

i SKILL

D3.1 – National report DENMARK

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Executive summary

This national report is based on an analysis of recent developments in Denmark's adult education and continuing training system. It draws on empirical data obtained from a study conducted within the plastics sector, involving two companies, as well as insights gathered from a roundtable discussion with relevant stakeholders at the sectoral level.

The adult education and continuing training system in Denmark is characterised by its complexity, encompassing diverse definitions, subcategories, and theoretical and practical differences. The responsibility for its regulation is divided among three ministries, with numerous national agencies involved in oversight.

Social partners play a significant role in collective bargaining related to adult learning, operating at the national, sectoral and local levels. They exert considerable influence over the adult learning system, shaping both the overall policy framework and the specific objectives of training courses. Despite experiencing a decline in membership, trade unions continue to hold considerable sway within the adult learning system.

The empirical study conducted with two major Danish companies, as well as relevant social partners and stakeholders, highlights the issues faced by adult education and continuing training in the context of the twin transition (presumably referring to the transition towards green and digital economies). The companies require a more skilled workforce and have implemented tailored courses to address their specific production needs. However, this poses a challenge for public education providers, who face strict regulations and limited flexibility compared with private providers. Furthermore, education providers struggle to keep pace with the demand for new technology and knowledge associated with the twin transition.

Based on the findings, this report recommends:

1. an assessment of the labour and skills required for the new green legislation;
2. enhanced flexibility and autonomy for education providers to contribute to improved quality;
3. more support for small to medium-sized enterprises;
4. transparency for employees.

All stakeholders involved also acknowledge that the issues within the adult learning system have persisted over many years, and various initiatives have been proposed by different governments since 2000 to address these issues. Consequently, 'cracking the code' to increase adult participation remains a formidable task.

Introduction

Adult education and continuing training play a significant role in supplementing the formal education system in Denmark. In 2020, the participation rate of adults (aged 25 to 64) in education and training activities in Denmark was 20.7 %¹, and is expected to be higher for 2022. Furthermore, private enterprises allocated DKK 15 billion (approximately EUR 2 billion) in 2018 to adult education and continuing training, primarily for covering wages (DA, 2019).

Compared with other EU countries, Denmark is a frontrunner in terms of participation in adult education and training. However, Denmark also faces various challenges within the adult education and continuing training system. These challenges include: 1) a decline in participation rates (from 2013 to 2021), 2) lower-educated employees exhibiting lower participation rates, 3) obstacles related to dyslexia and literacy, and 4) decreased financial and political prioritisation (Andersen, 2019).

In relation to the green transition in Denmark, adult education and continuing training are particularly relevant to ensuring an increased number of well-educated employees capable of working with sustainable solutions. A 2022 report estimates that an additional 116 000 full-time equivalents will be needed for Denmark to achieve its climate law² goal of a 70 % reduction in CO₂ by 2030 (COWI, 2022). These 116 000 full-time equivalents pertain to Danish industry alone and refer to employees responsible for developing and producing green solutions such as renewable energy infrastructure and maintenance.

The digital transition also emphasises the importance of adult education and continuing training in establishing a foundation for digital competencies, enabling individuals to utilise digital solutions in both their personal and professional lives. According to a DESI report from 2022, 24 % of Danes do not have basic digital content-creation skills (EU Commission, 2022).

Regarding green and digital skills, the focus of political and public attention lies primarily on the traditional education system, aiming to encourage the younger generation to pursue vocational or STEM education. The adult education and training system receives political support through the negotiation of tripartite agreements involving social partners and the government. Yet, since 2000, numerous analyses and reports on the subject have highlighted the recurrence of similar obstacles and proposed comparable solutions. Nevertheless, it has proven difficult for politicians, social partners, stakeholders and others to successfully establish a well-functioning adult education and continuing training system that effectively meets the demands of the labour market (Andersen, 2019).

¹ https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Adult_learning_statistics

² <https://www.retsinformation.dk/eli/ita/2020/965>

Table 1. Participation in education and training – Denmark

		2010	2020
Adult learning outcomes (%)	Adult learning PR ³ total	34.63%	20.71%
	Adult learning PR formal	4.31%	5.14%
	Adult learning PR nonformal	30.31%	15.57%
	Mean hours of learning total	14.48	12.24
Inequality dimensions (%)	Adult learning PR Females	41.63%	25.11%
	Adult learning PR Males	26.94%	17.32%
	Adult learning PR High Skilled (ISCED 5–6)	43.56%	26.03%
	Adult learning PR Medium Skilled (ISCED 3–4)	32.20%	19.35%
	Adult learning PR Low Skilled (ISCED 0–2)	24.14%	15.05%
	Adult learning PR Standard Work (Full-time permanent employment)	27.58%	13.78%
	Adult learning PR Atypical Work (Part-time, shift/evening/weekend, temporary employment)	37.80%	24.53%
	Adult learning PR Employed	34.63%	20.71%
	Adult learning PR Unemployed	35.78%	24.46%

Source: CSPS SAS and KU Leuven teams' calculations on EU–LFS 2020⁴.

Table 2. Company-level indicators regarding adult learning participation and social dialogue – Denmark

	2019
Employee participation in training sessions (%)	41.75
Employees receiving on-the-job training (%)	51.32
Percentage of firms with union representation	40.04%
Percentage of firms with non-union representation	N/A
Percentage of firms with country-specific forms of employee representation	N/A
Percentage of firms with a works council	26.50%
Percentage of firms indicating learning from more experienced colleagues as 'most important' for becoming more skilled on the job	59.24%
Percentage of firms indicating participation in training as 'most important' for becoming more skilled on the job	16.87%
Percentage of firms indicating learning by doing as 'most important' for becoming more skilled on the job	28.30%

Source: CSPS SAS and KU Leuven teams' calculations on the European Company Survey (ECS) 2019.

³ Participation (PR).

⁴ <https://ec.europa.eu/eurostat/documents/1978984/6037342/EULFS-Database-UserGuide.pdf>

1. National context for adult learning

Adult learning policy

The adult learning system in Denmark has historically been grounded in the concept of general liberal adult education (Folkeoplysning), which emerged from religious and social movements in the 19th century (Eurydice, 2022). In the 1950s, the adult learning system underwent a reform in response to high unemployment rates and the necessity of upskilling both employed and unemployed individuals to meet the evolving demands of the labour market (Andersen, 2019). This reform resulted in the establishment of an adult education and continuing training system that combined elements of the democratic citizenship education, the regular school system and company-oriented training. The adult education and continuing training system provided a range of educational offerings, including single-subject teaching and later vocational education and training, to enhance and update the skills of employees in response to labour market changes. Although the structure underwent various reforms from 1950 to 2000, the fundamental principles and objectives of the adult education and continuing training system have remained consistent.

Lifelong learning

The Treaty on the European Union (1992) initiated a discussion on lifelong learning among stakeholders in the Danish education system. During a meeting, in 1995, a 10-step plan was introduced to ensure equal access and the right to adult education in Denmark. It primarily sought to enhance the transparency of the adult education system and facilitate easier access, particularly for individuals with lower levels of education. However, Denmark did not participate in the EU-initiated *Year of Lifelong Learning* in 1996 due to political disagreements (Ehlers, 2009). In 2007, Denmark officially introduced its strategy for lifelong learning: *Denmark's strategy for lifelong learning and lifelong skills upgrading for all*. This strategy encompassed various initiatives (Undervisningsministeriet, 2007):

- increased guidance and counselling for employed individuals and small to medium-sized enterprises (SMEs);
- enhanced access to individual competency assessment;
- increased focus on literacy and numeracy skills development by offering more flexible courses that can be combined across the adult education system;
- higher quality courses for bilingual individuals;
- more attractive, targeted and flexible courses in the vocational education system to meet labour market demands;
- increased adult apprenticeships by raising the public subsidy;
- implementation of systematic upskilling methods and tools for SMEs;
- higher public and private investment.

This strategy was implemented between 2007 and 2012, and lifelong learning continues to be a central strategy for advancing adult education in Denmark.

Recent policy framework for adult learning

In 2017, the most recent tripartite agreement on adult education and continuing training was concluded between the social partners and the Danish government. The agreement initially ran from 2018 to 2021 but was extended until the end of 2023. The next tripartite agreement on adult learning is scheduled to take place in 2023.

The tripartite agreement in Denmark highlights the complications posed by globalisation and technological advancements, which have reshaped the work environment and created competition for Danish enterprises and organisations. Yet, these developments also offer new opportunities for innovation, knowledge and skills (Regeringen, 2017). The objective is to generate opportunities in Denmark that make it desirable for both employees and companies to reside and conduct business operations.

The state has the responsibility of ensuring that individuals in the labour market possess fundamental skills and have access to high-quality formal education that aligns with the needs of the labour market (Regeringen, 2017). As part of the Danish flexicurity model, which is a labour market model characterised by a high degree of flexibility and security, in which the state and public sector play a crucial role in the adult education and continuing training system.

The social partners are responsible for fostering motivation among employers and employees, particularly regarding stimulating demand for adult education and training among those who are least motivated. By enhancing the skills of individual employees, their employability and development opportunities improve, and the companies become more competitive in the global market. To strengthen skills, Denmark requires a 'strong, targeted, manageable, and flexible' adult learning system (Andersen, 2019). In the recent tripartite agreement, the government and social partners have identified five problems:

- There are 600 000 adults with inadequate literacy skills.
- The level of vocational education has declined.
- Education providers have limited or no economic incentives to offer vocational education and training (VET) courses.
- There is difficulty in establishing connections between different educational levels (a lack of recognition of individual competency assessments).
- Adult education centres⁵ face issues in coordinating various education providers and creating an overview of opportunities.

These problems are addressed through 81 points of content, with a specific focus on vocational education:

- strengthening basic skills in literacy and numeracy;
- easing access to individual competency assessment;
- modernising vocational education (Arbejdsmarksuddannelser);
- digitalising the adult education system;
- increasing compensation and establishing a new fund for reskilling.

Several of the initiatives have been recommended and noticed in earlier strategies and reforms. For example, in 2000, the system underwent another reform to address a range of challenges. The main goals of this reform were to increase the education level for individuals with low skills;

⁵ Regional departments offering adult education and training.

enhance literacy and numeracy competencies; prioritise those with the lowest level of education; establish a more integrated education system; and strengthen collaboration among education providers.

Governance and key actors

The Danish education system consists of an ordinary education system and of adult education and continuing training, which is placed in a parallel education system. The adult education and continuing training system is a complex framework with various definitions, subcategories and theoretical/practical differences. Therefore, the following section will focus on providing a description of the governance and key actors in vocational education and training.

The adult education and continuing training system is organised into four categories:

- general adult education
- vocational education and training
- adult and continuing higher education
- non-formal adult education.

The administration of these different types of adult education and continuing training is divided among three ministries. The Ministry of Children and Education is responsible for general adult education and VET, while the Ministry of Higher Education and Science oversees adult and continuing higher education. The Ministry of Culture is responsible for non-formal adult education. Non-formal adult education operates outside the formalised adult education system, is not part of tripartite negotiations and does not receive the same financial support as the rest of the adult education and continuing training system.

Structure of governance of vocational education and training

The Danish Parliament (Folketinget) is responsible for legislation regarding VET, which is formulated through tripartite agreements with social partners. The social partners consist of the Confederation of Danish Employers (Dansk Arbejdsgiverforening) and the Danish Trade Union Confederation (Fagbevægelsens Hovedorganisation), representing employers' organisations and trade unions, respectively. It is through these tripartite agreements that legislation, policies and initiatives for VET are negotiated.

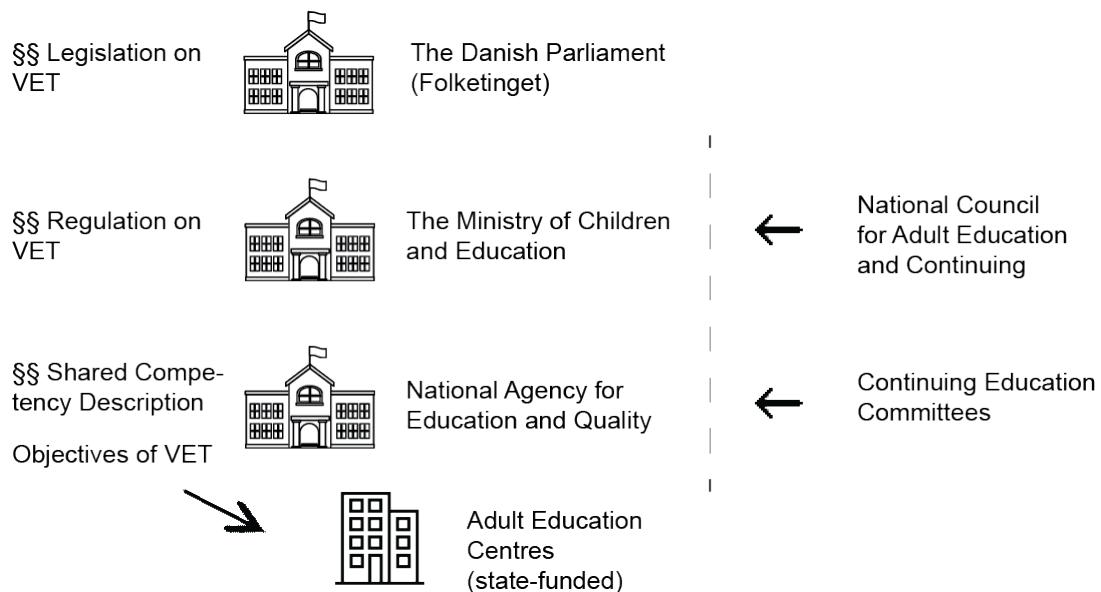
The Ministry of Children and Education is responsible for regulations covering general adult education and VET. The ministry seeks guidance, knowledge and input from the National Council for Adult Education and Continuing Training (in Danish: VEU-rådet) on various issues related to VET. The council primarily provides advice on upskilling relevant to the labour market, the need for subsidies, basic skills, unskilled employees and prior learning recognition (individual competency assessment). The council was established in 2009 and its members are appointed for a 4-year term. The 29 council members represent trade unions, employers' associations, public organisations, education providers, the Ministry of Children and Education, the Ministry of Employment, and the Ministry of Industry, Business and Financial Affairs (Undervisningsministeriet, 2023a).

The National Agency for Education and Quality manages and implements the regulations through shared competency descriptions in VET. The formulation of these descriptions is handled by 11 continuing training and education committees, each representing a specific sector. In the case of the plastics sector, the joint committee for the industry assumes responsibility. These committees also establish the objectives for VET programmes.

The continuing training and education committees are managed by their respective secretariats, which develop and prepare plans for VET programmes catering to the needs of companies and employees. At the national level, various sectors have continuing training and education committees responsible for providing education and training opportunities for their sector. These committees typically include representatives from trade unions and employers designated by employers' organisations. In terms of VET, the social partners also play a crucial role in management, priority setting, development, organisation and quality assurance through representatives on school boards and education committees (Undervisningsministeriet, 2022). The committees determine specific courses, education programmes and training initiatives relevant to their respective sectors. They are also responsible for discontinuing courses with low attendance or limited relevance to the labour market. The social partners provide financial support for the committees and their secretariats, covering tasks related to VET implementation, evaluation and financial reporting (STUK, 2019).

Once the shared competency description and objectives for the VET programmes are implemented by the National Agency for Education and Quality, 13 adult education centres incorporate these objectives and descriptions into their education programmes. The VET programmes are offered by approximately 100 education providers approved by the Ministry of Children and Education. The education providers are mainly public and can also provide other courses, such as those for ordinary education. The education providers are associated with the 13 adult education centres (which are located regionally throughout the country), and the centres are responsible for coordinating guidance activities and contacting local companies and employees to encourage the use of VET (Undervisningsministeriet, 2022).

Figure 1. Illustration of governance and key actors



Source: Authors' interpretation

To ensure that the supply of education aligns with local demand, the education providers establish local education boards. These boards comprise representatives from local trade union departments and local companies affiliated with employers' organisations. The close interaction between the education providers and the local education boards serves as a vital link between education providers and the labour market (Industriens Uddannelser, 2023).

The VET programmes offered by public education providers are funded by public sources. The public education providers operate within a decentralised framework and receive funding based on the number of participants (measured in full-time equivalents) and a fixed rate per programme,

which is provided by the Ministry of Children and Education (Undervisningsministeriet, 2022). This funding is called taximeter funding. User fees are typically imposed on most VET programmes, with employers usually covering the cost.

The training is conducted by teachers who hold vocational or higher education diplomas, along with experience in adult pedagogical education. These teachers need to be flexible in their approach, as new courses can be introduced when decided by the continuing training and education committees. In some cases, training may be organised at the workplace, and teachers are also involved in counselling and guidance activities at the company level.

Upon completion of a programme, participants receive a certificate that qualifies them for the national labour market. The assessment of participants is conducted by the teachers, and nearly everyone receives a certificate. Approximately 120 training programmes require participants to pass an exam in order to receive a formal, qualifying certificate recognised by the relevant authorities. It is important to note that certificates from adult vocational training programmes do not grant direct access to further education in ordinary education or other adult education and training programmes. However, individuals who wish to pursue education and training programmes in ordinary vocational education or higher education may have their prior learning, including from adult vocational training programmes, assessed – the individual competency assessment. They may then receive a certificate and have their credits transferred.

The education providers are responsible for addressing the needs of their local labour market. Additionally, these providers are required to analyse the quality of their training activities. This includes systematic measurement of participant satisfaction rates among all participants and a representative sample of companies. The results of these analyses are made available by the Ministry of Children and Education (Undervisningsministeriet, 2023b).

Social dialogue for adult learning

To provide an overview of the extent to which social dialogue has been developed in the field of adult learning, it is essential to explore the concept of flexicurity and its implications for social dialogue.

Concepts of flexicurity

Flexicurity, originally developed in the Netherlands and Denmark during the 1990s and later adopted by the European Union in 2007 (Viebrock and Clasen, 2009), is a framework aimed at balancing the demands for labour market flexibility and security, thereby creating a sustainable situation for both employers and employees.

The Danish flexicurity model fosters a mobile and transaction-friendly labour market by offering limited job protection, generous unemployment benefits and active labour market policies (Bekker and Mailand, 2017). Flexicurity also promotes educational opportunities and ongoing training for both employers and employees, facilitating leaves of absence and the search for substitutes.

The role of social partners in the flexicurity model is crucial. Trade unions have accepted a relatively liberal employment-protection system due to the presence of a generous, state-supported, union-based unemployment insurance system. Employers' organisations, in response to low job protection, have embraced generous unemployment benefits, making it easier to adapt to market changes (Viebrock and Clasen, 2009). This collaboration between social partners is built on consensus and trust. Additionally, social partners are involved in supporting the upskilling and reskilling of employees and the unemployed, promoting a smoother flow in the labour market. Active labour market policies focus on enhancing the skills of the unemployed, benefiting both companies and individuals.

Historical context and recent changes

In Denmark, the role of social partners in social dialogue can be traced back to the early 20th century, primarily in the metal industry, where a framework for wage levels at the enterprise level was established. Over time, collective bargaining has extended to numerous other sectors. Social dialogue in Denmark is deeply rooted in national culture, institutions and historical traditions, fostering a relationship between social partners based on consensus and mutual respect for diverging interests, forming the core of the 'Danish Model' (Due and Madsen, 2008).

In recent years, the organisation of social partners has undergone changes. In the 1950s, it was centralised, with national negotiations overseen by the main organisations, but this shifted to a model of centralised decentralisation in the 1980s. Sector organisations gained more bargaining rights at the company level, leading to more complex coordination between social partners (Due and Madsen, 2008).

From the financial crisis of the 2000s up until 2018, there was a relatively limited number of tripartite agreements dealing with adult education and continuing training, in comparison with those addressing unemployment issues and employment policies during the same period. Specifically, between 2008 and 2016, only one tripartite agreement concerning adult education and continuing training was established. Still, it is important to note that this agreement is not considered a comprehensive tripartite agreement as the involvement of social partners was centred around the implementation of initiatives rather than the development of policies (Mailand, 2019). When examining the period following the 2008 financial crisis, Mailand (2019) highlights the continued significant influence of social partners in shaping labour market policies and welfare state policies through these tripartite agreements.

In 2017, a more recent tripartite agreement was reached, which has subsequently been extended until 2023. The social partners placed significant emphasis on general adult education and VET in this latest tripartite agreement of 2017. This focus was prompted by a decrease in the number of participants and the demand from companies to enhance the skills of unskilled employees and make them vocationally proficient.

Challenges and influences

Social partners face challenges as trade union membership has declined since 2012, particularly among unions organised within the Danish Trade Union Confederation, representing employees with lower levels of education. The reasons for this decline are multifaceted, including the rise of new and cheaper unions outside the Danish Trade Union Confederation. As a result, more employees are covered by collective agreements but do not contribute to them through membership fees (Mailand, 2019).

Employers' organisations also face challenges as their purpose has evolved. With the decline in the power of trade unions and working-class parties, the employers' organisation has shifted its focus from countering trade unions in wage negotiations and employment policies to creating networks and exerting political influence in various sectors, aiming to provide the best opportunities for companies to develop and innovate (Ibsen and Navrbjerg, 2017).

Despite these challenges, social partners have maintained significant influence in labour market policies and in the administration and implementation of policy initiatives.

In summary, social dialogue in the field of adult learning has been shaped by the concept of flexicurity and the involvement of social partners in fostering a balance between labour market flexibility and security. Social partners have played a significant role in influencing labour market policies, as well as the administration and implementation of policy initiatives.

Mapping the plastics sector

For the Danish national report, the plastics sector has been selected to provide an overview of the complications related to the green and digital transitions within one of Denmark's largest sectors in the manufacturing industry.

The plastics sector encompasses various sub-sectoral areas of plastics production and is a significant component of the manufacturing industry. In the primary plastics sector, Danish companies primarily engaged in the production of plastic products such as packaging, medical equipment, toys, and construction materials. Additionally, some companies specialise in manufacturing plastic components for other sectors such as automotive and electronics. Furthermore, there are companies dedicated to the reuse and recycling of plastic.

The plastics sector has an industry association called Plastindustrien, which represents 275 companies. These companies contribute 70 % of the sector's revenue and employ over 26 000 individuals. This employment accounts for 10 % of the total workforce in the manufacturing industry and 1 % of all employed individuals in Denmark (Plastindustrien, 2018). Consequently, the plastics sector holds a prominent position within the manufacturing industry. Plastindustrien is affiliated with the Confederation of Danish Industry, an organisation that represents 19 000 companies in Denmark. Furthermore, the Confederation of Danish Industry is a member of the Confederation of Danish Employers, which represents employers in tripartite agreement negotiations.

Denmark places significant emphasis on the use and reuse of plastic. In 2018, the Danish government introduced its first political plan of action to promote plastic reuse and create a circular plastic production system. However, the political plan does not explicitly address adult education, continuing training or VET initiatives (Regeringen, 2015).

Description of the methodology adopted (roundtable and semi-structured interviews)

The national report is based on semi-structured interviews conducted with two companies, social partners and an interest organisation⁶ in the period November 2022 to January 2023, as well as a roundtable discussion involving relevant stakeholders in March 2023. The semi-structured interviews sought to gather insights, experiences and perspectives from companies within the plastics sector, including individuals from different levels within the organisations such as management, line management, HR management, union representatives and employees. A total of 10 semi-structured interviews were conducted with representatives from two companies, along with three interviews involving social partners and the interest organisation. The interviews aimed to provide a description of the following aspects:

- the general perspective on adult education and training within the plastics sector;
- the role of social partners in the plastics sector and its impact on adult education and training in both the specific sector and Danish industry overall;
- the value assigned by companies to relevant training and education related to the green and digital transitions;
- how companies encourage and motivate employees and managers in relation to adult education and training;

⁶ Independent organisations established by trade unions and employer organisations focus specifically on ordinary education and adult education and training within the Danish manufacturing industry.

- the management of outcomes resulting from adult education and training initiatives;
- the validation of new skills within companies.

The semi-structured interviews

The semi-structured interviews were conducted with two different companies and with a group of stakeholders. The interviews were conducted anonymously. Table 3 provides an overview of the interviews.

Table 3. Participants in semi-structured interviews at the sectoral and company levels – Denmark

Type of organisation	Position	Date of interview
Company	CEO	10.11.2022
Company	Communication and Support	10.11.2022
Company	Production Line Manager	10.11.2022
Company	Plastic Maker and Trade Union Representant	28.11.2022
Company	Vice President	28.11.2022
Company	Senior Director	28.11.2022
Company	Senior Quality Manager	28.11.2022
Company	Auxiliary Equipment Cleaner	28.11.2022
Company	Operator	28.11.2022
Company	Senior Manager	04.01.2023
Social Partner	Chief Consultant	22.11.2022
Social Partner	Education Consultant	22.12.2022
Interest organisation	Head of Secretariat	31.10.2022

Source: Authors' interpretation

The company-level interviews were conducted with representatives from different levels, including management, HR management, line management, trade union representatives and employees. The three semi-structured interviews with stakeholders represented an employer organisation, a trade union and an interest organisation. The employer organisation is one of the largest in Denmark and represents the manufacturing industry and the plastics sector. The trade union represents employees working in the manufacturing industry and plastics sector. The interest organisation is an independent institution established by trade unions and employer organisations to focus specifically on ordinary education and adult education and training within the Danish manufacturing industry.

The semi-structured interviews were conducted in person whenever possible, with online interviews serving as a secondary option. Each interview was conducted in Danish and afterwards roughly translated into English.

The roundtable discussion

The roundtable discussion was conducted to validate and supplement the findings from the semi-structured interviews. Instead of conducting three separate roundtables involving social partners and education providers, a single roundtable was organised, due to close collaboration, which created a dialogue among the parties. The roundtable discussion took place on 8 March in

Copenhagen and included representatives from social partners, education providers and the interest organisation. The table below provides an overview of the roundtable participants.

Table 4. Participants in the roundtable – Denmark

Type of organisation	Position	Date of the event
Social partner	Education Consultant	08.03.2023
Interest organisation	Head of Secretariat	08.03.2023
Social partner	Chief Consultant	08.03.2023
Education provider	Chief of Education	08.03.2023
Education provider	Chief of Education	08.03.2023
Interest organisation	Senior Consultant	08.03.2023

Source: Authors' interpretation

The roundtable was facilitated by two moderators from the University of Southern Denmark. The programme commenced with a presentation round, followed by an exercise based on the user journey method. User journey is a design method used to visually represent the chronological experience of a specific user, in this case, employees and employers/managers. It provides a depiction of the current situation and allows for the inclusion of different perspectives from various stakeholders. The user journey method helps identify barriers and obstacles faced by users and can facilitate the identification of potential solutions (University of Copenhagen, 2023).

The decision to employ user journeys aimed to introduce a new approach to discussing adult education and training with the representatives. While many of them had heard of the method before, they had not previously utilised it in collaboration with different organisations. The user journey exercise created two specific journeys, one from the employee perspective and another from the employer/manager perspective, serving as the foundation for the subsequent roundtable discussion. The specific journeys were made based on the semi-structured interviews.

Following the facilitation of the two user journey exercises, the roundtable discussion proceeded in a more traditional manner, focusing on four overarching themes:

- the impact of recent crises (such as the Covid-19 pandemic, inflation and the war in Ukraine) on adult education and training;
- inclusion of individuals with lower educational backgrounds;
- the quality of education and training;
- financing and support.

Most of the follow-up questions during the discussion had been prepared in advance based on the insights gained from the semi-structured interviews and relevant desk research.

2. Insights from semi-structured interviews at the company and sectoral levels

This section of the report draws from empirical data collected from two prominent companies in the Danish plastics sector, as well as relevant social partners and an interest organisation. Its purpose is to gather insights and experiences within the sector regarding adult education and continuing training. The interviews focused on the following themes:

- general views on the sector
- the role of social partners
- training content

- encouragement and motivation
- the monitoring of results
- the validation of skills.

Additionally, a roundtable was facilitated to validate and complement the findings from the semi-structured interviews. The roundtable participants consisted of social partners, an interest organisation and education providers. Further details can be found in the *Methodology* section.

The two selected companies are major Danish corporations with primary operations in Denmark and production activities in other parts of the world. They have considerable influence in local communities and have established several local companies to employ unskilled individuals and those with secondary education. Both companies prioritise innovation in developing new materials and products to foster sustainability. Brief descriptions of each company are provided below.

The selection of these companies is based on multiple factors:

- The companies actively engage with interest organisations and employers' organisations concerning education, adult education and training.
- The companies are pioneers in strategic initiatives and the implementation of education programmes.
- The companies are large corporations that prioritise adult education and training financially and strategically.
- The companies can serve as role models for others.

The subsequent sections of this report provide a comprehensive description of the data gathered from the semi-structured interviews, complemented by insights from the roundtable discussion. The analysis is divided into three distinct parts, focusing on the sectoral, company and employee levels. Each part delves into specific aspects of adult education and continuing training within the plastics sector.

Evidence from the sectoral-level interviews

Skills and adult learning: Challenges and gaps

The companies within the plastics sector include those involved in the production of plastic components as well as those that incorporate plastic components into their production lines. Thus, the plastics sector comprises a diverse range of companies.

Generally, larger companies in the sector serve as frontrunners in terms of technology and sustainability. They are often the first to identify new trends, products and business opportunities, which then impact the rest of the supply chain. SMEs in the sector typically follow suit when they receive specific tasks related to production from larger companies.

Identifying the specific sustainable skills required in the sector can be challenging as knowledge of sustainability is continually evolving. One significant change is the utilisation of reusable plastic granules in production, which primarily has effects on the design department rather than the production department. This exemplifies how sustainability changes chiefly affect decision-makers within companies rather than those assigned specific tasks. The task is the same when you are producing a plastic component, whether it is with reused plastic granules or with conventional plastic granules.

Regarding digital skills, the demand has not been as substantial as initially expected when educational providers began offering Industry 4.0-related courses. Digital skills often revolve around utilising and comprehending data to drive production innovation. These skills are

frequently taught internally at the company to ensure proximity to the company's specific production processes. Training on the use of new machines will typically be done by a technician from another company.

In order for the plastics sector to enhance the upskilling of employees, there must be an increased focus on tasks related to digitalisation and sustainability. Employers are more likely to engage in upskilling efforts if they can witness tangible results in the overall company's economic performance. If other companies in the supply chain demand new standards for sustainability or digitalisation it can increase the interest of the employer. The same goes for regulation at the national or EU levels.

Role of industrial relations and social dialogue in adult learning

Adult education and continuing training are crucial to achieving the goals outlined in the Danish climate law. The sector, along with social partners and the government, must adopt a long-term perspective and make strategic investments for the future. Enhancing the availability of adult education and continuing training opportunities is one approach to tackling this issue effectively.

In terms of governance, sector-specific local education committees and continuing training and education committees play a crucial role in ensuring that the education programmes offered remain up to date with the latest industry trends. These committees, consisting of representatives from both employers and employees, collaborate to determine the necessary competencies and develop new courses. Recognising that industrial partners possess valuable knowledge and are adept at identifying emerging trends and potential business opportunities, these committees are proactive in responding to industry changes. Additionally, they stay informed about new regulations at the national and EU levels that may impact the labour market's skill requirements and strive to stay ahead of such developments.

A significant obstacle lies in encouraging participation in these courses, which requires close dialogue among social partners, employees and employers. Trade unions educate their representatives to assist and support employees with the administrative and motivational aspects of participating in adult education and training programmes. The role of these representatives is vital, and the trade unions witness a significant impact when their representatives possess administrative skills. Employers' organisations actively encourage employers to make long-term investments to meet future regulations and legislation that may affect their businesses. However, during times of economic prosperity, companies often face resource constraints and may be too occupied to allocate time to employees for education or training. Conversely, during periods of recession, participation tends to increase (as observed in 2022⁷).

Furthermore, social partners engage in dialogue with key education providers offering education programmes for the plastics sector. These education providers validate and test courses before their introduction, ensuring their relevance to companies. They also provide feedback on existing courses, facilitating necessary modifications or removal, if required.

Perceptions of existing public schemes

There is a difference between large companies and SMEs with regard to public schemes for continuing vocational education.

In larger companies, education and training are typically prioritised as integral components of their operations. These companies often develop a strategic approach to education and training, along with specific tools to monitor the various courses mandated by law. They frequently have local collective agreements in place, which are negotiated between employee representatives

⁷ <https://uddannelsesstatistik.dk/Pages/Reports/1808.aspx>

and management. These agreements often outline the company's strategy for employee participation in adult education and training programmes, as well as procedures for applying and determining whether the company will cover associated costs. Moreover, companies often assist employees in applying for subsidies and remain up to date on the latest changes in subsidy regulations. When employees participate in public vocational education programmes, larger companies may even enrol a significant number of employees as a group, thereby filling an entire class. They may also collaborate with education providers to tailor the course content to align more closely with the company's specific production requirements. Public education providers can tailor a minor part of their courses to the company's needs, whereas private education providers can manage more freely.

Among SMEs, a strategic approach to adult education and training is less common. Many SMEs concentrate on providing employees with the necessary certifications mandated by law. If individual employees show interest in attending adult education or training, they are often responsible for seeking out additional information themselves. Moreover, SMEs may lack the administrative staff to assist employees in applying for courses or subsidies, thereby creating higher administrative barriers for employees. Due to their size, SMEs are unable to send a group of employees for education or training simultaneously. As a result, many SMEs encounter issues, such as course cancellations by education providers or low relevance for their specific production. Additionally, since employees from different companies may attend the same course, the content cannot be customised to specifically cater to the production needs of individual SMEs.

The contrasting approaches to adult education and training in larger companies versus SMEs in the plastics sector are huge. Larger companies prioritise adult education and training, develop strategies and have collective agreements in place to support employee participation. They collaborate with education providers to tailor courses to their production needs. In contrast, SMEs often focus on mandatory certifications and face challenges in providing support for employee adult education and training.

Evidence from the company-level interviews

This section gives a brief description of the two companies and afterwards an analysis at the company level.

Company 1

Brief description

Company 1 manufactures products for the construction sector, incorporating plastic components in the main product of the production lines. The company is headquartered in Denmark and operates 16 production facilities in Denmark and in 8 other countries. It is part of a corporate group with approximately 11 000 employees, including 2 000 in Denmark. The company was founded in the 1940s.

Company 1 is committed to sustainability, with a focus on reducing the carbon footprint of its products and utilising eco-friendly packaging. It strives to incorporate reused materials, such as polyurethane and considers sustainability a driving force in its work. The company's policy dictates that it must be involved in the transition towards sustainability to remain relevant. Concerning the digital transition, the company is less apprehensive due to the relatively high digital skills among Danish employees and the overall level of digitalisation in Denmark.

The interview participants from Company 1 represent one of its production facilities in Denmark. This facility employs 250 hourly-paid workers covered by the industry's collective agreement. The employees primarily possess unskilled or vocational education backgrounds. At the time of the interviews, the facility was considering cutbacks due to inflation and a slowdown in the construction industry.

Learning culture

Company 1 offers a world-class product and recognises the importance of maintaining competitiveness through continuous innovation in its production line. To avoid outsourcing production to countries with lower wages, the company has implemented a strategy to educate and upskill its employees aiming to cultivate 'world-class employees' or 'next generation employees'. A next generation employee possesses advanced professional skills in product introduction methods and development, as well as strong interpersonal abilities to collaborate with colleagues from diverse educational and professional backgrounds. The company intends to have a significant number of next generation employees, although not every employee is expected to reach this level.

Learning opportunities

Top management at Company 1 places great emphasis on adult education and training, particularly for employees with lower education backgrounds. The production facility's management is involved in local-level education initiatives and possesses in-depth knowledge of the employees and the available local education opportunities. This allows management to tailor specific learning opportunities for individual and company needs in a local context.

The learning opportunities mainly target employees with lower education levels who are paid on an hourly basis. They are the primary focus of the education strategy as they require education and training the most. Employees with higher educational backgrounds are generally more proactive in seeking education and training themselves, and therefore the management's interest is not particularly directed towards them.

The learning opportunities for employees include part-time adult education programmes, individual courses, in-house courses, non-formal learning through mentorship programmes and digital learning tools.

For instance, one of the examples mentioned in the interviews is a part-time adult education programme designed for unskilled employees or those with less relevant vocational education. This programme aims to upskill or reskill employees to become industrial operators. It follows a part-time structure, with one week of education followed by one week of work, over a specific period based on individual assessments. Currently, the company has approximately 30 employees enrolled in this adult education programme, working in two shifts to ensure continuous production. The management selects the programme, and employees can apply to participate. During the education period, the company pays the employee a lower wage (the same level as unemployment benefits), which is later reimbursed by the continuing education subsidy (VEU-godtgørelse).

Role of social partners in training

Company 1 is a member of an employers' association and operates under the industry's collective agreement. The production facility also has a local trade union representative.

While the local department of the company does not participate in local education committees or continuing training and education committees, it remains unknown whether the top management does. However, the local department actively engages in local networks for companies where they discuss and share insights on employability, education, training and the need for upskilled employees. This network serves as a platform for exchanging knowledge and tools related to structuring education and training within the workplace. For example, the local department has been inspired to adopt a newly developed digital tool that tracks and forecasts education and training activities among employees.

Perceptions and experiences with existing public schemes

The local department of the company utilises public adult VET programmes when they require fundamental skill courses or a specific certificate. These courses, offered through the VET system,

are cost-effective and provide the necessary certifications. Yet, when the company requires more customised courses to address their specific needs, they find the VET system somewhat inflexible in terms of course adaptability.

In such cases, the companies invite education providers to their facility, where they can familiarise them with the production-related problems they face. The education providers then submit proposals for courses or training tailored to meet these problems. The company selects the education provider based on their flexibility in adapting teaching plans, ability to teach on-site and pricing.

To cover expenses such as wages, transportation and materials, the company takes advantage of various subsidy opportunities. Both the continuing education subsidy (VEU-godtgørelse) and the Industry Competency Development Fund (IKUF) are utilised, with the HR manager responsible for submitting the subsidy applications. Even so, it is important to note that the company cannot receive any subsidies without obtaining the digital signatures of the employees. Therefore, the HR manager also sets aside time to assist certain employees in signing the subsidy applications and help the employees with other administrative tasks related to their education and training.

Company 2

Brief description

Company 2 produces toys predominantly made of plastic. The company's head office is in Denmark, and it has production facilities in Denmark and in seven other countries. It is part of a corporate group with around 27 000 employees, including 5 000 in Denmark. The company was established in the 1930s.

Company 2 has a sustainability mission encompassing various initiatives, including responsible production of sustainable materials, utilising renewable or recycled resources and minimising waste.

The interview participants from Company 2 are based at its production facility in Denmark. The facility employs 600 hourly-paid workers covered by the industry's collective agreement. The employees tend to have unskilled or vocational education backgrounds.

The company has implemented a strategy to increase participation in adult education and training, with several strategic measures to enhance motivation and encouragement. One such measure is making adult education and training a key performance indicator that influences the management's yearly bonus. This means that the management must encourage all employees to undergo at least 3 days of education or training each year to receive their annual bonus.

Learning culture

Company 2 offers a world-class product within its sector, with production facilities located in multiple countries that adhere to the same quality standards. The learning culture at Company 2 is highly regarded and prioritised by management, encompassing both adult education and regular education. The company works to enhance its production and relevance by having better trained and more competent employees. Furthermore, Company 2 seeks to create a meaningful work environment that considers the holistic development of individuals, emphasising lifelong learning in both professional and personal skills.

The company employs various learning strategies, including formal education programmes for both ordinary and adult education and training, as well as non-formal learning initiatives. Non-formal learning focuses on onboarding newcomers and ensuring they receive thorough training and understanding of their tasks and expectations within the company. Training the trainers is crucial, so that every newcomer receives a comprehensive introduction to the production process, emphasising safety, motivation and engagement.

The learning culture at Company 2 revolves around the development of personal and professional skills. Personal skills encompass collaboration, communication, optimisation of the production, understanding deadlines and effective participation in the workplace. Professional skills include a deep understanding of the production process, plastic manufacturing techniques, digitalisation and maintenance. By combining personal and professional skills, employees gain the ability to confidently express their ideas, discuss optimisation opportunities and identify weaknesses in the production process. This collaborative approach fosters innovation and ensures a secure production environment. Ultimately, the primary goal of the learning culture is to empower employees to find suitable solutions for optimising production and maintaining the company's reputation for delivering world-class products.

The industry's collective agreement entitles employees to 10 days of education and training but very few at Company 2 use this opportunity. To further incentivise management's commitment to learning and adult education and training, their bonuses are tied to these initiatives, as adult education and training is a key performance indicator. A local collective agreement negotiated by the HR department, management and trade union representatives has established that each employee in the production department is to be encouraged to participate in a minimum of 3 days of adult education and continuing training per year. Consequently, it becomes the manager's responsibility to ensure that every employee receives the opportunity to participate in education programmes or training. If an employee is unwilling to attend, the manager is required to engage in a dialogue with the employee to explore the reasons behind their reluctance. This initiative promotes open conversations about employee participation in adult education and training. In cases where employees are initially uninterested, managers can work to create a supportive environment and encourage their attendance later. With the implementation of the local agreement, the average number of days spent by employees on adult education and continuing training is expected to increase from the current 0.7 days per year to a minimum of approximately 3 days.

Learning opportunities

The company provides a wide range of learning opportunities, including ordinary education programmes, adult education and continuing training programmes, and non-formal learning initiatives. As part of the local collective agreement, a course catalogue has been created specifically for employees in the production department. The course catalogue is easily accessible, allowing employees to gain an overview of the learning programmes management deems relevant for them.

The course catalogue encompasses various types of adult education programmes, such as those for general adult education (Forberedende voksenundervisning), vocational education, and adult and continuing higher education (academy and diploma level). Management recognises the importance of building skills on a solid foundation, ensuring that employees possess basic skills before progressing to topics such as digitalisation, safety and optimisation. In line with this, all employees are offered dyslexia screenings. Approximately 30 % of production employees face challenges related to dyslexia. Therefore, the course catalogue includes literacy courses in Danish to address these challenges, after which they can focus on developing other skills.

The course catalogue streamlines the process of finding relevant courses for employees. By moving the selection of courses to an internal webpage, employees are relieved of the burden of navigating official websites filled with irrelevant information.

Furthermore, the company is actively exploring opportunities to enhance learning among its employees through digitalisation, leveraging technologies such as virtual reality (VR) and augmented reality (AR). The digitalisation efforts centre on training newcomers and providing specific safety instructions.

Overall, the company's commitment to providing diverse learning opportunities, optimising accessibility through the course catalogue and exploring digitalised learning with VR and AR

technology demonstrates its dedication to fostering a culture of continuous learning and development among its employees.

Role of social partners in training

The company actively participates in various national and local committees dedicated to ordinary education and adult education and continuing training. The top management represents the company in the negotiation group of the Confederation of Danish Industry and provides input and guidance for the industry's collective agreement. Additionally, the management in the production department is involved in the continuing training and education committees at the national level, as well as the local education committees. The same manager attends these committees, representing the interests of the plastics sector rather than solely the company. The company was selected by the Confederation of Danish Industry due to its status as a pioneering leader in technology and innovation.

Participation in these committees does not lead to disagreements between employer and employee representatives. Both sides generally agree on matters related to education, as they share a common interest in having well-educated employees. The discussions and decisions made in the committees focus on specific course content and objectives. It is crucial for committee members to be well-informed about production-related matters, which in turn necessitates proximity to the production line.

At the company level, the management, HR management and trade union representatives engage in negotiations for local collective agreements concerning adult education and continuing learning. These agreements determine the course catalogue's content, cost coverage and the number of 'obliged' days that the management can request. All three parties find this negotiation process to be the most effective approach to reaching agreements that reflect the interests of both management and employees.

The management maintains a strategic interest in upskilling employees' professional and personal skills to enhance production quality and innovation. HR management emphasises cost considerations and specific opportunities, while the trade union representative endeavours to represent all employees, including those without union membership, and ensure that management prioritises the holistic well-being of employees rather than production numbers alone. This inclusive approach entails understanding and accommodating employees who may not thrive in the education or training system.

Within the production department, there are five trade union representatives, each with different responsibilities. One of the representatives is dedicated full-time to education and training matters. This trade union representative fosters positive relationships with employees, assists them in finding relevant courses and provides support with application processes and subsidies.

The interviews highlight that fewer employees are members of the trade union, which negotiates the industry's collective agreement and local agreements, but all employees are covered by the collective agreement even if they are not part of a trade union.

Perceptions and experiences with existing public schemes

The company utilises public education and training courses, most notably general adult education programmes and vocational education programmes. It recognises the importance of addressing basic skills, particularly for employees with lower educational backgrounds or dyslexia. Understanding that previous negative experiences can make it challenging for these employees to participate in education and training, the company aims to remove barriers by providing on-site teaching within the production facility. By offering courses directly at the workplace, the company expects to increase participation by approximately 20-30 %.

In addition, the company uses various subsidy opportunities such as the continuing education subsidy (VEU-godtgørelse) and the Industry Competency Development Fund (IKUF). The HR

department, with assistance from the trade union representative, manages the utilisation of these subsidies.

To support the HR department and management in their efforts, the company has conducted trials of an app designed to track employees' education and training needs, participation and opportunities specifically at the production site. This app serves as a platform for identifying the specific skills required by the production department in the near future and matching them with employees' abilities and skills. The manager will be notified when an employee needs to take a specific course. Furthermore, the app allows for the assessment of employees' skills using different proficiency scales (skilled, expert, can learn more, etc.). It also aids in developing individual education plans for employees, streamlining the process for the HR department, management and employees themselves to monitor progress and identify future educational opportunities.

Summary

Company 1 is focused on maintaining competitiveness through continuous innovation and has implemented a strategy to educate and upskill its employees. It aims to cultivate next generation employees who possess advanced professional skills and strong interpersonal abilities. The company offers various learning opportunities, primarily targeting employees with a lower education level. Part-time adult education programmes, individual courses, in-house courses and training programmes are among the options provided. The company utilises public adult VET programmes and subsidy opportunities to cover expenses.

Company 2 also emphasises a learning culture and seeks to enhance production and employee development. The company offers ordinary and adult education programmes and promotes the development of personal and professional skills. A local collective agreement encourages employee participation in adult education and training, with management responsible for providing opportunities. The company provides a course catalogue, offers dyslexia screenings and is exploring digitalisation in learning (VR and AR platforms). It actively participates in national and local committees, ensuring representation and involvement in decision-making processes. Social partners negotiate local collective agreements, and the trade union representative plays a crucial role in supporting employees' education and training needs. The company utilises public education and training programmes, emphasising on-site teaching to increase participation rates. It also makes use of subsidies.

Both companies recognise the importance of education and training in maintaining a skilled workforce and strive to provide tailored learning opportunities. They utilise public schemes and engage with social partners to enhance the learning experience and development of their employees.

Personal perceptions and experience with skills and learning

It is widely acknowledged that employee motivation presents a significant barrier to adult education and continuing training. This argument is frequently raised by employers and employers' organisations. In contrast, trade unions and employee representatives argue that while everyone has a desire to learn, individual learning preferences must be considered to foster a supportive learning environment. The topic of employee motivation was discussed in all semi-structured interviews and the roundtable session, providing various perspectives on the issue. However, instead of focusing solely on individual employee motivation, it would be more insightful to examine workplace culture according to the interviewees. Typically, companies in industries with predominantly low-skilled workforces do not have a strong culture of prioritising adult education and continuing training. Consequently, it can be uncomfortable for individual employees to stand out among their colleagues and not conform to the prevailing work culture. To enhance motivation among individual employees, the workplace culture regarding adult

education and continuing training needs to embrace lifelong learning as an integral part of being in the labour market.

Given the expected retirement age of approximately 72 or older, it is anticipated that the younger generation will actively engage in lifelong learning. With an extended work life, employees must adapt to the transition towards digitalisation and sustainability with increased flexibility. Social partners and management from Company 1 and Company 2 have the expectation that lifelong learning will become more prevalent among new generations of employees and that there will be greater emphasis on promoting it in companies in the future.

More specifically for the employees in Company 1 and Company 2, skills pertaining to quality and safety are identified as the most important. These skills are incorporated into the newcomers' training programme and continuously developed. Quality and safety are crucial not only for individual employees but also for the overall production line and facility. The related skills are typically learned in-house from trainers in a non-formal learning context. Additionally, collaboration and communication skills are emphasised to foster a positive work environment and reduce misunderstandings among different departments.

While digital and sustainable skills are prioritised by management, employees do not share the same level of interest. Some employees find digital skills challenging, particularly if they are not accustomed to technology, and may exhibit resistance towards learning them. This resistance can stem from perceived difficulty or a belief that it is too late to acquire these skills, considering their age. Conversely, most of the younger generation possesses stronger digital skills but may lack mechanical skills, which can also impede their participation in relevant training and education.

Many of the employees in Company 1 and Company 2 actively participate in education and training courses. These courses encompass basic skills, communication and collaboration skills, as well as personal finance skills (such as a course related to the current inflation). Employees value these personal skills courses and apply the acquired skills in their work after completing the courses.

Employees emphasise that they incur no direct costs for these courses; instead, the costs are covered through their trade union fees. The industry's collective agreement grants employees the right to 10 days of education or training, which is partly financed by trade union members. Transportation and accommodation expenses are covered by the company. Without this support, employees would likely attend fewer courses, especially considering the current inflationary environment.

At Company 2, employees view the bonus system for managers as a positive influence on the company culture regarding education and training. It creates a safe space for requesting education and training opportunities, and employees who are currently uninterested in such activities still feel respected and included.

Summary

This section of the report presents empirical data gathered from two prominent companies in the Danish plastics sector, as well as from social partners and an interest organisation, to gain insights and experiences related to adult education and continue training in the sector. The interviews and roundtable discussions covered various themes, including general perspectives on the sector, the role of social partners, training content, encouragement and motivation, the monitoring of results and skills validation. The report offers a comprehensive description of the collected data, categorised into sectoral, company and employee levels of analysis.

The plastics sector in Denmark encompasses a diverse range of companies involved in the production of plastic components or the integration of plastic components into production lines. Larger companies, which serve as pioneers in technology and sustainability, often influence the

entire supply chain. Digital skills within the sector primarily revolve around data utilisation for production innovation, commonly taught through internal channels, and sustainable skills revolve around reusable materials and carbon neutrality.

Sector-specific education committees play a crucial role at both the national and local levels in ensuring the relevance of adult education and training programmes. Encouraging participation in courses necessitates dialogue and support between employers and employees, and social partners are actively working towards raising awareness of adult education and training among both employers and employees. Trade unions educate representatives to provide administrative assistance to individual employees, while employers' associations encourage the implementation of structured plans for adult education and continuing training.

The perception of public vocational education schemes varies between large companies, which strategically prioritise education, and SMEs, which often focus on mandatory certifications. SMEs face administrative barriers and obstacles in customising courses. The significant contrast in education and training approaches between larger companies and SMEs is acknowledged by the social partners, who recognise the need for greater attention to lifelong learning and the utilisation of adult education and continuing training among SMEs.

The two selected companies, Company 1 and Company 2, are prominent Danish corporations with a strong emphasis on sustainability and technology. Both companies prioritise lifelong learning and have implemented measures to enhance adult education and continuing training. They recognise the value of education and training in maintaining competitiveness, improving production processes and supporting the holistic development of their employees. These companies actively engage with social partners, utilise public schemes and offer diverse learning opportunities tailored to the specific needs of their workforce and production. They serve as role models for SMEs within their supply chain and the wider sector.

The motivation of employees to participate in adult education and training is often viewed as a barrier, although trade unions argue that consideration should be given to individual learning preferences. Workplace culture plays a crucial role in prioritising lifelong learning. With an extended work life and the increasing need for digitalisation and sustainability skills, the younger generation is expected to engage more actively in lifelong learning. The industry's collective agreement grants 10 days of education or training, but many employees do not utilise the full allocation if management fails to provide sufficient encouragement or if administrative barriers prove excessive. The dialogue between the employee and the employer is essential to get more employees to attend adult education and continuing training.

3. Conclusions and recommendations

The primary objective of adult education and continuing training in Denmark is to foster a flexible labour market capable of adapting to the complications posed by globalisation, digitalisation and sustainability. A well-functioning adult education and training system benefits both employers and employees. However, Denmark has faced challenges within its adult education and training system, with a decline in participation due to economic growth, as many companies struggle to allocate time for employee training.

Reports, evaluations and public documents from the ministries have consistently highlighted the same problems since the 2000s. These problems include a significant number of individuals with low levels of literacy and numeracy, difficulties in accessing adult education and training programmes for both employers and employees, insufficient reorganisation of individual learning assessments and a lack of flexibility within the adult vocational training system to meet the demands of companies.

To address these problems, various tripartite agreements introduced by different governments have proposed different initiatives. The initiatives dating from the 2000s to the latest tripartite

agreement for 2017-2023 aim to lower barriers to attendance and increase incentives for companies to upskill their employees, such as through higher subsidies, simplified administration and improved access to other education opportunities.

Regulating the adult education and training system requires the active involvement of social partners at both the national and local levels. At the national level, social partners collaborate with the government to develop policies and strategies. They are also involved in the specific planning of adult education and training programmes to ensure that the needs of the labour market are adequately represented. Despite a decrease in the number of members, social partners still play a relevant role in developing the labour market in Denmark.

Insights from semi-structured interviews and the roundtable discussion indicate that larger companies are frontrunners in adult education and training, and their structured approach to training and upskilling can have a positive impact on SMEs. However, SMEs face issues in engaging with adult education and training due to limited resources and knowledge. Additionally, public education providers struggle to meet the specific needs of companies, lacking the required flexibility and offering courses that may not align closely enough with the companies' requirements. As a result, companies often turn to alternative education providers or opt for internal training programmes.

Based on these findings, the following recommendations are put forward.

Assessment of the labour and skills required for new green legislation

A newly released report by Tænketanken Mandag Morgen and Concito (2023) provides several recommendations to make sure the workforce is sufficiently skilled for the green transition. One of the key recommendations is the implementation of a systematic assessment of the labour and skill requirements associated with new environmental, climate, energy and supply legislation (Tænketanken Mandag Morgen and Concito, 2023).

A significant obstacle to the establishment of green solutions is the scarcity of skilled workers. Therefore, it is essential to foster closer collaboration between the Ministry of Climate, Energy and Utilities and the Ministry of Employment. This collaboration should focus on developing the necessary initiatives for upskilling of the workforce to meet the demands of the green transition. The assessment and initiatives should undergo evaluation by the social partners to ensure their appropriateness and effectiveness.

Enhanced flexibility and autonomy for education providers to improve quality

Educational institutions in Denmark are bound by rigorous regulations, which can hinder their ability to experiment with innovative approaches and drive institutional change. Yet, one particular education provider in Esbjerg has endeavoured to foster close collaboration with local companies to develop education and training programmes based on demand rather than supply. This approach seeks to ensure that the education provided is directly aligned with the needs of the industry. Additionally, the education provider assumes the responsibility of facilitating subsidies on behalf of the companies to streamline administrative processes and prevent barriers to participation.

To promote a more flexible education system, it is essential to temporarily alleviate the burden of excessive regulations on educational institutions. This would enable them to explore and implement new strategies that better align with the evolving needs of companies and the educational landscape, similar to the approach taken by the aforementioned education provider in Esbjerg.

Furthermore, in order to effectively teach the latest technologies, it is crucial to upskill educators. Education providers can collaborate with universities and large companies to access the most up-to-date knowledge and expertise in the field. This collaboration can facilitate the transfer of

knowledge and ensure that educators are equipped with the necessary skills to teach emerging technologies.

More support for SMEs

In order to encourage greater participation by SMEs in adult education and continuing training, a recommended approach would be to establish a comprehensive support system. This system would assist SMEs in identifying relevant courses, applying for subsidies and systematically planning their education and training activities. While this recommendation has been made on multiple occasions in the past, it can be made more practical through the proposal to appoint a national secretary specifically dedicated to this purpose (Tænketanken Mandag Morgen and Concito, 2023).

The national secretary would play a crucial role in removing administrative barriers for SMEs and facilitating their access to pre-existing education systems. By streamlining processes and providing dedicated support, the national secretary would make it easier for SMEs to navigate the intricacies of the education landscape and take advantage of available resources. The national secretary could also focus on developing digital solutions to assist SMEs in gaining an overview of the skills they require, and the skills mandated by legislation. By leveraging technology in collaboration with tech companies, the secretary could provide user-friendly platforms or tools that enable SMEs to assess their skill needs in a more efficient and systematic manner. This would enable SMEs to align their workforce development strategies with legal requirements and ensure compliance with relevant regulations.

Transparency for employees

Employees covered by the industrial collective agreement are entitled to 10 days of education and training. Providing an overview of these 10 days in a more transparent manner can help employees to keep track of their allocated days, understand how they can utilise them and be aware of any specific requirements. PensionDanmark, a pension fund that serves numerous clients under the industrial collective agreement, is currently working on establishing individual information accounts to enhance transparency. The aim is to ensure that more employees are informed about their rights and are encouraged to make full use of the allotted 10 days.

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