DIGITAL SKILLS AND STRATEGIC AUTONOMY

How to address the gaps in the EU's external action

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Policy Brief

Summary

In the past five years, Europe has faced crisis after crisis – Covid-19, the Russian war against Ukraine, followed by heightened trade tensions, food and energy and migration crises.

All these crises have led European leaders, such as the **High Representative of the European Union** for foreign affairs and security policy, as well as **Spanish and Dutch leaders**, to promote European 'strategic autonomy'. Despite the lack of consensus on what strategic autonomy actually means, the **European Parliament Research Service** refers to strategic autonomy as 'the capacity of the EU to act autonomously – that is, without being dependent on other countries – in strategically important policy areas', including digitalisation and technology.

This means that the EU needs to not only act more autonomously in an ever-more tumultuous geopolitical environment, but also be able to exert influence externally. Being strategically autonomous may require having the infrastructure, the knowledge, the financial resources and the skills to reduce dependencies. At the same time, skills have become an increasingly relevant topic in EU debates, as shown by 2023 being designated the European 'Year of Skills'.

Thus, this policy brief focuses on the interconnection between strategic autonomy and skills, particularly on the unaddressed gaps in EU strategic autonomy promotion through digital skills. Specifically, we recommend the **systematic and consistent inclusion of external digital skills promotion in the EU's discourse on strategic autonomy**, as well as the **mainstreaming of digital skills in EU digital and education-related external action**. This could be realised through the creation of National or Regional Digital Skills Coalitions (DSCs).

According to the **European Commission's Digital Competence Framework**, digital skills go beyond confidently navigating the internet or digital technologies. Being digitally literate entails proficiency in five key areas: information and data literacy, communication and collaboration, digital content creation, safety, and problem-solving. Moreover, the concept extends to the acquisition of advanced digital skills, which involves mastering programming languages to pursue in-demand tech careers such as artificial intelligence (AI) and cybersecurity. Overall, the need to promote and increase digital skills in Europe has not been completely ignored by the European Commission.

Designating 2023 as the European 'Year of Skills' may seem like an interesting choice, especially as arguably the dominant political discourse over the past year has been about resilience, security, and Europe's role in the world - all themes linked to strategic autonomy. But, looking at the Commission's policy initiatives including the **European Skills Agenda** and **A Europe fit for the Digital Age** – both of which prioritize a digitally robust and resilient European Union – it becomes evident that digital skilling plays a crucial role in achieving strategic autonomy, along two dimensions. First, addressing the internal digital skills shortage in Europe can help strengthen the European workforce and ensure European competitiveness. Second – and core to this policy brief – **to position the EU as a global leader in an increasingly turbulent world marked by geoeconomic dynamics, the external dimensions of digital skills** must be placed at the forefront of the EU's external engagements and strategic autonomy efforts.

This CEPS Young Thinkers Initiative Policy Brief argues that, while strong internal support for European digital skilling is crucial, **the EU's commitment to digital skills as a strategic autonomy lever should be extended to external digital skills promotion**. EU action to promote the digital skilling of key partners will advance broader EU ambitions and enhance the EU's strategic autonomy. This is particularly evident when examining the EU's external ambitions via initiatives like the Global Gateway, where we identify a clear opportunity where adopting a larger focus on digital skills can create new opportunities.

The European digital skills crisis

Realising Europe's strategic autonomy goal is heavily dependent on the robustness and adaptability of its internally-focused skills policy. Such a policy makes the current European workforce better able to adapt to an ever-evolving labour market, especially as green and digital technologies open new doors at the expense of old ones.

Many of these skills are necessary to obtain strategic autonomy in other areas, for example, to build and operate secure critical infrastructure, the EU will require more trained cybersecurity professionals. Or, to be a global leader in the green transition and energy independence, green skills and reskilling will be especially important. And, as a final example, Europe needs to be especially competitive in R&D – an area **increasingly dominated by China**, an 'economic competitor and a systemic rival'. **Simply put, an adequate skills policy is necessary to achieve any strategic autonomy ambitions.**

Yet, Europe is experiencing a digital skills shortage. The **Digital Economy and Social Index (DESI)** paints an alarming picture. In 2021, a mere 54 % of Europeans aged 16-74 possess a minimum level of digital literacy. In other words, **every third working adult in Europe lacks basic digital skills**. Most troubling is the 30 % (2019) of youth aged 13-14 years-old underperforming in computing and struggling to meet the competency baseline needed to critically engage with technology. These statistics, alongside significant regional disparities of science, technology, engineering and mathematics (STEM) graduates, underscore considerable skill disparities that may make it very difficult to achieve the **EC Digital Decade** target of equipping at least 80 % of the European population with basic digital skills.

With the abrupt rise of Artificial Intelligence (AI), coupled with the heated national security rhetoric, sectors that require specialised digital expertise such as computer programming, AI research, and cybersecurity are also lagging dangerously behind. For instance, the European Commission has **recently stated** that in 2022, the EU lacked between 260-500 000 cybersecurity professionals.

Furthermore, the gap between demand and existing skilled cybersecurity professionals is so wide in Germany, France, and Spain that countries would need to increase their cybersecurity workforces between **14 % and 30 %.**

The skills crisis is most acutely felt in the EU's struggle to keep pace with the digital transition. Anything short of a pragmatic fix to bridge the digital skills deficit will only hinder Europe's strategic autonomy. Given that digital literacy rates are nowhere near the desired level, Europe is likely to continue experiencing labour shortages through 2025 or 2026.

The EU's response

As a geopolitical actor, the EU risks falling behind. Should the digital skills gap persist, the EU runs the risk of prolonging – or potentially exacerbating – its labour shortage and inadvertently creating excessive reliance on other nations to fill job vacancies.

This is why European Commission President Ursula von der Leyen declared 2023 the 'European Year of Skills' to galvanise collective action and foster a reform mindset. However, while the intentions behind the 2023 skills campaign may be clear, closing a gap of this magnitude demands an array of innovative approaches.

Following the basic principle of investing – i.e., spread and diversify your risks – the EU has adopted a two-pronged approach: 1) enhancing alignment across Member States' education systems, and 2) focusing on upskilling and reskilling by maintaining collaborative partnerships with private industry stakeholders.

Inequality and lack of opportunity begins at the very early stages of education and childcare. A major challenge revolves around a need to redefine and establish a more unified standard on the basic knowledge students should acquire. To address regional disparities, the **Digital Education Action Plan**, along with its associated **European Digital Education Hub**, exemplify government efforts to improve European education systems.

This dedicated space stimulates cross-national/regional exchange of digital learning content and research, equipping educators and training providers with common guidelines to effectively organise their digital learning curricula.

The promotion of cybersecurity practices at the primary and secondary levels has also been complemented by specialised micro-credential offerings by higher education institutions. Overall, these efforts underpin the EU's mission to grow the workforce and are particularly effective in addressing the scarcity of cybersecurity STEM graduates.

But closing the gap goes beyond merely protecting and expanding the EU labour pool. Efforts to increase the population of digitally literate adults should also emphasise a commitment to continuing professional development. Private companies have taken the lead on upskilling and reskilling in technically advanced areas such as AI and the ICT sector.

According to the **World Economic Forum**, more than 36 of Germany's most prominent industrial firms have launched digital skills development and education initiatives to effectively address the skills gap. Throughout the European Union, programmes akin to **'Siemens Professional Education'**, **'SAP Learning Hub: Upskilling with SAP'** and Telefonica's **'Skills for the Digital Era'** are emerging as notable knowledge-exchange platforms. Although these initiatives primarily offer training courses, workshops, and resources tailored for employees, they are also made publicly available to assist the general population and businesses in implementing technology training.

Alongside private sector initiatives, the EU has implemented various government-driven programmes. The Commission itself launched the **Erasmus+ Digital Entrepreneurship and Employability Paths (DEEP)**, the **Pact for Skills**, and the upcoming **European Digital Skills Certificate (EDSC)** to tackle the digital skills gap. However, the uptake of working adults in vocational education and training programmes remains extremely low, at a reported rate of only **11.9%** in 2022, with the highest numbers observed in Sweden, Finland, and the Netherlands. Going forward, **the Commission and public officials should recognise and improve dialogue with private sector initiatives to maximise upskilling and re-skilling training uptake.**

The plethora of partnerships and programmes launched as proactive measures to facilitate the digital transition within the EU serve as large-scale internal solutions. However, the challenge at hand is for the EU to strike a balance by complementing its ongoing internal agenda with a well-crafted external strategy.

As more and more global crises to contend with, long-term challenges are coming into sharper focus: **should disruptions continue to hinder the digitisation of labour, the EU could risk losing out on an additional EUR 2.5 trillion to its GDP by 2025.** Given that economic prowess provides the foundation for strategic autonomy, these severe consequences suggest a need to pivot away from a primarily internal-focused strategy to one that prioritises nurturing skills collaborations abroad.

External digital skills development and strategic autonomy

Clearly, EU governments' existing digital skills strategy is primarily focused on managing internal crises. But, with an increasingly interconnected world where globalisation, geopolitics and economic integration has made the world flatter than ever before, external elements and strategies are also key – especially when discussing strategic autonomy.

Thus, a second major aspect of digital skills as a tenant of strategic autonomy must consist of going beyond simply retaining talent and building internal competitiveness. A key part of strategic autonomy is not only being able to secure your domestic or internal capacities, **but also to be able to exert influence externally**. In other words, if the EU desires to fulfill its ambitions of strategic autonomy, **it cannot do so by only strengthening itself.** There must also be efforts to credibly increase the EU's influence and soft power amongst potential partners. And here, skills have an underexplored role to play in enhancing soft-power collaboration.

Consequently, **a digital skills-based approach should be actively used by the EU to better position its interests amongst partners**. There are two key strategies that the EU has been crafting, under an agenda of strategic autonomy, to enhance its external influence: the external expansion of its regulatory power, and external initiatives to improve digital connectivity

First, the EU has in recent years embraced itself as a **regulatory power**. This identity, due to the so-called **Brussels Effect**, also now has the potential to influence external partners and other global players. Digital skills promotion supports EU digital and public diplomacy efforts. The EU is shifting its approach to many of its global relations by reconfiguring donor schemes into partnerships. Examples are found in the Global Gateway and EU regional partnerships with Africa and Latin America.

Partnerships require that peers are adequately empowered and build the capacity to own their development paths, for which digitalisation and digital skills are a crucial lever. Thus, supporting digital skills abroad enhances EU's diplomacy and soft power.

Furthermore, when in a position to teach and build skills, the skills that support the same values held dear by the EU can be taught, like cybersecurity skills to ensure the resilience of civil society organisations. This can and should include skills that align regulatory models and norms. For instance, in the proposed AI Act, its risk-based approach is seen by many to be **extraterritorially-influential**. Its influence could further be enhanced by promoting AI-based skills programmes in countries such as Global Gateway targets, so when these countries sit down to develop regulation, they will more likely turn to EU standards.

Second, mirroring its internal action to improve digital connectivity and regulatory frameworks within EU borders, the EU is also supporting third countries in developing their digital economies. In these initiatives, education and skills are acknowledged as important objectives and areas of investment. For example, the EU has created **Digital4Development Hubs** (D4D) in Africa, Latin America and the Caribbean and Asia-Pacific. In D4D Hubs, willing EU Member States and partner countries cooperate to promote the local digital economy, including on digital skills.

Finally, Global Gateway also includes references to digital education. The rationale to couple these programmes with investments in digital skills is that failing to do so can fail to empower the population, create further dependencies on the EU and other countries, and defeat the purpose of digital connectivity efforts. However, across these initiatives, digital skills still play an insufficient role. mainly reflect physical infrastructure investments. The only clearly identified project on digital skills is the VaMoz Digital project in Mozambique, that focuses on youth digital literacy and skills, and the EU-LAC Digital Alliance that, among others, will work on digital skills development in Latin American and Caribbean states. Skills are mentioned across the board in a footnote stating that "soft measures", including efforts on skills, will accompany all initiatives. However, relegating skills to a footnote highlights a lack of priority given to skills in the context of the Global Gateway and other international initiatives.

This is a distinct gap in EU external initiatives with EU domestic policy and internal ambitions. In the context of the European Year of Skills, EU expertise and aspirations should be shared with partners, which would also form new partnerships and open new doors for skills cooperation and development.

Thus, **investment in external digital skills, such as through Global Gateway, again reinforces the EU's soft power as a trusted and reliable partner. This not only provides partners with quality infrastructure but also empowers local populations to embark on their own their digital development projects.**

Policy recommendations

The current lack of focus on digital skills in EU digital external engagement is problematic. It means that the EU is missing out on the opportunity to leverage the political and financial capital put into large-scale initiatives to strengthen strategic autonomy in digital skills. Thus, this Policy Brief proposes the following two recommendations:

1 | **Incorporate the promotion of external digital skills in the political discourse on EU strategic autonomy**

The concept of EU strategic autonomy, in all its variants, should incorporate external digital skills promotion as a crucial component. A political commitment that clearly and consistently associates external digital skills to EU strategic autonomy is a precondition for articulating policies and concrete strategies that pursue this goal.

2 | **Mainstreaming digital skills in EU-related digital and education external relations (especially in digital connectivity investments)**

Be it within the Global Gateway, D4D Hubs or in other digital initiatives, the EU should include digital education and skills components in all its projects to empower local communities and policymakers, and build capacity on the technologies included in new infrastructure. Capacity building can also include transnational collaboration through student and professional exchange programmes.

This is particularly timely given the new approach to connectivity projects showcased in the Global Gateway, which includes mobilising private money and the involvement of private actors. Therefore, once EU institutions and Member States themselves have internalised the relevance of external skills promotion for strategic autonomy, the EU needs to develop convincing narratives and business cases for EU businesses to understand the relevance of (and to fund) skills programmes abroad.

Achieving our recommendations through Digital Skills Coalitions (DSCs)

Based on prior EU projects with partner countries and success stories of external digital skills promotion, the EU should extend the development of **National or Regional Digital Skills Coalitions (DSCs)**. These would be multi-stakeholder partnerships that aim to identify digital skills gaps, propose skill building measures to address these gaps, and share best practices through the collaboration of businesses, education institutions, civil society organisations and other actors in the public and private sector.

DSCs could mirror and draw from the best practices identified in the already existing **National Digital Skills Coalitions** in EU Member States and in eastern partner countries. These have so far been built at a national level. Coalition members collectively identify their coalition's objectives and design an action plan to support digital skills education and training, which are also collectively identified by members based on local needs and skills gaps.

The coalitions typically focus on four broad groups of digital skills: basic digital skills for all, for the labour force (upskilling and reskilling to actively participate in the digital economy), for ICT professionals (specialised skills) and in education (new ways of learning to adapt to the digital economy).

An innovative extension of the proposed DSCs would not only be the expansion of the model to other countries, but also the design of coalitions at regional level to identify common obstacles and facilitate the international transfer of best practices from skilling programmes. DSCs would lead to public-private partnerships and collaboration for more agile digital skills programme design.

DSCs should connect to existing initiatives that already create networks and link the public and private actors in the EU and in partner countries. They should build on these initiatives to ensure coherence with other EU-led projects and become leading frameworks of reference for the development of digital skills. Thus, the EU could have a key role in the proposed DSCs by acting as a bridge-builder between EU and MS institutions, businesses and education providers, with those in partner countries, and between different national DSCs.

For DSCs to be successful, a pre-requisite is the development of consistent regional systems to measure digital skills. These should homogenise data collection methods and digital skills indicators across countries and regions. A common measurement system will allow for better problem identification, as well as to pinpoint regional/local best practices that can be 'regionalized'. The EU could support partner countries by using its models (e.g. the EU's Digital Economy and Society Index) as a blueprint.

Conclusions

Internal and external digital skills promotion are two sides of the same coin. They represent complementary dimensions of a unified strategy fuelling Europe's pursuit of strategic autonomy. The EU has been making ongoing EU efforts to tackle its internal digital skills crisis, while neglecting a gap in external skills development that could impede the EU's influence in the global digital landscape.

To address and close this gap, this policy brief advocates that an external digital skills agenda should be included in the EU's strategic autonomy discourse. Digital skills have a clear role to play in supporting the EU's regulatory power and digital connectivity initiatives abroad. By implementing this policy brief's two key recommendations, policymakers would positively contribute towards cultivating large-scale political will and fostering transnational collaborations that would re-position the EU as a global leader in the digital age.

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