



ILO/Cinterfor Notes

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► Artificial Intelligence and Human Talent Management: Opportunities and Challenges*

Introduction

The “Artificial Intelligence” concept -AI¹ has garnered significant attention in recent months. The mention of intelligence alone is a strong allusion to human capacity for generating, problem-solving, innovating, and ultimately, what has propelled us forward as a species and allowed us to evolve rapidly. When the connotation of artificial is added, detaching it from its human essence, it acquires an air of mystery. Artificial is diametrically opposed to natural, evokes the imitated, the non-original.

The report on the future of work by the World Economic Forum highlights that new technologies such as big data, cloud computing, and artificial intelligence will be adopted by over 75% of companies in the next five years. The demand for AI and machine learning specialists will grow by 40% during this period. Additionally, companies will focus on retraining individuals in three key competencies: analytical thinking, creative thinking, artificial intelligence and big data².

Although it could be said that AI is still in its infancy, there has been a noticeable increase in its use for human talent in organizations, candidate selection, and the development of interviews and tests in recent years. While there are other applications in the curriculum design process or in training

and work practices, this article focuses on the recruitment and evaluation stage of candidates.

It is very important to take a look at the growth of AI in talent management processes, including the supply and demand of human resources, and how a certain convergence between training and competency development is beginning to emerge, along with its relationship to skills recognition and certification. From this perspective, these two areas tend to merge on different levels, such as identifying job profiles, developing skill and knowledge tests to assess suitability, merging with employment services, training, and occupational guidance, or even the recognition of a competency certificate.

This document aims to highlight the rapid proliferation of artificial intelligence applications in the world of work to bridge the gap between supply and demand for skilled labour. It considers, among others, the findings of a recent OECD³ report on the subject and includes other sources to illustrate the advancement of AI in the world of work⁴, but also to emphasize the enormous challenges posed by its use.

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1 The [European Parliament](#) agreed to define artificial intelligence systems as machine-based systems designed to operate with varying levels of autonomy and that can, through explicit or implicit objectives, generate products such as predictions, recommendations, or decisions that influence physical or virtual environments. This definition closely aligns with the one formulated by the OECD.
The [Merriam-Webster Dictionary](#) defines artificial intelligence as a branch of computer science dedicated to simulating human intelligence on computers.

2 World Economic Forum, 2023. [Future of Jobs report 2023](#). World Economic Forum.

3 Broecke, S. (2023). “[Artificial intelligence and labour market matching](#)”, OECD Social, Employment and Migration Working Papers, No. 284, Paris.

4 ILO reflects on [technology as a driver for equality](#) as part of its podcast on the future of work.

Key ideas of AI in the labour market.

Education and training systems are increasingly required to bridge the gap between supply and demand by increasing the relevance of training and educational programmes, recognizing the need to reform traditional education to make it more aligned with job requirements⁵. The so-called skills gap entails not only addressing the content of programs but also training strategies; therefore, it is necessary to have a better understanding of jobs and how they have been affected by technology.

AI has the potential to accelerate the automation of routine tasks and functions while also creating new jobs. The previously mentioned World Economic Forum report found that the top five jobs expected to grow between 2023 and 2027, according to surveyed companies, are: AI and machine learning specialists, sustainability specialists, business intelligence analysts, information security analysts, and FinTech engineers.⁶

The report also delves into the key skills considered important for new jobs, with the top six being: analytical thinking, creativity, resilience and adaptability, motivation, curiosity, and lifelong learning orientation. Much of what has been called the fourth industrial revolution is closely related to artificial intelligence and machine learning.

The use of AI in assessment and certification processes.

AI is increasingly being used to evaluate job applications, analyze resumes, and, in many cases, monitor performance. The previously mentioned OECD document describes how AI is utilized for its ability to provide more accurate and objective assessments of candidates' skills and qualifications, thereby reducing human errors and subjective biases. However, as will be discussed later, its application also entails risks due to potential bias resulting from the way algorithms have been trained, which can lead to inequity and discrimination.

As an illustration, I conducted a brief web search, and indeed, without any classification or exclusion criteria, experiences of recruitment and selection service providers such as Pymetrics,⁷ HireVue⁸, Plum⁹, Harver¹⁰, Gupy¹¹ or Talently¹² were found. They all have in common the provision of candidate selection and evaluation services using various systems that include videos, games, machine

learning algorithms, psychometric assessments, and other AI-supported techniques. Most of them report positive outcomes in terms of reduced hiring time, increased customer satisfaction, shorter job posting time, and decreased turnover, among others.

Converging Processes: From Selection to Evaluation and Certification

Competency assessment is the quintessential mechanism for determining the acceptance or rejection of a candidate. While the use of recognition and certification systems for prior learning provided by training institutions and labour ministries has become more widespread, many companies also train, evaluate, and certify their employees on a day-to-day basis. This trend has multiplied, especially in occupations related to digital technologies.

How close or far apart are these two processes? It seems they are converging in human talent management and development. The existence of organizations and platforms offering certification based on AI-driven assessment tools is also evident. Let's see the results of a quick web search.

- IBM offers a range of professional certification programs, some of which utilize AI-based assessment tools to evaluate candidates' skills and knowledge. For instance, IBM's Professional Certificate in Data Science program uses an AI-driven assessment tool to measure candidates' performance in practical tasks and quizzes. The course is offered in partnership with the Coursera platform¹³.
- Coursera is an online learning platform that offers courses and certifications from various universities and organizations. Some of the certifications offered on Coursera use AI-based assessment tools to evaluate candidates' skills and knowledge. Among others, it offers the Google IT Support Professional Certificate program and employs AI in evaluating candidates' performance in coding tasks¹⁴.
- SAP Latin America offers certification programs in various proprietary technologies. These programs are designed to develop skills and knowledge in these technologies and enhance career prospects. On their website, they highlight indicators such as salary increases (28%) and career promotion and advancement (61%) among other benefits for participants in their programs¹⁵.

5 For example, a recent article from MIT analyzes advances in higher education and its role in reducing the skills gap. See at: <https://workofthefuture.mit.edu/research-post/training-the-workforce-of-the-future-insights-from-work-based-higher-education-programs-in-germany-and-the-united-states/>

6 FinTech: Use of technologies for the design, offering, and provision of financial products and services.

7 View on: [Pymetrics.ai](https://pymetrics.ai)

8 View on: [Why HireVue? Solutions for Hiring At-Scale Online](https://hirevue.com/)

9 View on: [Plum | Talent Assessment Platform](https://plum.com/)

10 View on: [Harver - Better Talent Decisions. Faster](https://harver.com/)

11 View on: [Gupy | Impulsione o seu RH](https://gupy.io/)

12 View on: <https://talently.tech/hire/>

13 View on: <https://www.ibm.com/training/badge/data-science-professional-certificate>

14 View on: <https://www.coursera.org/>

15 View on: <https://www.sap.com/latinamerica/training-certification/education-courses.html#course-directory>

- Oracle Academy offers certification programs in various proprietary technologies, such as Database, Cloud Infrastructure, and Java. These programs are designed to assist students with hands-on experiences and modular content to develop skills in digital technologies. The duration of the programs can range from one semester to three years¹⁶.

Several training institutions are offering digital skills development programs, and while it's not explicitly mentioned whether AI is used for evaluations, here are some summaries:

- INTECAP: This professional training institution in Guatemala offers certification programs in Networks and Telecommunications with digital technologies from companies like LINUX (Professional Institute) and Microsoft (IT Academy). It is recognized with Cisco Academy standards and offers international Pearson VUE certification. The program includes technical training of up to two years in duration, but it can also be completed in certifiable modules and over 15 short courses¹⁷.
- INEFOP: In Uruguay, through a public-private partnership with Microsoft, INEFOP offers a basic program for developing digital skills for employability. It consists of five modules targeting individuals on unemployment insurance, those currently employed, and the general population¹⁸.
- SENA: In Colombia, as part of its "SENA Digital" strategy, SENA offers training using bootcamp-style programs for topics such as cybersecurity, artificial intelligence, Internet of Things, cloud computing, and web design. It provides training with technological partners through virtual learning environments that grant micro-certifications for specific competencies. The partners include Microsoft, Oracle, AWS-Educate, and SIEMENS. This is complemented by digital citizenship programs that focus on information management skills, content creation, online communication and collaboration, and safe online experiences¹⁹.

In general, the offering of training courses in digital technologies is shaping a triad of features associated with competency assessment and recognition, micro-certifications, and training. Depending on the experience, one angle may be emphasized over another, but there is evidence of a convergence of paths between those who start by recognizing their competencies, those who undergo training (which may be the same individuals), and those who obtain micro-certifications through one route or another.

Lights and Shadows around AI in People Management

The mismatch between supply and demand, or the "skills gap," has a frictional component explained by the lack of timely access to updated information about job vacancies or candidates. The difficult access to this information hampers the efficiency of the labour market and affects the unemployment rate.

AI can be a tool to improve harmonization in the labour market by facilitating the analysis of vast amounts of data on the supply side, including education, experience, and skills, and comparing them with the demands of employers to find the best matches. In this way, search times can be reduced on both sides, increasing the efficiency of the hiring process and reducing associated costs, even in stages such as job posting, selection, testing, and interviews. AI operates with standard and predefined criteria, which provides a guarantee of objectivity and effectiveness in the processes and works towards reducing hiring biases.

However, there is also a "darker" side and significant challenges in its use. Starting with the fact that the increasing use of AI and automation could lead to job displacement and exacerbate inequality among workers with fewer digital skills or more manual and routine task intensity²⁰. In this regard, it is also argued that technological advances have created more jobs on net balance than those they eliminate. Therefore, addressing this challenge requires more and better public policies that incentivize training and lifelong learning to mitigate these impacts and support those who need to integrate into new job opportunities.

Investing in new vocational training programs to develop skills required by new jobs and support retraining and updating becomes central in the planning scenario for the coming years. It is essential to promote social dialogue and collaboration among governments, employers, workers, and education providers to ensure that AI benefits workers and society as a whole. It is also crucial to ensure that the use of AI in human talent management is transparent, in line with ethical principles, and framed within regulations for privacy preservation and data protection.

The OECD document mentioned above highlights its emphasis on the advantages, challenges, and risks of using AI in the human talent management process²¹.

¹⁶ View on: <https://academy.oracle.com/es/solutions-curriculum.html>

¹⁷ View on: <https://www.intecap.edu.gt/cti/index.php/es/especialidades-ti/cisco-linux-microsoft>

¹⁸ View on: <https://www.microsoft.inefop.uy/>

¹⁹ View on: https://sena.edu.co/es-co/formacion/Documents/ABC_Sena_Digital_26042021.pdf#search=microsoft

²⁰ Broecke, S. (2023).

²¹ Broecke, S. (2023).

Some advantages of using AI in talent management²²

1. Enhanced efficiency: It can improve labour market alignment by matching job seekers with the most suitable jobs based on their skills and preferences, reducing the time and costs of the hiring process.
2. Diversity inclusion: It can reduce bias and discrimination in the hiring process by using objective criteria to assess candidates' qualifications and suitability for a job.
3. Increased accuracy: It can provide more precise and objective assessments of candidates' skills and qualifications, reducing human error and subjective biases.
4. Process productivity: It can automate routine tasks and create new areas of work by applying skills in data analysis, design, and programming, potentially improving productivity and innovating the process.

Some challenges in using AI in talent management include:

1. Job displacement and increased inequality: Widespread adoption of AI in the labour market could lead to job displacement for workers lacking the necessary skills to adapt to changing demands, potentially increasing inequality without support measures for retraining and job transition.
2. Bias and discrimination: Using AI in the hiring process could introduce bias and possibilities of discrimination if algorithms are trained on biased data or not designed to be inclusive and unbiased.
3. Privacy and data protection: When applying AI in evaluation or selection processes, safeguards should be in place regarding privacy and protection of personal data, as sensitive data is collected and used for hiring and selection purposes.
4. Ethical considerations: AI and its use in talent management may raise ethical concerns and questions about the potential impact on worker well-being.

Final considerations

While AI has the potential to support and improve human resource management, evaluation, and certification processes, it is unlikely to completely replace the typical skills of human intervention in this field.

AI algorithms can assist in tasks such as resume screening, candidate selection, and skills assessments, allowing HR professionals to more efficiently and effectively identify qualified candidates for job vacancies. It can also handle

large amounts of information regarding evaluation, results, and test success.

However, there are still many aspects of human resource management that require human skills, judgment, and experience, such as assessing cultural fit, evaluating soft skills, sensitivity to emotions, and making final hiring decisions.

AI can support these processes but is not advanced enough to fully replace human intervention. Last, but not least, the ethical implications of applying AI in talent management, evaluation, and certification cannot be overlooked, including potential biases and discrimination in algorithm-based decision-making.

²² The European Union is working on a legal framework on AI that addresses the risks of its use and provides clear regulations on obligations and requirements related to its various uses. You can find more information at: <https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai>

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