelligences, each of which exists independently.

As a fundamental aspect of the human experience, emotions have a big impact on how our lives turn out. Emotional intelligence (EI) is the link between emotions and cognition and is based on the capacity to recognize, understand and successfully control emotions. It is essential for managing stress,

communicating, empathizing, resolving conflicts, solving problems, and achieving general wellbeing. The four basic skill components that make up emotional intelligence are emotional perception, emotion-facilitated thought, emotional understanding, and emotional management. Self-awareness, interpersonal skill, and the capacity to negotiate the pressures of daily life are all influenced by these qualities. Self-Awareness, Self-Regulation, Motivation, Empathy, and Social Skills are some of the clusters that EI is frequently divided into.

The Petrides and Furnham model of trait emotional intelligence combines self-perceived emotional capacities and mood to provide a comprehensive understanding of a person's emotional intelligence. The ability EI model and the trait EI model, which both emphasize the significance of high EI in predicting real-world success, effecting social connections, academic achievements, and psychological well-being, are the two main approaches explored by research on EI.

The Nine Layer Emotional Intelligence Model:

The Pyramid of Emotional Intelligence has been established to offer a structured framework for comprehending and improving emotional intelligence across multiple life areas. This nine-layer model combines elements of the Ability EI and Trait EI models, including features of self-worth, motivation, social awareness, stress management, empathy, and more.



Figure 5. The emotional Intelligence Pyramid

Emotional Stimuli:

Emotional stimuli are processed by a cognitive mechanism that determines what emotion to feel and subsequently produce an emotional reaction which may influence the occurrence of the behavior

Emotion Recognition:

The next level above the emotional stimuli is the emotion recognition often occurring together. The ability to express and recognize emotions in others is an important part of the daily human interaction and interpersonal relationships as it is a representation of a critical component of human socio-cognitive capacities.[4]

Self Awareness:

Crisp and Turner described self-awareness as a psychological situation in which people know their traits, feelings, and behaviors. Development of self-awareness is the first step in developing EI. The ability to know inner self means having the ability to assess our strengths, weaknesses, our emotional state and our behavior.

Self management:

It allows a person to control their reactions so that they are not driven by emotional impulses. With self-management a person has the ability to control emotions and be more receptive of other's emotions.

Social Awareness:

It is an expansion of emotional awareness, social awareness refers to the way people recognize other's emotions and feelings and effectively modify their own behavior to achieve the desired results.

Social Skills:

It is a skill if developed can be used to be the best team player by having the ability to listen to everyone, resolve conflicts, develop trust and influence people. Social skills under the branch of emotional intelligence can include Influence, Leadership, Communication, Teamwork, and Collaboration.

Self-Actualization:

As soon as the below six levels have been achieved, an individual has now reached the self-actualization space where the person feels empathy and kinship towards humanity as a whole and therefore, that cultivates the universality of emotion.

Transcendence:

People who have reached this level help other people manage their emotions and realize their full potential. Transcendence is strongly associated with self-esteem, emotional well-being and global empathy.

Emotional Unity:

It is the top most level in the EI pyramid. In emotional unity one feels intense joy, peace and a acknowledgment of ultimate truth and the unity of all things. We are all interconnected, and the more we delve deeper into our heart and follow it, the less likely it will be for us to do things that can harm others or the planet in general.

In conclusion, Emotional Intelligence is an essential component of social interaction and human cognition in modern society. Understanding its complex nature is crucial for both individual and social well-being because it involves a variety of cognitive and emotional processes. More in-depth models that take into

account emotional, cognitive, and metacognitive skills could be developed as a result of future study, offering a better grasp of this crucial concept.[4]

Constantinos Halkiopoulos et. al (2020)

This research paper explores emotional intelligence (EI) as a changing personality trait and intellectual capacity, highlighting its significance in controlling cognitive processes. A sample of people between the ages of 18 and 26 mostly students and social network users have their emotional IQ tested as part of this study using machine learning and data mining techniques. The goal is to obtain understanding of user behavior on social networking sites so that interface design, social interaction research, and content distribution methods may all be improved.[5]

Methodology:

The Trait Emotional Intelligence Questionnaire is a self-report questionnaire that has been developed to cover the trait EI sampling domain comprehensively. The data were collected by completion of the self-report questionnaire Trait Emotional Intelligence (TEIQue) and used for the application of data mining. Then the data was analyzed using appropriate transformations for machine learning algorithms. TEIQue provides comprehensive coverage of the 15 facets of the trait EI sampling domain organized under four factors:

- Well being
- Self-control
- Emotionality
- Sociability

Well being:

It comprises of three traits namely happiness, optimism and self-esteem. It is a measure of peoples perception of how cheerful and content they feel in life.

Self-control:

Self-control is the control of impulsive reactions. It comprises three different traits: Impulse control, stress management and emotional regulation.

Emotionality:

The Emotionality factor comprises four different traits: Empathy, Emotion Perception, Emotion Expression and Relationships. Together they indicate how aware a person is of their own and other's emotions and feelings.

Sociability:

This factor indicates how much people feel comfortable in a social setting. Sociability is an important factor in leadership positions. It helps leaders motivate a variety of people in order to achieve goals and resolve difficult situations and underperformance.

Key Findings:

- Females (age range: 18-21) have shown lower sociability and emotionality rather than males of the same age range
 - Males (age range: 22-24) indicate normal rates in the factors of emotionality, sociability and well-being, whereas females of this particular age range, tend to present high sociability.
 - Both males and females (age range: above 25 years) present normal rates in the four factors of TEIQue.
- In conclusion, this study provides insightful information about young people' emotional intelligence within the context of social networks, enabling a nuanced understanding of psychological variations between genders. The results are important for the subject of marketing since they provide a practical tool for increasing marketing tactics and participation on social media platforms. Overall, this research emphasizes how emotional intelligence is changing and how it affects decision-making in the digital age.[5]

Conclusion

In conclusion, these research papers collectively underscore the growing importance of emotional intelligence (EI) in our evolving world, particularly in the context of technology, work environments, and social interactions. They highlight the multifaceted nature of EI, its integration into artificial intelligence, its impact on technology learning, and its role in understanding consumer behavior in the digital age.

As we navigate the age of AI and automation, cultivating emotional intelligence is not just a skill for managers but a vital competency for employees at all levels. It enhances productivity, happiness, and longevity in the workplace, ultimately benefiting both individuals and organizations. Additionally, the combination of Emotional Intelligence with Artificial Intelligence has enormous potential for bridging the gap between people and computers, addressing complicated societal issues, and fostering inclusivity and fairness. The connection between emotional intelligence and technological learning also exemplifies how EI may be revolutionary in boosting organizational success and learning efficacy, particularly in the IT industry.

Lastly, the exploration of emotional intelligence in the realm of social network consumers sheds light on how understanding emotional triggers and gender-specific differences can revolutionize marketing strategies in the digital era. In essence, these papers collectively emphasize that emotional intelligence is not just an essential skill but a dynamic force shaping the way everyone works, interacts, learns, and makes decisions in their rapidly changing world. Understanding and harnessing the power of emotional intelligence will continue to be instrumental in fostering empathy, efficiency, and meaningful human-machine interactions across various domains.

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