

The Great Skills Gap

We must learn to learn



Demands for lifelong learning

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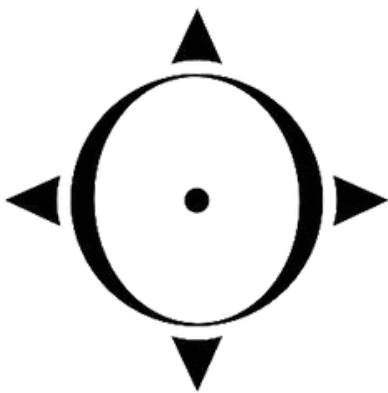


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Introduction:

The New Reality of Learning

The Danish Armed Forces' acute problems are also the danish society's problem: adapting too little and too late to fundamental risks. The same applies to four society-critical challenges: digitalisation and AI, climate change, cybersecurity, and welfare. Like the Armed Forces, these areas must be rapidly and ambitiously adjusted to a new reality. This is the consequence of a series of overlapping and mutually reinforcing events and trends—globally and nationally—including the effects of a collapsed agenda.

But adapting quickly presupposes learning quickly. That may become Denmark's largest, hardest, and most complex challenge. For many years—and rightly so—we have been able to pride ourselves on a well-educated workforce. The question is whether that is still true, and whether past qualifications are sufficient for a future with markedly different conditions for development and existence.

This question underpins the report—especially with reference to adult and continuing education activities that are meant to ensure the workforce is continuously upskilled. The reality is that we may be heading toward an actual competence crisis—described here as **"the great skills gap."** It expresses the distance between education systems that were largely developed and prioritised for a reality with predictable and clearly defined needs—with the individual at the centre—and a future in which an entire society must be "re-educated."

Figures illustrate the challenge: According to available information, the state's total investment in upskilling primarily the public-sector workforce is 0.07% of GDP –i.e., under one per mille, corresponding to DKK 2.6 billion in the national budget. As this report shows, continuing education simultaneously runs into a number of barriers that greatly limit the desired effect.

Moreover, it is difficult to identify precise data that provide a qualified and comprehensive picture of the state's expenditure on adult and continuing education. The figures should therefore be taken with that caveat.

Closing a Skills Gap

The report concludes with proposals to close the "skills gap," including:

- Develop a learning model aimed at adapting society to future competency requirements—including ensuring continuous, lifelong upskilling.
- Prioritise the task as critical infrastructure.
- Invest up to 1% of GDP over a ten-year period in the development and implementation of lifelong learning as a societal strategy.
- Put universities in the lead to develop future lifelong learning models—among other reasons because they encompass the necessary insight into complex challenges and can ensure a research-based foundation.
- Establish a "learning group" with selected actors and experts who, within one year, can propose and structure how a skills gap can be closed.

Erik Rasmussen

Founder of Navigating 360

Learn, Learn, Learn—

Arming Ourselves for Future Challenges

“Buy, buy, buy.” That has become synonymous with the largest military build-up in Denmark since the Second World War. It must be supplemented with **“learn, learn, learn.”** The Armed Forces’ build-up is at once a necessity, an opportunity, and a risk. **A necessity** if we are to be prepared for current war threats; **an opportunity** because it allows us to make up many years of backlog and adapt the Armed Forces to future security-policy challenges; **a risk** if we interpret the build-up of military capacity and three-digit billion-kroner investments as Denmark’s most important adaptation to a new geo- and security-political threat.

One important lesson can be drawn from the military build-up: the price of being too late in adapting to a new reality. Backlogs must be caught up; decisions on new strategies, plans, and investments must be accelerated at the expense of carefully thinking through what new types of conflicts must be countered—and thus which weapons must be prioritised, etc. The price then becomes so high—running into such large sums—that it is hard to grasp: what to invest in, in what, and where.

A Lesson for the Whole of Society

The lesson from the Danish Armed Forces can be transferred to society as a whole. It is not only the Armed Forces that must scale up rapidly and comprehensively. In reality, we are in the midst of a historic transformation toward a future that challenges the systems and structures on which we built our society in the post-war era. We are not alone in this; we share it with all Western societies, and it must be seen, among other things, as a consequence of a melted-down world order and the United States’ break with the transatlantic alliance. This is also a direct reason why Denmark is investing, at great speed, staggering sums in military rearmament.

The build-up must be carried out broadly in Denmark and encompass four society-critical systems. It must proceed in parallel with the defence and security-policy build-up. This is a precondition for completing what will, without comparison, be the most far-reaching, most complex, and most important transformation in seven decades—while respecting democratic values and norms.

Four Critical Challenges for Society

1. Integrating digitalisation and AI across all societal functions.
2. Meeting ambitious climate goals, including protection against rising waters.
3. Strengthening resilience against hybrid war threats, which will inevitably hit all critical infrastructure and companies in the coming years.
3. Adapting the welfare state to a future with a rapidly growing elderly population, imposing entirely new demands on care and services.

One thing is technological build-up; another is human build-up. Watershed transformations require combining an innovative mindset with strong and continuously updated competencies. The most important weapon in future conflicts is not only mastering the most advanced technology, but possessing the best-educated and most motivated human capacity.

In other words:

To carry out a learning and competency build-up of unprecedented and untested scale.

This raises fundamental questions:

- ➔ How far along is Denmark in adapting to the four challenges?
- ➔ Do we have the necessary competencies?
- ➔ How quickly can it be done?

A "Gap Report" on Education

A brief "condition report" for the four challenges:

1. Digitalisation and Artificial Intelligence: AI and automation are already changing public administration, healthcare, education, and security. But Denmark lags in the ability to translate technology into operations. Few authorities possess AI competencies at the leadership level. Denmark lacks both digital generalists and advanced AI specialists. According to the EU's Digital Economy and Society Index, Denmark still falls short of the target for "digital experts per 1,000 employees."

2. Climate neutrality and the green transition: The goal is not only to develop green technology – but to implement it at scale. There is a shortage of skilled trades, technical specialists, and local capacity for climate adaptation. Without speed, Denmark will lose its leading position.

3. Security and hybrid threats: Cyberattacks, misinformation, and threats against infrastructure make security a broad societal concern. Denmark's total defence is being built but remains fragmented. Hybrid warfare (cyber, misinformation, economic pressure) requires cross-cutting preparedness among the state, business, and civil society—and the development of entirely new competencies.

4. Demography and welfare: By 2040, the number of people aged 80+ will have grown by over 60%. This means more patients and greater care needs—but fewer hands. A new elderly cohort demands higher quality and digital services, and the labour market cannot keep up.

A New Learning Paradigm

There is a critical gap between the demand for competencies and their supply. This creates a large skills gap that risks growing deeper and wider in the coming years, slowing Denmark's adaptation to future conditions for development and competition.

This description confirms why the **"skills gap"** may become a serious brake on transformation and growth at a critical moment—precisely when four major, interconnected societal tasks must be handled and when the education system must be the glue that binds these tasks together and inspires new solutions. Those solutions require the development of new educational paradigms.

Previously, lifelong learning was an individual project—updating one's skills to remain relevant in the labour market. Today, it is a societal project: entire sectors, institutions, and cultures must be transformed simultaneously to new realities.

The new "mega-paradigms"—AI, climate, geopolitics, and welfare—are cross-cutting, adaptive, and systemic. They traverse all classical disciplinary and sectoral boundaries. This means lifelong learning must develop systemic competencies: the ability to understand interdependencies, consequences, and value conflicts—not merely technical skills.

Solving such watershed challenges within a few years is a societal task that draws on all sectors. But the framework must be set politically and established in public structures, with the involvement of educational institutions to ensure a broad and research-based foundation. The problem is that the demands for an ambitious and rapid build-up of new competencies and new educational paradigms are growing faster than the public sector and formal learning systems can keep up. This also challenges adult and continuing education.



The Major Barriers

What follows is a brief description of adult and continuing education primarily aimed at the public sector. The description comes with the caveat that figures and overviews are very scattered and fragmented and must be pieced together from several different sources. This makes it difficult to create precise overviews—and in itself illustrates a potential barrier to a future coordinated and ambitious effort.

- **What is being taught:** Learning activities are wide-ranging and target a very broad group with diverse needs. They span, among other things, leadership in public digitalisation, data management, welfare technology, public administration, and project management, as well as established labour-market programmes focused on short, practice-oriented courses. 47% of public organisations lack digital competencies (DM, 2025).
- **Barriers to education:** Even though the need is large and acute, these programmes face a number of barriers that often lead to de-prioritisation. This is due to a combination of self-reinforcing factors such as lack of time or funding, too little connection to everyday tasks, etc.

- Only 1 in 4 municipal employees participates annually in formal continuing education (KL/VIVE, 2024). Low-skilled workers participate three times less often than university graduates (AE, 2023).
- The problem is underscored by the risk that the welfare sector will lack 40,000 employees by 2030 if upskilling is not strengthened.
- In addition: without targeted continuing education, the green and digital transitions—particularly in municipalities and regions—will be slowed. Recruitment becomes more expensive while the loss of competencies increases.

A Tiny Promise for a Huge Task

Concrete figures say more than many words about how challenges are prioritised. This also applies to society's investments in adult and continuing education.

The lack of precise figures also makes it difficult to present exactly how much the state invests in adult and continuing education. But based on appropriations in the national budget, it amounts to roughly DKK 2.6 billion for 2025 and about the same for 2026, rising to DKK 3.1 billion in 2029. This figure should also be treated with caution, as it does not necessarily include all activities, though presumably the largest and most important.

If the DKK 2.6 billion is taken as the baseline, this corresponds to the state investing under one per mille of GDP per year in upskilling the public-sector workforce—precisely 0.076%.

This sum is spread across a multitude of different activities and raises questions about the overall effect of adult and continuing education.

But one thing is certain: Investing under one per mille of GDP to arm the public-sector workforce to tackle Denmark's four critical challenges is unrealistic. We must recognise that lifelong learning for the Danish workforce must be seen and prioritised as critical infrastructure. It is critical because the strengthening of human competencies will be a basic condition for Denmark's overall transformation.

Risk of a "Skills Crisis"

The figures speak loudly. We must reassess and rethink how Denmark—within a period of up to around five years—can carry out an ambitious and tightly coordinated mission to upskill the workforce for an entirely new reality. This effort must—like that of the Armed Forces—necessarily be the most important since the Second World War. It will not succeed with investments below one per mille of GDP.

The description of the current state of adult and continuing education in the public sector shows that the Armed Forces' adaptation problems are not unique but can be found across other society-critical sectors.

Reality is,

that Denmark appears poorly prepared to handle the risks and challenges that will predictably dominate political, economic, social, and technological realities in the coming years. We therefore risk experiencing how the "defence syndrome" spreads to the rest of society.

This means, that we recognise and understand the new conditions too late and must then, at great expense, catch up on backlogs and build new structures and competencies. A number of known educational offerings—including those aimed at the labour market—have, in other contexts, helped qualify the workforce. But conditions and needs are changing rapidly and profoundly and require new answers. Here, the Armed Forces were late. Denmark cannot afford to let this develop into a general societal problem. We must therefore rethink—and act quickly.

This raises the fundamental question: What kind of new thinking and what investments are needed?

Where New Thinking Is Needed

The education sector is a diffuse and fragmented institution. That includes adult and continuing education. This is confirmed not least when one attempts to get an overview—including compiling coherent and relevant data. Any ambition to implement new thinking in even parts of the sector is, in itself, a monumental challenge and risks failing from the outset.

For that reason, this document also proposes more limited and experimental activities and ideas to help broaden understanding and recognition of the need for new learning formats.

The alternative—a continuation of the current course with very small investments in continuously adjusting the workforce to constant new demands—can quickly develop into a fundamental societal crisis—far greater than the risks we have experienced with the Armed Forces and security-policy challenges. In reality, this is about preserving and consolidating Denmark's position as a resilient, democratically grounded society with the robustness and capacity to adapt to the most challenging and turbulent conditions of the post-war era.

Closing the Skills Gap

The descriptions in this document send one important signal: the need to close the obvious skills gap that might otherwise develop into a fundamental societal crisis. But even though the need is great and clear, the solutions are not necessarily so.

As a starting point, at least three recognitions must be met:

- 1** Lifelong learning is a condition for development and survival. This kind of learning is as essential as an electric car's dependence on charging stations. We must ensure that Denmark can build "stations" that continuously recharge our competencies. Lifelong learning is no longer a choice—it is society's survival strategy.
- 2** Knowledge becomes obsolete faster than it can be institutionalised. Current learning systems (formal education, AMU, EVU) are designed for stability, not disruption.
- 3** We must shift from traditional course formats to coherent learning systems—systems capable of embracing the complexity of transforming a society. That means less focus on the individual's upskilling and more on society's collective adaptation. Lifelong learning should be measured not by course participation but by institutional learning capacity. This is about developing a learning paradigm that moves from competence to capability.





Universities as the Entrepreneurs of Learning

The question is: how can these recognitions be translated into actions—and by whom?

What if the universities assumed the role of entrepreneurs of future learning systems?

- ➡ In an era of misinformation and loss of trust, universities are among the few institutions that can still offer scientific judgement as a shared point of reference. Lifelong learning must therefore also be understood as democratic learning: the ability to distinguish knowledge from noise, evidence from ideology.
- ➡ Universities represent the breadth of competencies necessary to embrace the complexity of transforming a society.
- ➡ Universities can offer continuous access to research and learning throughout life.
- ➡ Universities can establish learning partnerships with, among others, municipalities, regions, and the private sector—not as purchasers, but as co-developers.

This presupposes, among other things, that universities receive the mandate and resources to run lifelong learning as a third core mission (alongside research and education). This means that universities must increasingly function as a shared national learning centre—not only for students in their twenties.

The conclusion of this document is to perceive and prioritise learning as **critical infrastructure** on par with, for example, energy and water supply. Without targeted and continuous development of human competencies and the national workforce, the foundations for developing all other institutions and infrastructures will erode.

How We Move Forward— Two Proposals

Investments

Toward 2030, the state should allocate 1% of GDP to the development of lifelong learning, thereby equipping Denmark to adapt to the greatest and most difficult challenges of the post-war era and the future—challenges that can only be solved democratically if we prioritise learning as critical infrastructure.

This is a ten-fold increase compared to the tiny promise the state currently allocates to adult and continuing education, according to available data. That corresponds to about DKK 2.6 billion per year, which should be increased to about DKK 26 billion. Given the stakes, this is assessed to be a realistic size. It is proposed in two phases: half a percent of GDP by 2030, and an additional half percent over the following five years.

Action Plan

This raises natural questions about how to deploy the many extra billions. Recognising the barriers, traditions, and entrenched processes that currently dominate the education sector and adult/continuing education, it is proposed to establish a learning group of selected actors and experts. The group should be small and should not aim to gather all parties around a new continuing-education reform, but to identify and prioritise how a lifelong learning mission can be unfolded, including what role universities can play.

Regardless of the model and process established, it does not change the fact that Denmark—like other nations—right now and in the coming years faces challenges and risks we have not previously experienced and therefore have no experience with. We are therefore compelled to rethink and to experiment. The “learning group” can be seen as the start of an experiment. The “condition report” on the education programmes intended to prepare Denmark for a new reality suggests that, realistically, we have no choice.

It's all about a mindset...

History is full of reports and analyses bearing well-intentioned, timely, and necessary messages, whose impact is hard to trace afterwards. It is likely that **The Great Skills Gap** could meet the same fate—especially because it cuts across a range of complex agendas and entrenched priorities that many stakeholders are invested in. Any scepticism or resistance is therefore both predictable and partly understandable.

But that does not change the increasingly obvious fact that Denmark—like other countries—must now make critical choices that will define our role and position for decades to come. This creates a series of difficult dilemmas that can, in themselves, derail and delay a necessary transition. That is also why the report adopts an experimental approach—freed from the established and well-reasoned routines of everyday practice, though perhaps without acknowledging that the seemingly unthinkable may be the most necessary—and only—answer.

Ultimately, this is not about investments and models, but about a mindset. That will determine the fate of **The Great Skills Gap**.

Reference list:

IT-Branchen.dk “It barometer 2025”

Haslund, Alexander. “Faretruende udvikling: Så få it-uddannede er der i Danmark” Finansforbundet (2024)

Mønsted, Sabine. “Hver 4. udenlandske it-talent rejser efter kun et år i Danmark” DM (2024)

HBS Economics på vegne af Klimarådet. “Review af studier relateret til arbejdsmarkedet og den grønne omstilling” (2024)

Klintefelt, Thomas Michael. “Virksomheder i fuld gang med grøn omstilling mangler 10.000 medarbejdere” Danish Industry (2022)

Jørgensen, Jon Kirketerp. “Det kræver 19.000 ekstra medarbejdere til ældrepleje at opretholde nutidens serviceniveau i 2030” Momentum (2024)

Walther, Claus. “Massiv mangel på social- og sundhedsansatte udfordrer fremtidens ældrepleje” FOA (2025)

HBS Economics & Iris Group. “Mismatch på arbejdsmarkedet for it-uddannede i 2030” (2021)

Kaslund, Rasmus Lindø. “Arbejdskraft til grøn omstilling og infrastruktur” The Economic Council of the Labour Movement (2025)

Czulda, Robert. “Danish acquisition programmes” European Security and Defense (2025)

The Ministry of Defence Personnel Agency. “HR-strategi for Forsvarsministeriets område” (2024)

About Navigating 360

Navigating 360 has one clear mission: to ensure that society's key leaders and decision-makers base their choices on an updated, cross-disciplinary, and trustworthy foundation. We work to strengthen the strategic understanding of those shaping the future – across institutions, organizations, authorities, educational environments, businesses, and politics. What unites them is a shared responsibility to secure a timely adaptation to a new and increasingly complex reality.

This reality is defined by four interconnected risks that challenge leadership, decision-making, and societal resilience: the climate crisis, geopolitical conflicts, the AI revolution, and the knowledge collapse.

Navigating 360 brings together leading societal- experts, researchers, and practitioners to create insights, scenarios, and solutions that enable leaders to recognize the underlying patterns of change – and to act on them in time. It is not just about staying informed. It is about survival – about maintaining relevance, capability, and influence in a world undergoing rapid transformation.

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