INFOSYS – WEF 2017



EMPLOYERS AND EMPLOYEES – ARE BOTH SIDES CHOOSING THE SAME SKILLS PRIORITIES?

A year ago, Infosys released its research "Amplifying Human Potential: Education and Skills for the Fourth Industrial Revolution". The aim of that study was to better understand the concerns and point of view of the younger workforce and those about to join it. Furthermore, it sought to trigger a discussion about how stakeholders could reset education priorities, promote education inclusiveness and equip students with the revised skillset and knowledge needed to thrive in the Fourth Industrial Revolution. That researched focused on the formal and workplace education and skills development of 9,000 young workers – namely the 16 to 25-year-old "millennial" group – across nine countries split between developed nations in Europe and North America, and emerging economic powers in Africa, South America and Asia. Respondents were asked what subject areas and skills they felt would be key for their future career progression in an Al-centric workplace.

This year, our follow-up research *"Amplifying Human Potential: Towards Purposeful Artificial Intelligence"*

revisited the same skills and education questions, as part of a comprehensive study of business attitudes towards AI across seven major developed and growing economies. Equipped with these findings, we were keen to understand the perspective from the other end of the process, the employers and decisionmakers. In the face of such rapid technological and social change, it was important to see if the expectations of the emerging workforce was aligned with that of the organizations their careers rest with, and whether those employers needed different or additional skills from future workforces amid growing Al adoption.

Are we choosing the right subjects for the future?

Across both surveys, we found that decision-makers and young workers were in sync regarding the Al-supporting subject areas that future generations of the workforce would need to focus on.

Computer sciences, such as programming, web design and data science topped both years' responses. In the first study, 65 percent of younger workers cited this as the most important subject they would need to gain work after education. This year, 72 percent of decision makers said the same, reflecting the heightened importance being placed on development and other coding knowledge including data analytics capabilities. In an Al-

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centric workplace, these will be among the most valuable and utilized job functions.

Traditional business subjects such as marketing, accounting and finance do still have a major role to play, but the emphasis has shifted when viewed by employers. Among young employees, almost two thirds (63 percent) saw those business and management subject areas as critical for their development. This is likely a reflection of the focus these subjects receive in the education systems of established economic markets. However, when the same query was posed this year to decision-makers, only 47 percent flagged the same skillset as a top three subject area, reflecting the refocusing of business priorities towards computing, Al and automation topics.

Similarly, mathematics is viewed more highly by decisionmakers (45 percent) than by young employees (34 percent), another reflection of the employer focus on Al and data-supporting subjects and skillsets.

Focusing on the skills that matter the most

When the research study looked into the specific skills that were viewed as most important – rather than teaching subjects – we see a similar heightened employer focus on certain themes.

Active learning, namely understanding the implications of new information for both current and future problemsolving and decision-making, is vitally important to both employers and young employees working in Al-affected work roles. However, it is the employer that values it more highly, with 58 percent citing it as a top three consideration against just 32 percent of employees. We see a similar gap in emphasis with complex problemsolving, valued by 53 percent of employers against 30 percent of younger employees. Critical thinking is more closely aligned, but again it's the employers placing more emphasis on it. While 37 percent of employees last year cited it as a key skill, 46 percent of decision-makers said the same this year.

That said, the broad skill of creativity is highly valued in both traditional and Al-centric business environments, with 34 percent of young employees flagging it as a key skill against 46 percent of decision-makers.

An interesting aside: time management – a traditional bastion of workplace skills – is perhaps not as critical as it once was. Seen as key by 45 percent of young employees who have had the notion drilled into them through education, it is only seen as important by 27 per cent of our decision maker respondents. Amid new ways of working and more flexibility in job roles, traditional time management is perhaps no longer a lynchpin of workplace order.

Finally, logical reasoning is one of the most important skills needed when working alongside AI, setting the parameters of AI and indeed when developing technology. Some 43 percent of decision-maker respondents recognize the value of this skill in a future workplace, against 34 percent of employees the previous year.



What we can take from these findings is that in the year that has passed between the two studies, the role of AI in business as well as in wider society has fallen under a more intense spotlight. The fact that organizations spent an average of \$6.72 million on AI last year, further underscores how valuable these skillsets are to employers.

Both sides are on the same future path and are at least partly prepared for a more AI, automation and datacentric world of work

It is fair to assume that not all markets have kept pace with business needs and adapted training and vocational guidance to follow suit, leading to the disparity between employers and employees. However, the fact that both groups have flagged the same subjects and skills as important is extremely interesting. Both employers and employees perceive similar future value in the same key skills and core subjects. This shows us that both sides are on the same future path and are at least partly prepared for a more AI, automation and data-centric world of work. Nonetheless, the same data also show us that there are substantial numbers of both decision-makers and next-generation workforce members that need more support, guidance and further education to fully equip and prepare them for the changing world of work and career development.

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