

AI, WORK FUTURES, & OPPORTUNITY

This Time is Different? Higher Education and AI's Impact on the Labor Market

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The last two centuries' historical experience has shown that technology has consistently replaced human labor in specific tasks without leading to widespread job loss, reinforcing instead the labor market advantages of higher education. Despite that optimism, growing concerns have permeated policy views about digitalization and its impacts on the labor market. This text examines briefly those concerns and some potential implications for higher education, with a particular emphasis on the role of educational mission, pedagogical and curricular innovation, and the institutional conditions favorable to face those challenges.

The last two centuries' historical experience has shown that technology has consistently replaced human labor in specific tasks [without leading to widespread job loss](#). Moreover, the experience of the last half century indicates that technological progress has reinforced the [labor market advantages of higher education](#). Despite that optimism, growing concerns have permeated policy views about digitalization and its impacts on the labor market. This text examines briefly those concerns and some potential implications for higher education.

Rising Concerns About the Effects of Recent Technological Changes

In recent years, there has been growing pressure to assess the potential impact of AI on employment for different profiles of workers. [Recent analyses](#) have pointed out that generative AI technologies, which can produce novel content (e.g., text, images, and code), have the potential to affect a broader range of industries and employments than previous waves of automation, and that jobs that rely heavily on human interaction, complex judgment, or non-repetitive creative tasks tend to be less exposed to the effects of generative AI. These analyses show that a sizeable number of jobs currently filled with workers with higher levels of education and specialized skills, earning higher median salaries, may be more exposed to advanced generative AI technologies than they were to previous technological advancement.

This view that AI and machine learning may have an impact slightly different than previous waves of technological change is corroborated by [several analyses](#). Whereas previous waves of automation had a significant impact on workers with low or intermediate levels of qualifications, age, and wages, the potential impact of AI could affect many workers characterized by higher wages, higher levels of educational attainment, and

many years of experience—a group once insulated from the effects of automation.

The evidence suggests that AI's impact on job content is not uniform and [varies significantly across occupations](#). What is particularly relevant is that reskilling and upskilling may become relevant for workers who, until recently, were regarded as insulated from technological changes due to their high levels of educational attainment and lengthier labor market experience. This profile is [very different from those targeted by previous policies aiming at workers affected by automation](#).

Furthermore, [the impact may also differ across countries](#). High-income countries seem likely to face bigger challenges, as their employment structure presents greater exposure to AI and has a higher percentage of qualified workers who may face reskilling needs. On the other hand, their structure of employment also presents greater complementarities with AI, thus protecting those workers for whom AI is expected to boost their productivity. Although [low- and middle-income countries seem to be less exposed to the impacts of AI](#), they also face the complex challenge of having to deal with persistent pressures to expand access to higher education, enhanced by higher wage premia for college-educated workers, at the same time that they must rethink the skills profiles of higher educated workers.

To make the matter even more complex, several authors consider that the impact of AI and machine learning on employment is nuanced and predominantly [occurs at the task level rather than the job level](#). While most jobs include tasks amenable to machine learning, only a small proportion of jobs are fully susceptible to automation through machine learning, meaning that automation through machine learning is likely to complement human workers in many occupations, rather than entirely displacing them. Hence, adapting education and training systems may often not imply a macro-change of the

existing curricula, but a focused review of the knowledge transferred and the skills developed in higher education.

Some Major Implications for Higher Education

The accumulating evidence about the impacts of rapid technological advancements in the labor market has relevant implications for higher education. One of the main challenges is to rethink the educational portfolio and the balance between degrees and other forms of learning, notably through the increasing importance of lifelong learning. In a rapidly changing world, the emphasis on one-time degree attainment must be balanced with a more flexible and continuous approach to education.

Another significant challenge arising from this shift is the growing mismatch between the skills graduates acquire during their education and those employers require. Consequently, there is a growing need to reconsider the content and structure of educational curricula to ensure that they align with the evolving demands of a digitalized and automated economy. Although many higher education institutions (HEIs) monitor the employability of their graduates, this tends to be focused on the initial stages of the transition to the labor market, with most institutions losing track of older cohorts of graduates where AI impacts may be more significant.

This renewed attention to education and training as a core mission of universities implies rethinking academic reward systems. If universities are seriously committed to fostering innovation and quality in teaching, learning, and assessment, they need to find ways to assess and reward the time, ingenuity,

and effort placed into pursuing these objectives by academic staff. These aspects are significantly at odds with an entrenched institutional and professional culture that has tended to reward achievements in research over those of education and training.

In order to be successful in this transformation, institutions need to support their academic staff. As the demands of the higher education sector change, so must the skills and knowledge of those who teach, requiring academics to effectively integrate new technologies, teaching methods, and subject matter into their practices. Continuous professional development is essential to keep pace with advancements in their respective fields of expertise and also in adopting teaching strategies that enhance student engagement and learning outcomes.

Final Remarks

The recent dynamics of the labor market seem to affect far more highly educated and experienced workers than previous waves of technological progress. Although the jury is still out, the preliminary accumulating evidence indicates that this time may be different, and that the impact of new technologies will negatively affect the position of many experienced college graduates. This reality requires higher education to fundamentally rethink the profile of educational portfolios and reassess the competencies, skills, and literacies developed during initial education and lifelong training. This will also require HEIs to attentively monitor the employability of not only recent cohorts but older ones, too, in order to better respond to rapidly emerging needs. Failing to do so may exacerbate existing challenges and render higher education less relevant to the demands of an AI-driven labor market.

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