TREXIMA

Inequalities in Employees' Access to Education

Commissioned by	Association of Autonomous Trade Unions (within the framework of tasks under Section 320a of the Labour Code, 2026)
Prepared by	TREXIMA spol. s r.o. Mgr. Marcel Navrátil
Date	June 2026

Contents

1. Introduction

The issue of inequalities in employees' access to education is one of the key topics of today's labour market. From the employees' perspective, the opportunity to continuously develop knowledge and skills is a fundamental element of a high-quality working environment, influencing their employability, job satisfaction and long-term professional prospects. Unequal access to training may deepen the differences between groups of employees, limit career opportunities and create a sense of unfairness, while systemic barriers (in terms of time, finance, organisation or information) may reinforce distrust and reduce motivation for further development.

The study **Inequalities in Employees' Access to Education** describes selected sub-topics related to who has access to corporate training in practice, under what conditions, and what obstacles different groups of employees may face. The aim of the study is to raise awareness among trade union organisations, workers and other stakeholders about the nature of these inequalities and to support a substantive discussion on measures that can contribute to a fairer and more transparent setup of skills development in the workplace.

2. Summary of Key Findings

The study illustrates that employees' access to training in the Czech Republic is not evenly distributed across workplaces; rather, it largely mirrors the institutional capacity and culture of employers. The clearest dividing lines run along company size, ownership and sector: in large companies, training is practically a standard, whereas in the smallest enterprises an employee's chance of receiving training beyond statutory courses is considerably lower. Similarly, domestic enterprises provide less training than foreign-controlled companies, and sectors also differ markedly, with knowledge-intensive sectors at one end and sectors with low investment in skills development at the other. This inequality is reflected not only in whether an employee gets onto a course "at all", but also in the scope and quality of support: differences in training expenditure are significant and, across sectors, may amount to multiples.

In terms of participation, it is important to note that Czech enterprises show high involvement in mandatory training, but for non-mandatory courses and training, participation is below the EU average. Moreover, inequalities also spill over to the employees' side: participation in non-formal education rises with educational attainment and income and is higher in larger cities, whereas low participation rates are recorded among the less educated and workers in small companies. For trade union practice, it is important to read these findings as a picture of the accumulation of advantages and disadvantages: those who are already "inside" an organisation with a training budget, a training plan and sufficient HR capacity also gain more opportunities for further development, while groups in operationally strained and low-cost sectors or in small companies tend to remain on the margins.

Particular attention should be paid to how weakly employee representatives are systematically involved in decision-making on training. In enterprises, trade unions or employee representatives are only exceptionally involved in decisions on training, and written agreements with social partners covering training are likewise rather rare. At the

same time, it is evident that the management of training is poorly anchored in many enterprises: only a minority of companies work with a written training plan, and a relatively large share of employers have no clearly assigned responsibility for training. In such an environment, employee training easily becomes an ad hoc activity which, when "cuts" are made under time pressure and operational problems, is among the first to go. This further reproduces inequalities.

Digitalisation and artificial intelligence (AI) are increasingly entering the picture of inequalities. Although the Czech population has a relatively good starting position in basic digital skills, a marked age gap persists. Corporate ICT training also remains a minority practice, so access to digital development is largely determined by where a person works. Likewise, the use of AI in enterprises in the Czech Republic is below the EU average and, in practice – much like training in general – is unevenly distributed by size and sector. This may reinforce differences in opportunities to acquire new skills.

From the above, an important conclusion follows for trade union organisations: training needs to be shifted from the level of a "benefit" or a random offer to the level of a predictable working standard to which employees have a real and fairly accessible entitlement – especially where training currently happens the least. In trade union practice, this means systematically opening up training as a legitimate topic of collective bargaining and social dialogue and insisting that it be linked to planning, a dedicated budget and transparent rules for employees' access to corporate training. The point is not to burden employers administratively, but to create a minimum framework that reduces randomness and protects, above all, those groups that currently have the hardest time accessing training: the less qualified, older generations of workers, employees in small and domestic companies, and workers in sectors with low investment in development.

Recommendations for trade unions can be formulated on three interconnected levels. First, it is advisable to strengthen bargaining demands for the "institutional infrastructure" of training in the enterprise: regular assessment of skills needs, a training plan (ideally in writing), assigned responsibility and clear criteria for selecting participants, so that training

is not distributed merely according to current operations or managerial preference. Second, it is useful to focus on the barriers that the study repeatedly shows to be the most frequent – time pressure, high workload, costs and sometimes also an insufficient offer – and to promote solutions that are genuinely usable for employees: training during working hours, a combination of short modules and flexible forms (including online), clear information and support for those with a weaker starting position. Third, trade unions should also direct their attention above the level of individual enterprises, particularly towards the segment of small companies and sectors with weaker support for employee training. There is scope here for sectoral agreements, shared training capacities and inspiration from foreign models of funds or jointly managed training programmes. It is precisely there that a collective approach can compensate for what an individual small employer cannot manage organisationally on its own. Specific foreign examples of the above-mentioned union activities and outputs are described in detail in the study.

Last but not least, it is important that trade unions enter the debate on digitalisation and AI not merely as an "observer" of technological change, but as an actor that monitors the impacts on working conditions and on the fair distribution of retraining opportunities. If the development of AI skills takes place selectively, there is a risk that some employees will gain a head start while others will slip into the position of a less employable workforce. It is therefore appropriate to promote accessible support for digital education for older and less qualified workers as well, and at the same time to push for ICT training not to be marginal but to gradually become a normal part of skills development in enterprises. In the long term, it also pays for trade unions to develop their own capacities in this area: to be able to read workplace training data, identify inequalities in access, collect members' experiences and turn them into concrete bargaining topics. In this way, training can become not only a tool of corporate competitiveness, but also a tool of social justice, job security and a dignified adaptation to the transformation of work.

3. Where the Czech Republic Stands: A Picture of Adult Participation in Education

For the purposes of ongoing comparison and evaluation of the state and development of lifelong learning at the level of individual European Union Member States, several instruments are available that enable systematic monitoring in the field of lifelong education and learning:

- *Continuing Vocational Training Survey* (**CVTS**) is known in the Czech Republic as **Šetření o vzdělávání zaměstnanců**. This survey monitors, at five-year intervals, the training of employees in selected economic sectors from the employers' perspective. It provides information on how many companies in the Czech Republic provide training for their employees or how many employees participate in it. The survey results reveal data on the planning, organisation and evaluation of training activities. The survey also shows the most common thematic focus of courses, how much companies invest in employee training, and what obstacles or limitations they perceive in providing training to employees.
- the *Adult Education Survey* (**AES**) is known in the Czech Republic as **Šetření o vzdělávání dospělých**. This survey provides, at six-year intervals, comparable data on the participation and non-participation of adults in lifelong learning.
- the EU *Labour Force Survey* (**EU-LFS**), known in the Czech Republic as **Výběrové šetření pracovních sil**, makes it possible to monitor the extent of people's involvement in formal and non-formal education. The survey covers the topic of education only marginally; however, its advantage over the AES and CVTS is that it is conducted every year.

Given the different methodologies, target groups and reference periods of the individual surveys, their results cannot be compared directly. Together, however, they provide a comprehensive picture of participation in education and of the factors influencing employees' access to training.

3.1 Employee Training

For the purposes of the Continuing Vocational Training Survey (*Continuing Vocational Training Survey*, CVTS), employee training is defined as "*adult education provided by enterprises with the primary purpose of acquiring or improving knowledge and skills applicable on the labour market, responding to ongoing innovation and changing requirements, and improving the overall competitiveness of the enterprise*". The latest available CVTS data are from 2020. When interpreting the 2020 data, it should be borne in mind that the survey took place during the COVID-19 pandemic, which may have affected both the scope and the forms of employee training. For the purposes of the survey, enterprise-provided training means activities that are planned, organised or actively supported by the enterprise with a specific learning objective. In addition, the enterprise must at least partially pay for such training on behalf of the employee (whether from its own resources or from received subsidies, etc.). Partial payment for employee training also includes situations where the worker is allowed to use paid working time for training, or where the worker's learning materials are paid for (e.g. in the case of self-study).[1]

The survey shows that in 2020, any form of training for employees was provided by **86% of Czech employers**. A more objective picture emerges, however, if mandatory training required by law is excluded (typically training in occupational health and safety and fire protection). In that case, **57% of enterprises providing training** were identified. In the following text, data on non-mandatory training will be presented as a priority in order to obtain a more realistic view of the situation in employee training.

Employers provide the following **forms** of non-mandatory training:

- courses/training sessions (44%)
- initial training/on-the-job instruction (26%)
- self-study/e-learning (18%)

[1] CZECH STATISTICAL OFFICE. Employee Training – 2020 (CVTS survey) [online]. Prague: Czech Statistical Office, 2023. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-zamestnancu-2020

- workshops, seminars, conferences or trade fairs (15%)
- job rotation (4%).

Expenditure on training in 2020 amounted to:

- CZK 2,431 in total training expenditure per employee (all enterprises)
- CZK 2,569 in total training expenditure per employee (enterprises providing training)
- CZK 2,874 in expenditure on courses/training sessions per participant
- The share of training costs in total labour costs was 0.4%.

Czech enterprises only very rarely pool training funds into a training fund serving multiple entities. In the three years preceding the survey, less than 1% of the employers surveyed had done so. Enterprises receive training funds somewhat more often. In total, however, this concerned only 5% of organisations. They most frequently drew on EU funds (4%), state budget subsidy schemes (0.7%) or tax incentives (0.4%).

Employee courses/training sessions by provider (**internal** vs **external**):

- External mandatory courses/training: 58% of enterprises
- External non-mandatory courses/training: 39% of enterprises
- Internal mandatory courses/training: 47% of enterprises
- Internal non-mandatory courses/training: 17% of enterprises.

Types of external course/training providers in enterprises providing external courses/training:

- Commercial companies focused on education: 69%
- Commercial companies not focused on education: 18%
- Employers' associations, chambers of commerce and trade: 5%
- School education institutions: 2%
- Public institutions focused on adult education: 2%
- Trade union organisations: 1%
- Other education providers: 29%.

Planning and decision-making on training in enterprises (as % of all enterprises):

- A total of 50% of all enterprises in 2020 stated that training is planned in advance.
- Only 21% of all enterprises mentioned that pre-planned training includes a written training plan or project.

Assignment of responsibility for employee training (as % of all enterprises):

- No responsible unit or person: 62%
- A person providing training alongside another main job role: 30%
- A person with training provision as their main job role: 5%
- A unit focused on training: 4%.

Involvement of employee representatives in decision-making on training in enterprises:

- Only 6% of enterprises involve employee representatives in decision-making on training in enterprises.
- In such organisations, employee representatives most frequently co-decide on:
    - the content of training (reported by 54% of enterprises where employees are involved)
    - training objectives (52%)
    - the form or type of training (50%)
    - the selection of external training providers (32%)
    - the evaluation of training outcomes (25%)
    - the criteria for selecting training participants (25%)
    - drawing up the training budget (14%).[2]

Written agreements between the enterprise and its professional or social partners covering the topic of training have been concluded by 8% of employers. Professional or social partners are organisations representing employers and employees (employers' associations, sectoral

[2] CZECH STATISTICAL OFFICE. Employee Training – 2020 (CVTS survey) [online]. Prague: Czech Statistical Office, 2023. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-zamestnancu-2020

federations and trade union organisations). Agreements between the employer and trade union bodies or committees at the enterprise level are not included in this definition.

Assessment of training needs in enterprises (as % of all enterprises):

- Only 21% of enterprises regularly assess what skills their employees will need. A total of 47% of employers assess this need irregularly and 31% of enterprises do not carry out this assessment at all.

Chosen **solutions** when the enterprise does not consider its employees' current skills sufficient (as % of all enterprises):

- The enterprise provides the necessary training to existing employees: 52%
- Recruitment of new workers with the appropriate qualifications, skills and abilities: 22%
- Internal reorganisation to make better use of employees' existing skills and abilities: 22%
- Recruitment of new workers who subsequently provide the necessary training: 4%
- None of the above solutions: 30%.

Evaluation of the **effectiveness** of employee training provided:

- A total of 46% of enterprises providing employee training evaluate its effectiveness, whereas 54% of employers offering training do not assess its impacts.

Participation of employees in training activities:

- Four fifths (81%) of all employees of enterprises organising legally mandated courses/training took part in them. Enterprises providing courses/training not required by law reported a participation rate of 41% of employees. Participation was similar for initial training and on-the-job instruction (38%) and for self-study or e-learning (40%). One fifth of employees of enterprises providing job rotation took part in this form of training (19%).

The time dimension of employee training:

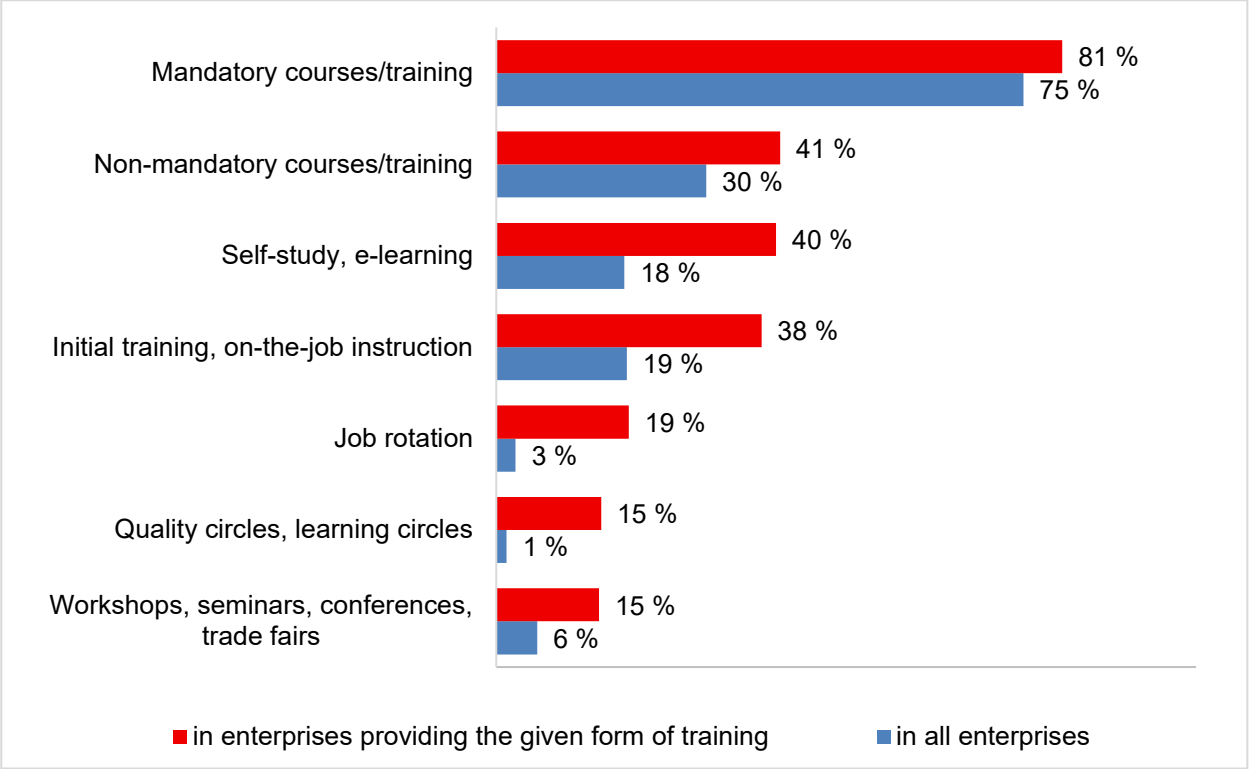
- Overall, 8.2 hours of working time spent in courses/training sessions fell on each employee across all enterprises.
- The number of training hours per participant was 4.9 hours of working time for mandatory courses/training, and 15 hours per participant in non-mandatory courses/training.
- In total, 0.5% of employees' hours worked across all enterprises was devoted to courses/training,
- The share of paid working time devoted to participation in mandatory/non-mandatory courses/training (as % of enterprises that provided mandatory or non-mandatory courses/training, respectively) was 0.57%.[3]

Share of training participants in enterprises:

- The highest participation was recorded in mandatory training. In enterprises that provided legally mandated courses/training, 81% of all employees took part in them. Other forms, understandably, did not come anywhere near such participation. Detailed information on participation in employee training activities in their individual forms, broken down by enterprises providing the given form of training/all enterprises, is provided in the following chart.

[3] CZECH STATISTICAL OFFICE. Employee Training – 2020 (CVTS survey) [online]. Prague: Czech Statistical Office, 2023. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-zamestnancu-2020

Figure 1: Employees participating in individual forms of training, 2020 (as % of all employees)



Source: Czech Statistical Office, 2020

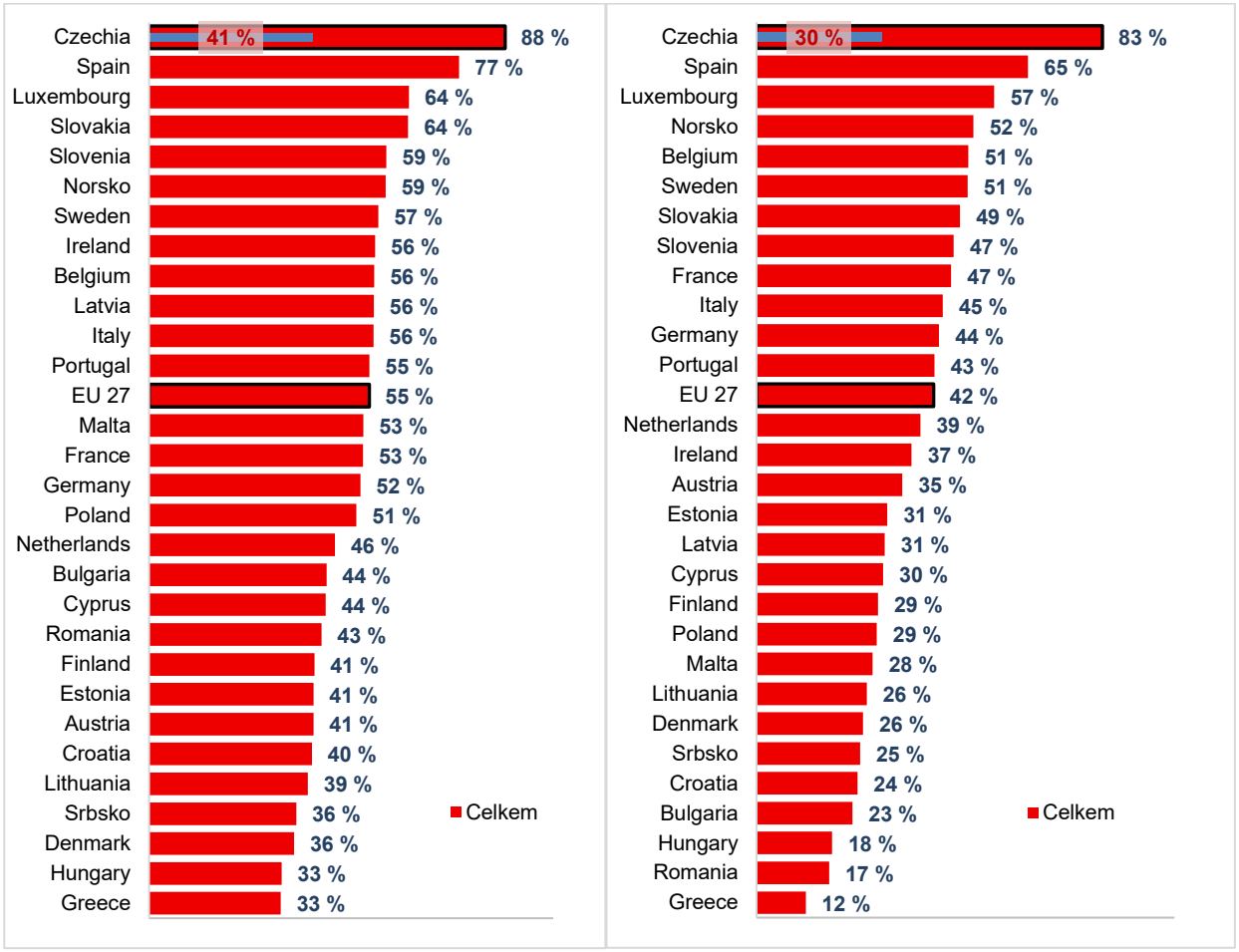
Involvement in courses/training by **gender:**

- In enterprises providing courses/training not required by law, a similar share of men (40%) and women (41%) took part.
- For legally mandated courses/training, participation was 84% for men and 77% for women (again only for enterprises providing them).

At first glance, a comparison of the share of employees trained in courses/training sessions in Czech enterprises with employers in other European Union countries (see the following chart) may suggest that Czech employers are the most active in Europe in providing training courses for their employees. Here, however, it must be taken into account that in the Czech version of the questionnaire, questions were asked separately about mandatory training (occupational health and safety, fire protection) and separately about non-mandatory training, whereas in the international version of the questionnaire, questions were asked about courses/training in general, with only one supplementary question concerning the share of hours in mandatory

courses/training focused on health protection and occupational safety. As a result, unlike in the survey among Czech enterprises, respondents may have omitted to include this training.

Figure 2: Employees participating in courses/training in the Czech Republic and the EU (share of employees of training enterprises and share of employees of all enterprises, 2020)



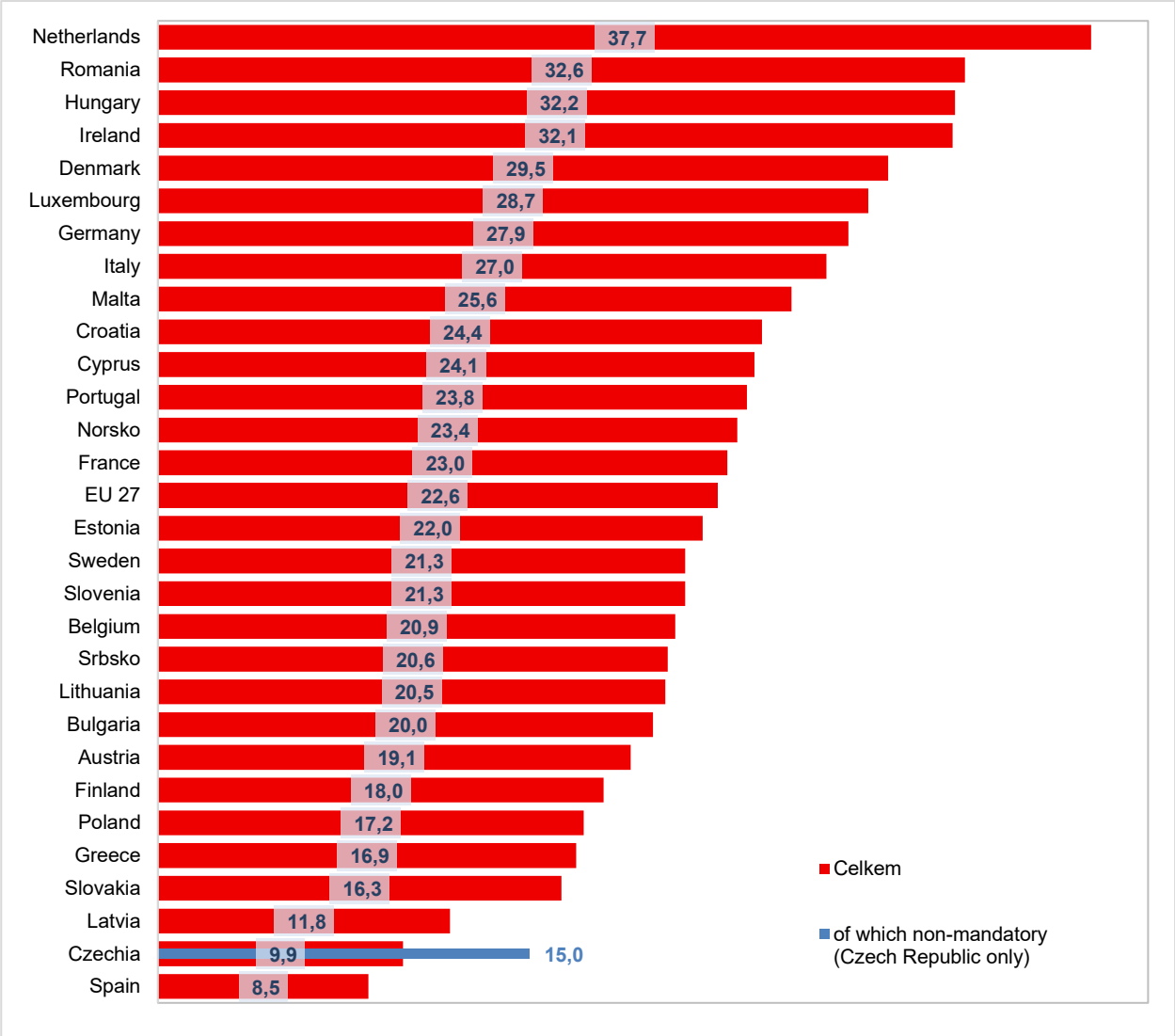
Source: Eurostat, processed by the Czech Statistical Office, 2020

If only non-mandatory courses and training are taken into account, the share of employees involved in training reaches only 41% (as a share of employees of training enterprises) and 30% (as a share of employees of all enterprises), respectively. In both cases, these are **values lower than the EU average** as a whole (55% and 42%, respectively).

The number of hours of paid working time spent in courses/training per participant (regardless of whether these were legally mandated courses/training or non-mandatory courses/training) was significantly lower in 2020 compared with other EU countries. While Czech

employees spent **9.9 hours** in training/courses, the EU average was 22.6 hours. The Czech Republic reported the second lowest number of hours of working time spent in courses/training per participant among EU countries, after Spain.

Figure 3: Average number of hours of paid working time spent in courses/training per participant (EU, 2020)



Source: Eurostat, processed by the Czech Statistical Office, 2020

The Czech Republic does not fare much better when evaluating the working time spent in courses/training that are not required by law. On average, this amounted to **15 hours** per participant, the third lowest value among EU countries (after Spain and Latvia).

The analysis of the provision of courses/training as one of the forms of employee training can be concluded by stating that enterprises providing courses/training in the Czech Republic devoted a below-average share of employees' paid working time to this training compared with other European Union countries. On the other hand, they reported the highest share of participating employees. The number of hours of paid working time spent in this training per course/training participant was the second lowest. This can be explained by the fact that (I) mandatory training (occupational health and safety, fire protection) generally requires less time than non-mandatory courses/training and (II) the two types of training were distinguished in the Czech version of the Continuing Vocational Training Survey (CVTS) questionnaire.[4]

3.2 Adult Education

Another Europe-wide survey in the field of education is the "*Adult Education Survey*" (AES) survey, known in the Czech context as the Adult Education Survey. This sample survey is conducted once every 6 years and provides data on the participation and non-participation of adults in lifelong learning. In addition to participation and non-participation in education, the survey also covers reasons for non-participation. The most recent wave of the AES survey took place in 2022, with data collected from more than 10 thousand respondents in the Czech Republic. Given the focus of this study, the following text presents results for non-formal education.

Definition of non-formal education

Organised and institutionalised education under the guidance of an educational authority, e.g. a professional lecturer, which takes place alongside formal education. It is education undertaken for work-related or private reasons and takes the form of courses, seminars, workshops, work-related training or on-the-job instruction, private lessons, etc. Its aim is to acquire knowledge, skills and competences, and it is therefore intentional. Unlike formal

[4] CZECH STATISTICAL OFFICE. Employee Training – 2020 (CVTS survey) [online]. Prague: Czech Statistical Office, 2023. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-zamestnancu-2020

education, it does not lead to the completion of a particular level of education or the award of a standard formalised certificate.

The data from the 2022 Adult Education Survey in the Czech Republic reveal the following about non-formal education:[5]

Overall results

- In 2022, at least one non-formal education activity was completed in the Czech Republic by **2,739 thousand (40%)** adults aged 18–69. This is the same share as in 2016.
- The vast **majority** of Czech participants in non-formal education undertake it **for work-related reasons (2,381 thousand, i.e. 35%**), while a minority do so for private reasons.

Participation in non-formal education by gender

- Non-formal education was undertaken more by **men** (41%) than women (38%), mainly due to greater involvement in **job-related** non-formal education. Almost 38% of men, but only 31% of women, took part in non-formal education for work-related reasons. Women, on the other hand, predominated in privately motivated non-formal education (10% of women, 6% of men).

Participation in non-formal education by age

- Non-formal education is most frequently undertaken by people aged **35–49**, where the participation rate reached 49%. Participation of the 25–34 and 50–59 age cohorts was 45% in both cases. By contrast, in the 60–69 category the participation rate in non-formal education stands at 17%, i.e. three times lower than in the 35–49 age group.
- In most age groups, people took part in non-formal education for **work-related reasons**; the only exception was the 18–24 group, where the shares of those involved for work-related reasons and for private reasons were balanced (just under 18%).

[5] CZECH STATISTICAL OFFICE. Adult Education in the Czech Republic (AES survey) – 2022 [online]. Prague: Czech Statistical Office, 2024. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-dospelych-v-ceske-republice-setreni-aes-2022

- For a detailed overview, see the following table.

Table 1: Participation in non-formal education in the Czech Republic by age (%, 2022)

	Participated in non-formal education			Did not participate in non-formal education
	Total	For work-related reasons	For private reasons	
Total 18–69 years	*39,7*	*34,5*	*8,0*	*60,3*
18–24 years	32,9	17,4	17,5	67,1
25–34 years	45,0	38,9	10,5	55,0
35–49 years	48,9	44,8	7,8	51,1
50–59 years	44,5	42,0	4,9	55,5
60–69 years	17,2	13,7	4,3	82,8

Source: Czech Statistical Office (AES, 2022)

Participation in non-formal education by educational attainment

- Among the adult population aged 25–69, the rate of participation in non-formal education **increases in direct proportion to participants' educational attainment**. This applies to overall participation, participation for work-related reasons and participation for private reasons.
- People with upper secondary education without a school-leaving examination (maturita) or lower took part in non-formal education at a rate of 28%; just under 27% of them were involved for work-related reasons and just under 3% for personal reasons.
- By contrast, adults with post-secondary and tertiary education undertake non-formal education roughly twice as often: 56% of them took part in non-formal education, of which 49% for work-related reasons and 14% for private reasons.

- Between these two extremes lies the participation rate of those with a school-leaving examination (overall participation was 45%, participation for work-related reasons: 40%, participation for personal reasons just under 8%).
- The results are presented in more detail in the following table.

Table 2: Participation in non-formal education in the Czech Republic by educational attainment (%, 2022)

Educational attainment (age group 25–69)	Participated in non-formal education			Did not participate in non-formal education
	Total	For work-related reasons	For private reasons	
upper secondary without maturita and lower	28,3	26,5	2,5	71,7
upper secondary with maturita	44,8	40,1	7,5	55,2
post-secondary and tertiary	56,0	49,0	14,1	44,0

Source: Czech Statistical Office (AES, 2022)

Participation in non-formal education by economic status

- **The employed** are the category of adults by economic status that takes part in non-formal education most frequently. Their participation rate exceeded 51%, with 48% undertaking non-formal education for work-related reasons.
- The category of the employed is further divided into **employees** and **the self-employed**. The participation rate of employees in non-formal education exceeded 54%, and participation for work-related reasons exceeded 51%. Among the self-employed, over 35%

took part in non-formal education, with 31% of self-employed persons doing so for work-related reasons.

- Although **students** (over 18) are primarily participants in formal education, more than a quarter of them (27%) also took part in non-formal education; in their case, however, this was mostly for private reasons (a participation rate of over 24%).
- Adults on **parental leave/homemakers** participated in non-formal education at a rate of 17%, with 7% involved for work-related reasons and 11% for personal reasons.[6]
- The results are presented in more detail in the following table.

[6] CZECH STATISTICAL OFFICE. Adult Education in the Czech Republic (AES survey) – 2022 [online]. Prague: Czech Statistical Office, 2024. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-dospelych-v-ceske-republice-setreni-aes-2022

Table 3: Participation in non-formal education in the Czech Republic by economic status (%, 2022)

	Participated in non-formal education			Did not participate in non-formal education
Economic status category	Total	For work-related reasons	For private reasons	
Total 18–69 years	*39,7*	*34,5*	*8,0*	*60,3*
employed	51,2	47,9	7,0	48,8
employees	54,3	51,4	6,8	45,7
self-employed	35,4	30,9	7,6	64,6
unemployed	13,2*	:	:	86,8
students (over 18)	26,9	:	24,4	73,1
old-age pensioners (under 69)	7,2	2,6*	5,0	92,8
on parental leave / homemakers	16,8	7,1*	11,1	83,2

Source: Czech Statistical Office (AES, 2022)

*Notes: * = low reliability : = insufficient number of observations*

Participation in non-formal education by household income

- Participation in non-formal education **increases in direct proportion to the household income** of education participants – the higher the income, the higher the participation rate, which applies to non-formal education overall as well as broken down by reason (work-related, private).

- When households are divided by income level into five equally sized groups (quintiles), it emerges that people from households with the lowest incomes took part in non-formal education at a rate of 23% (just under 18% for work-related reasons and 6% for personal reasons).
- At the other end of the spectrum are Czechs from the highest-income group. They took part in non-formal education at a rate of 55%. Exactly half of the wealthiest group undertook non-formal education for work-related reasons, i.e. three times more often than people from households with the lowest incomes. They opt for non-formal education for private reasons roughly twice as often.
- The participation rates of the other income groups in non-formal education lie between the above extremes, with the rule that as household income rises, so does the rate of participation in non-formal education.
- The results are presented in more detail in the following table.

Table 4: Participation in non-formal education in the Czech Republic by household income (%, 2022)

	Participated in non-formal education			Did not participate in non-formal education
Income groups	Total	For work-related reasons	For private reasons	
1st quintile (lowest)	22,8	17,5	6,3	77,2
2nd quintile	31,0	25,2	7,1	69,0
3rd quintile	42,1	36,8	7,6	57,9
4th quintile	47,2	42,8	8,0	52,8
5th quintile (highest)	55,2	50,2	11,1	44,8

Source: Czech Statistical Office (AES, 2022)

Participation in non-formal education by municipality size

- A comparison of participation in non-formal education broken down by the size of the respondent's place of residence (municipality population) shows that non-formal education is most frequently undertaken by **residents of cities with 50 thousand or more inhabitants**. Their overall participation exceeds 45%; 38% undertook non-formal education for work-related reasons and 11% for private reasons.
- The relatively lowest participation in non-formal education (36% in total, 32% for work-related reasons and over 5% for personal reasons) was found among residents of the smallest municipalities with up to 2 thousand inhabitants; however, the participation of residents of larger municipalities (with the exception of the largest cities) did not differ much.[7]
- The results are presented in more detail in the following table.

Table 5: Participation in non-formal education in the Czech Republic by municipality size – population (%, 2022)

	Participated in non-formal education			Did not participate in non-formal education
Population	Total	For work-related reasons	For private reasons	
Less than 2,000	35,9	32,1	5,4	64,1
2 000-9 999	39,4	34,8	7,6	60,6
10 000-49 999	37,6	32,5	7,8	62,4
50,000 and more	45,2	38,1	11,2	54,8

Source: Czech Statistical Office (AES, 2022)

[7] CZECH STATISTICAL OFFICE. Adult Education in the Czech Republic (AES survey) – 2022 [online]. Prague: Czech Statistical Office, 2024. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-dospelych-v-ceske-republice-setreni-aes-2022

3.3 Findings from the Labour Force Sample Survey

Another source of information reflecting the current state and development of participation in education is the Labour Force Sample Survey (LFSS). Although it touches on adult education only marginally, its advantage is the higher frequency of the survey compared with the CVTS and AES surveys. The Labour Force Sample Survey is fully compatible with the data of the Europe-wide survey *Labour Force Survey* (EU-LFS) and also allows comparison at the EU level.

The 2024 survey data reveal the following facts:[8]

- In the 4 weeks preceding the survey, almost **680 thousand Czech citizens** in the 15–64 age group took part in non-formal education.
- This number represents **10,2 %** of persons in this age category.
- Of those in non-formal education, **530 thousand** persons (8%) were involved for **work-related reasons** and the remaining 150 thousand (2.3%) for personal reasons.
- **Women** take part in non-formal education **more often than men.** In 2024, 359 thousand women (10.6%) undertook non-formal education in the previous 4 weeks, of whom 264 thousand (7.8%) for work-related reasons and 95 thousand (2.8%) for personal reasons.
- In 2024, 321 thousand men (9.5%) took part in non-formal education, of whom 266 thousand (7.9%) for work-related reasons and 55 thousand (1.6%) for personal reasons.
- **Men** are thus relatively much more likely than women to take part in non-formal education related to their **profession** rather than for personal development. Of the men in non-formal education, 83% were learning for work-related reasons, whereas for women this share was only 73%. The number of men and women involved in job-oriented non-formal education is almost identical; in the case of non-formal education for personal reasons, women outnumber men.

[8] CZECH STATISTICAL OFFICE. 2501322506 [online]. Prague: Czech Statistical Office. [accessed 2026-04-24]. Available at: https://csu.gov.cz/docs/107508/138ead9f-1d9b-59b7-9e78-89c22c298d8f/2501322506.pdf?version=1.1

The data on the involvement of the Czech population aged 15–64 in non-formal education show that in 2024, relatively **the most people in the past six years** undertook non-formal education (see the following table).[9] A comparison for the period 2018 to 2024 shows that the rate of involvement of Czech citizens in non-formal education **is growing dynamically**. It is also significantly higher compared with 2018–2019, the years preceding the roughly two-year period of restrictions associated with the COVID-19 pandemic, when Czechs, for objective reasons, undertook the least non-formal education.

Table 6: Participation in non-formal education in the past 4 weeks (%, 2018-2024)

	2018	2019	2020	2021	2022	2023	2024
Total	6,9	6,6	4,0	4,4	8,3	9,3	10,2
Men	6,7	6,6	4,2	4,4	8,3	8,8	9,5
Women	7,0	6,6	3,8	4,4	8,3	10,0	11,0*

Source: Eurostat (trng_lfs_09, 2026)

**Note: the values for women's participation in non-formal education in 2024 differ between the data sources of the Czech Statistical Office and Eurostat.*

The next table compares the involvement of Czech citizens in non-formal education with other European Union countries. In 2024, the Czech Republic showed a **below-average** rate of involvement of its citizens aged 15–64 in non-formal education. At **10,2 %**, it stood **1 percentage point below the EU average** and was well below the values of the best-performing countries, where more than one fifth of people took part in non-formal education in the 4 weeks preceding the survey. The top five countries are mostly the Nordic states of Europe, led by Sweden (32%) and Denmark (28%). These are followed by Slovenia (22%), Finland (21%) and Estonia (19%). At

[9] EUROSTAT. Participation rate in education and training (last 4 weeks) [trng_lfse_01] [online]. 2026. [accessed 2026-04-24]. Available at: https://ec.europa.eu/eurostat/databrowser/view/trng_lfs_09__custom_20632184/default/table

the opposite end of the ranking is Bulgaria (1%), followed by Croatia and, surprisingly, Germany with 6%, then Italy with 8% and Romania with 9%.[10]

[10] EUROSTAT. Participation rate in education and training (last 4 weeks) [trng_lfse_01] [online]. 2026. [accessed 2026-04-24]. Available at: https://ec.europa.eu/eurostat/databrowser/view/trng_lfs_09__custom_20632184/default/table

Table 7: Share of participation in non-formal education in the past 4 weeks (%, EU, 2024)

EU country	Participation in non-formal education (%)
Sweden	31,7
Denmark	27,9
Slovenia	21,5
Finland	20,5
Estonia	18,8
Malta	16,9
Netherlands	15,7
Portugal	15,5
Austria	14,8
France	14,6
Luxembourg	13,6
Cyprus	13
Spain	12,7
Slovakia	11,5
Greece	11,3
Ireland	11,3
EU	**11,2**
Belgium	11,2
Hungary	11
Czech Republic	**10,2**
Poland	10,1
Lithuania	9,5
Latvia	8,8
Romania	8,7
Italy	7,8
Germany	5,9
Croatia	5,6
Bulgaria	1,4

Source: Eurostat (dataset trng_lfs_09)

As mentioned above, the survey distinguishes two possible reasons for taking part in non-formal education: personal reasons and work-related reasons. A comparison of participation in non-formal education for work-related reasons is provided in the following table.

Table 8: Share of participation in non-formal education for work-related reasons in the past 4 weeks (%, EU, 2024)

EU country	Participation in non-formal education – work-related reasons (%)
Estonia	15,2
Sweden	15
Slovenia	14,3
Finland	13,4
Netherlands	12,4
Luxembourg	12
Portugal	11,9
Malta	11,1
Austria	10,5
Spain	10,4
Slovakia	10,1
Belgium	9,4
Denmark	8,6
Czech Republic	**8**
Hungary	7,9
Lithuania	7,8
Romania	7,8
EU	**7,3**
Latvia	7
France	6,6
Cyprus	6,5
Poland	5,8
Germany	5
Italy	5
Ireland	4,9
Greece	3,7
Croatia	3,7
Bulgaria	0,8

Source: Eurostat (dataset trng_lfs_09)

A comparison of participation in non-formal education **for work-related reasons** shows the Czech Republic in a **better** position within the EU than a comparison of participation in non-formal education overall. It turns out that non-formal education in the Czech Republic is more

concentrated in job-related non-formal education than is the case on average in other EU countries, which improves the Czech Republic's position in this sub-parameter. While in the EU an average of 7.3% of people aged 15–64 take part in non-formal education for work-related reasons, **in the Czech Republic** the figure is exactly **8 %,** i.e. **0.7 percentage points more than in the EU** as a whole. However, countries such as Estonia and Sweden stand at around 15%, i.e. almost twice as high as the Czech Republic. At the bottom of the ranking of EU countries by the rate of involvement in non-formal education for work-related reasons are Bulgaria (1%), Croatia and Greece with just under 4%, and Germany, Italy and Ireland (5%).[11]

3.4 Digital Competences and Corporate ICT Training

The Czech Republic has a strong starting position in basic digital competences. In 2023, 69% of the population had at least basic digital skills, well above the EU average (just under 56%)[12]. This means that the "digital starting line" in the Czech Republic is overall higher than in the EU, which may reduce the extent of digital exclusion among part of the economically active population – at the same time, however, the high average may mask inequalities within individual groups (e.g. by age or educational attainment).

Inequalities in digital competences: where the differences are small

Some typical "digital divides" are relatively mild in the Czech Republic. The gender gap in the acquisition of at least basic digital competences is very narrow – the difference is only 0.7 percentage points, whereas in the EU the average gender gap is over 2.2 percentage points. The Czech Republic also shows relatively small differences between rural and other areas. In rural areas, 66% of the population has at least basic digital skills, which exceeds the EU average for rural

[11] EUROSTAT. Participation rate in education and training (last 4 weeks) [trng_lfse_01] [online]. 2026. [accessed 2026-04-24]. Available at: https://ec.europa.eu/eurostat/databrowser/view/trng_lfs_09__custom_20632184/default/table

[12] EUROPEAN COMMISSION. The DIGITAL Europe Programme – Work Programmes [online]. [accessed 2026-04-24]. Available at: https://ec.europa.eu/newsroom/dae/redirection/document/116928

areas (48%), and the gap between rural and other areas in the Czech Republic is 3.6 percentage points (EU: 8.1 percentage points). In terms of education, the Czech Republic is also "more equal" than the EU: among people with high formal education, the rate of acquisition of at least basic digital skills reaches 92% (EU: 80%). Among people with low educational attainment, it is 59%, differing from the national average by "only" 10.5 percentage points, whereas in the EU this gap is more than double, reaching almost 22 percentage points.

Inequalities in digital competences: where differences persist

A marked age divide can be identified in the rate of acquisition of basic digital skills. The 16–24 age group reaches 93% for at least basic digital skills (EU: 70%), but among people aged 65–74 it is only 26% – and, moreover, this is the only group where the Czech Republic lags behind the EU average (28%). Age thus appears to be the most significant factor of inequality in digital readiness, which may translate directly into unequal access to further training in the workplace (e.g. lower participation of older employees, higher barriers to entering courses, greater need for support).

The state of ICT training in enterprises: availability and limits

For the topic of inequalities in employees' access to (digital) training, the key figure is the extent to which companies provide ICT training at all. In 2024, 27% of Czech enterprises provided ICT training, thus quite significantly exceeding the EU average of 22%. The trend compared with 2022 was also positive in the Czech Republic. While in 2022, 23% of Czech companies provided ICT training, in the EU as a whole the figure was 22%. This means that the intensity of ICT training in the EU overall stagnated between 2022 and 2024, but in the Czech Republic it grew by 3.6 percentage points.[13] From the perspective of inequalities, however, what this figure conveys indirectly is equally important: even with relatively good performance, ICT training in Czech enterprises remains a "minority practice" – roughly three quarters of enterprises (in the given size category of 10+) still do not offer it. This creates a structural inequality in employees' access to

[13] EUROPEAN COMMISSION. The DIGITAL Europe Programme – Work Programmes [online]. [accessed 2026-04-24]. Available at: https://ec.europa.eu/newsroom/dae/redirection/document/116928

training depending on where they work: the opportunity to learn digital skills is largely determined by the employer, not just by individual motivation.

4. Why Participation Fails: Inequalities and Barriers Facing Employees and Companies

This chapter describes typical inequalities in access to training on the employers' side according to characteristics such as organisation size, type of ownership and sector. It describes barriers to employee training as perceived by employers. In the next part of the chapter, the study describes the barriers and inequalities in access to education arising on the side of the Czech adult population, with a focus on the employed.

4.1 Inequalities on the Employers' Side

Inequalities by organisation size

Based on a more detailed analysis of Czech employers' responses in the 2020 Continuing Vocational Training Survey (CVTS)[14] by their size, the following can be stated:

- The more employees an organisation has, the higher the chance that it provides them with training. This applies both to legally mandated training and to non-mandatory training. While an employee of a company with fewer than 20 employees has barely a fifty-fifty chance (45%) that the enterprise will provide them with non-mandatory training, in companies with 250 or more employees they are almost certain to receive it: 93% of organisations of this size provide their employees with training not required by law.
- Even among enterprises that provide employee training, employees' access to training is more widespread in large companies than in small ones. This applies to all monitored forms of employee training. For enterprises with fewer than 20 employees, for example, non-mandatory courses and training are offered by only a third of them, whereas in

[14] CZECH STATISTICAL OFFICE. Employee Training – 2020 (CVTS survey) [online]. Prague: Czech Statistical Office, 2023. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-zamestnancu-2020

companies with 250+ employees they are provided by 89%. A similar disparity exists for initial training/on-the-job instruction, which is provided by only 19% of the smallest employers but over 56% of the largest.

- The smaller the enterprise, the less money it spends on employee training. For organisations with fewer than 20 employees, total training expenditure per employee amounts to CZK 1,687; for employers with 250+ employees, the figure was CZK 2,944.
- The smaller the enterprise, the greater the risk that employee training is not a managed process. Large companies with 250+ employees plan employee training in advance in more than 90% of cases, and for three quarters of large enterprises this planning takes the form of a written training plan. By contrast, only four in ten employers with fewer than 20 employees plan their employees' training in advance, and only a tenth of them create a written training plan for this purpose.
- The probability that a designated employee or even an entire unit is responsible for employee training also rises with employer size. A total of 73% of the smallest organisations have no unit or person responsible for employee training; for companies with 250 or more employees, this probability drops to 12%.
- Funds for employee training are included in the corporate budgets of the largest companies three times more often than in the smallest ones: 28% of enterprises with fewer than 20 employees earmark funds for training, compared with 89% of employers with 250+ employees.
- Every fourth enterprise with more than 250 employees has a written agreement concluded between the enterprise and its professional or social partners; among the smallest enterprises it is only one in twenty employers.
- The smaller the enterprise, the less the employer assesses what skills its employees will need. Of the smallest companies with up to 19 employees, 37% stated that they do not assess employees' training needs at all and only 15% of them assess them regularly. For the largest employers, the situation is exactly the opposite. Six out of ten of the largest enterprises assess these needs regularly and only 7% of them do not monitor them.

- The smaller the enterprise, the smaller the chance that an identified skills deficit in the organisation will be addressed by training existing employees. The smallest employers choose this strategy of filling missing skills in only 43% of cases, the largest enterprises in 88% of cases.
- The smallest enterprises evaluate the effectiveness of the training they have provided to employees far less often than the largest enterprises (the smallest enterprises in 35%, the largest organisations in 87% of cases).
- The smaller the enterprise, the less paid working time its employees spend on courses and training that are not required by law. In the smallest enterprises with fewer than 20 employees, workers spend only 0.16% of their working time on such courses; in the largest companies with 250+ employees, this share is more than double (0.39%, expressed as % of employees' working time across all enterprises).

Inequalities by ownership

An analysis of Czech employers' responses in the 2020 Continuing Vocational Training Survey (CVTS), broken down by ownership (i.e. domestic enterprises and foreign-controlled enterprises), yields the following findings:[15]

- Only half of domestically owned enterprises provide non-mandatory training (beyond legally required courses), compared with 81% of enterprises with foreign owners.
- For example, non-mandatory courses/training are provided by 71% of all enterprises with a foreign owner, but only by 40% of domestic companies. The option of self-study/e-learning is considerably more common in foreign-controlled companies (41%) than in domestic enterprises (just under 15%). Domestic companies do not provide any form of non-mandatory training more frequently than foreign-controlled enterprises.
- Domestic enterprises spend considerably lower amounts on training their employees than employers with a foreign owner. Total training expenditure per employee in domestic

[15] CZECH STATISTICAL OFFICE. Employee Training – 2020 (CVTS survey) [online]. Prague: Czech Statistical Office, 2023. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-zamestnancu-2020

companies amounted to just under CZK 1,800 in 2020; in foreign-controlled enterprises the amount exceeded CZK 3,300.

- Domestic enterprises are considerably more likely not to plan employee training. Only just under half (46%) of domestic employer's plan training for their employees in advance and only 17% of them create a written training plan for this purpose. By contrast, three quarters of enterprises with a foreign owner plan their employees' training in advance and 45% of them draw up a written training plan.
- In domestic enterprises there is a higher risk that no one bears responsibility for employee training. Two thirds of domestic companies stated that no unit or person has been assigned responsibility for employee training. Only one third of foreign-owned enterprises mentioned this option.
- Funds for employee training are included in the corporate budgets of companies with a foreign owner twice as often as in domestic companies: only 34% of domestic enterprises earmark funds for training, compared with 73% of foreign-controlled employers.
- Domestic enterprises are half as likely to have a written agreement with their professional or social partners covering the topic of training provision (7% of domestic enterprises, 13% of foreign-controlled enterprises).
- Domestic enterprises assess what skills their employees will need far less frequently. A third of domestic enterprises do not carry out such an assessment at all; for foreign-controlled enterprises the figure is 15%. Conversely, this assessment is carried out regularly by 18% of domestic companies but 42% of enterprises with a foreign owner.
- In domestic companies there is a smaller chance that an identified skills deficit will be addressed by training existing employees. Domestic employers choose this strategy of filling missing skills in half of cases, enterprises with a foreign owner in 73% of cases.
- Domestic enterprises evaluate the effectiveness of the training they have provided to employees far less often than enterprises with a foreign owner (42% and 71% of cases, respectively).

- In domestic enterprises, employees spend considerably less time on courses and training that are not required by law than in foreign-controlled enterprises. In domestic enterprises, workers spend only 0.2% of their working time on such courses; in companies with a foreign owner, this share is more than double (0.41%, expressed as % of employees' working time across all enterprises).

Inequalities by sector

An analysis of Czech employers' responses in the Continuing Vocational Training Survey (CVTS)[16] from 2020, broken down by the sections of the economy in which the surveyed enterprises operate, yields the following findings:

- Employees of enterprises operating in the "Financial and insurance activities" and "Information and communication" sectors have the greatest chance of taking part in training. These companies provide non-mandatory employee training in 85% (and 84%) of cases, respectively. By contrast, enterprises in the "Arts, entertainment and recreation" sector provide employee training in only 39% of cases, and in the "Accommodation and food service activities" sector in 30%.
- Enterprises in different sectors of the economy differ markedly in total training expenditure per employee. The differences across sectors can even amount to multiples. While enterprises in the "Financial and insurance activities" sector spent almost CZK 8,300 per worker, and those in the "Information and communication" sector CZK 6,440, at the bottom of the ranking were the "Arts, entertainment and recreation" sector (CZK 1,009) and, above all, "Accommodation and food service activities": with CZK 357, it spent on average 23 times less than enterprises in the "Financial and insurance activities" sector.
- Once again, enterprises in the "Financial and insurance activities" and "Information and communication" sectors are best at planning employee training. They plan these activities in advance in 73% and 64% of cases, respectively, and they also create written training

[16] CZECH STATISTICAL OFFICE. Employee Training – 2020 (CVTS survey) [online]. Prague: Czech Statistical Office, 2023. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-zamestnancu-2020

plans most frequently of all sectors: 39% of enterprises in the "Financial and insurance activities" sector and 31% of companies engaged in information and communication activities. Employee training is planned in advance least often by enterprises in the "Accommodation and food service activities" sector (39%) and by enterprises focused on real estate and administrative activities (37%). Written training plans are least common among employers in the arts, entertainment and recreation sector – only one enterprise in twenty creates them.

- In enterprises in the "Financial and insurance activities" and "Information and communication" sectors, the situation where no unit or person is responsible for employee training occurs least often. It happens in only 37% and 45% of cases, respectively. By contrast, three out of four enterprises in the "Arts, entertainment and recreation" and "Accommodation and food service activities" sectors have no holder of responsibility for employee training.
- Funds for employee training are most frequently earmarked in the organisation's budget by enterprises in the "Financial and insurance activities" and "Information and communication" sectors (72% and 65%, respectively), and least frequently by employers in the "Accommodation and food service activities" sector (19%).
- Enterprises in the "Financial and insurance activities" sector most frequently have written agreements between the enterprise and its professional or social partners covering the topic of training provision (14%). This is followed by the "Industry" sector with 10%. Such agreements are least common among enterprises in the "Accommodation and food service activities" sector (only every 20th enterprise) and "Arts, entertainment and recreation" (only every 25th enterprise).
- Employers in the "Financial and insurance activities" and "Information and communication" sectors also come out best in comparison with other sectors in terms of assessing future skills needs. Such an evaluation is carried out by 87% of enterprises in the first-mentioned sector and 86% in the second. The assessment of what skills their employees will need is carried out least frequently by enterprises in the "Real estate and

administrative activities", "Transportation and storage" and "Accommodation and food service activities" sectors (58% of organisations in each case).

- Workers in the "Financial and insurance activities" sector have the greatest chance that an identified skills deficit will be addressed by training existing employees (this option for addressing skills deficits was chosen by 81% of companies in the sector), followed by "Information and communication" (77%); by contrast, this solution is least likely among enterprises in accommodation and food services (26%).
- The effectiveness of employee training provided is most frequently evaluated by enterprises in the "Financial and insurance activities" (70% of companies in the sector) and "Information and communication" (65%) sectors; by contrast, in the "Transportation and storage" and "Accommodation and food service activities" sectors, only a third of companies monitor training effectiveness.
- The highest share of paid working time devoted to participation in legally mandated courses/training was identified in the "Construction" sector (0.39%), whereas the lowest was recorded in the "Financial and insurance activities" sector (0.14%). The latter, however, was characterised by the highest share of paid working time devoted to participation in non-mandatory courses/training (1.15%).[17]

SUMMARY:

Inequalities in corporate training can be delineated along at least three dividing lines: enterprise size, ownership and the sector in which the enterprise operates.

In large companies, non-mandatory training is almost a certainty (93%), whereas in the smallest ones fewer than half of employees receive such training (45%). The difference is also reflected in the range of forms offered: in enterprises with up to 19 workers, non-mandatory courses and training appear in only a third of companies, in enterprises with over 250 employees in almost nine out of ten. Large enterprises also invest more in training, plan it better, have clear

[17] CZECH STATISTICAL OFFICE. Employee Training – 2020 (CVTS survey) [online]. Prague: Czech Statistical Office, 2023. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-zamestnancu-2020

responsibility for it and earmark a budget. They are also more likely to assess skills needs and training effectiveness, and more often choose training existing employees as a tool for addressing skills deficits. Employees of large enterprises also spend more time on non-mandatory courses (0.39% vs 0.16% of working time in the smallest companies).

The second dividing line is ownership. Foreign-controlled enterprises provide non-mandatory training considerably more often than domestic companies, make greater use of courses/training and e-learning, and invest twice as much (over CZK 3,300 vs just under CZK 1,800 per employee). They plan training better (75% vs 46% plan in advance, 45% vs 17% have written training plans), more often have a responsible person or unit and a separate training budget. Domestic companies also monitor future skills needs less (a third do not assess them at all, compared with 15% of foreign-owned ones) and less often choose training existing employees as a strategy for filling missing skills (50% vs 73%). Time devoted to non-mandatory courses is half as long in domestic enterprises as in foreign-owned companies.

There are also marked differences between sectors. "Financial and insurance activities" and "Information and communication" are among the leaders: they provide training in roughly 85% of cases, invest the most (approx. CZK 8,300 and CZK 6,440 per employee), and systematically plan and evaluate the effect of training. They also most frequently address skills shortages by developing current employees. At the opposite pole are "Accommodation and food service activities" and the cultural sector, with the lowest offer and investment (up to 23× less than the finance/insurance sector) and weak training management. The only exception is the higher share of mandatory training in construction.

Overall, then, access to training is uneven and mirrors companies' resources, planning capacity and institutional infrastructure: the larger, more foreign-owned and more knowledge-intensive the organisation, the broader and more systematic the training offer – and the better the employees' chances to learn and grow professionally.

4.2 Barriers to employee training from the employers' perspective

The Continuing Vocational Training Survey (CVTS)[18] shows that there are two lines of barriers to the provision of employee training on the enterprises' side. The first is a typology of limitations and obstacles occurring in enterprises that do provide employee training. The second concerns barriers on the side of enterprises that do not provide employee training at all. In the following text, these situations are described separately. Only barriers relevant to the present are analysed, i.e. excluding limits associated with COVID-19 (the survey took place in the pandemic year 2020).

Limitations and obstacles in enterprises providing employee training

As already mentioned above, in 2020 any form of training was provided by 86% of employers, while non-mandatory training (not arising from legislative requirements) was provided by 57% of enterprises.

The positive news is that two thirds of enterprises providing employee training did not perceive any factors limiting training. However, the remaining third of employers do feel certain limitations:

- Of the options that enterprises providing training were given to choose from, a tenth stated that the enterprise's employees faced **a high workload and lack of time for training**.
- Seven per cent of enterprises providing training mentioned as a problem **an unsuitable training offer on the market**.
- Six per cent stated that **the enterprise had already placed great emphasis on employee training in the past few years**.
- A total of 4% of enterprises preferred, over providing training for existing employees, **recruiting new workers with the necessary qualifications, skills or abilities.**

[18] CZECH STATISTICAL OFFICE. Employee Training – 2020 (CVTS survey) [online]. Prague: Czech Statistical Office, 2023. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-zamestnancu-2020

- The same share of enterprises (4%) perceives as a barrier **the high costs associated with training**.
- A focus of the enterprise on **supporting initial vocational education** rather than on employee training was cited by 2% of enterprises providing training.
- According to just under 2% of enterprises, there was **a problem with identifying employees' training needs**.
- Over 11% of enterprises providing training mentioned that they had encountered **other obstacles** than the reasons for limiting training listed in the options.

More detailed information on the occurrence of factors limiting employee training in enterprises that provide training, including a breakdown of responses by enterprise category (size, ownership), is provided in the following table.

Table 9: Enterprises citing further factors limiting employee training, in total and by size and ownership (2020, as % of enterprises providing training)

	Total	By number of employees				Domestic vs foreign-controlled enterprises	
		10–19	20–49	50–249	250+	domestic	other
High employee workload and lack of time for training	**10,4**	9,1	8,9	13,3	19,8	9,5	14,6
Available training offers unsuitable for the enterprise	**7,0**	5,5	6,1	10,6	12,9	6,5	9,8
Great emphasis of the enterprise on employee training in previous years	**5,6**	4,4	4,4	8,3	13,2	4,7	9,9
Preference for recruiting new qualified or capable workers over providing training for existing employees	**4,3**	4,0	4,1	5,4	4,3	4,5	3,4
Excessively high costs of employee training	**4,0**	3,2	4,4	4,6	6,6	3,8	5,1
Focus on supporting initial vocational education rather than on employee training	**2,0**	1,8	1,7	2,7	3,5	2,0	2,3
Difficulties in identifying employees' training needs within the enterprise	**1,5**	1,3	1,5	1,6	2,3	1,6	1,0
Other reasons for limiting employee training	**11,4**	9,3	11,3	14,3	18,9	10,7	14,7
No further limitations (i.e. besides those associated with the COVID-19 epidemic)	**66,4**	70,1	68,6	58,7	49,1	67,7	59,8

Source: Czech Statistical Office, 2020

The table shows, among other things, that in enterprises providing employee training, limiting factors are perceived more often by large than small companies (51% vs 30%) and more often by enterprises with a foreign owner than by domestic employers (40% vs 32%).

The CVTS survey[19] also makes it possible to sort information on barriers to the provision of employee training in enterprises that do provide training by economic sector. These responses are summarised in the table below.

[19] CZECH STATISTICAL OFFICE. Employee Training – 2020 (CVTS survey) [online]. Prague: Czech Statistical Office, 2023. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-zamestnancu-2020

Table 10: Enterprises citing further factors limiting employee training, by sector (2020, as % of enterprises providing training)

	Information and commu-	Financial and insurance	Professional, scientific and technical activities	Accommodation and food service activities	Industry	Wholesale and retail trade; repair of vehicles	Real estate and administrative activities.	Construction	Transportation and storage	Arts, entertainment and recreation
High employee workload and lack of time for training	**17,4**	**17,5**	9,6	**6,0**	11,5	11,6	**5,6**	8,5	7,7	10,5
Available training offer**s** unsuitable for the enterprise	10,0	8,2	**11,3**	**2,8**	7,9	5,7	3,7	8,2	5,2	**2,9**
Great emphasis of the enterprise on employee training in previous years	7,9	**10,2**	6,6	6,1	6,9	5,7	3,0	3,6	2,3	**0,0**
Preference for recruiting new qualified or capable workers over providing training for existing employees	**6,8**	3,2	3,8	5,6	4,2	3,9	5,5	3,4	4,7	**2,7**
Excessively high costs of employee training	5,6	3,6	3,1	**7,7**	4,4	4,2	3,6	2,9	**1,7**	2,6
Focus on supporting initial vocational education rather than on employee training	**0,7**	**5,1**	2,9	3,5	2,5	1,5	**0,8**	1,4	1,7	2,2
Difficulties in identifying employees' training needs within the enterprise	2,6	1,8	1,3	**3,5**	1,3	1,6	2,6	**0,2**	0,9	2,4
Other reasons for limiting employee training	10,6	9,5	14,3	**17,2**	12,6	10,6	13,3	8,9	**4,3**	7,9
No further limitations (i.e. besides those associated with the COVID-19 epidemic)	**57,9**	59,1	61,2	61,2	63,7	66,2	71,7	72,9	77,3	**78,8**

Source: Czech Statistical Office, 2020

Employers' reasons for not providing employee training

The second line of barriers to employee training consists of factors explaining the complete absence of training provision. In 2020, a total of 14% of the companies surveyed did not provide any employee training. Of these:

- Half (53%) stated that employees' existing qualifications, skills and abilities matched the current needs of the enterprise

- 22% perceived the COVID-19 epidemic as an obstacle
- 4% cited as obstacles a preference for recruiting new workers over training existing employees, as well as employees' high workload and lack of time for training
- A total of 3% of enterprises not providing training considered the excessively high costs of employee training to be an obstacle
- 1% of enterprises each considered the following to be obstacles:
    - great emphasis of the enterprise on employee training in previous years
    - available training offer unsuitable for the enterprise
    - focus on supporting initial vocational education rather than on employee training
    - difficulties in identifying employees' training needs within the enterprise
- a total of 28% of enterprises not providing training gave "Other reasons for limiting employee training" as their answer.[20]

4.3 Inequalities on the Citizens' Side

Inequalities in adults' participation in non-formal education overall

An insight into the overall situation regarding adults' participation in education (with a focus on non-formal education) is provided by the results of the 2022 Adult Education Survey in the Czech Republic[21] – see chapter 3.2 of this study.

The following inequalities emerge from them:

[20] CZECH STATISTICAL OFFICE. Employee Training – 2020 (CVTS survey) [online]. Prague: Czech Statistical Office, 2023. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-zamestnancu-2020

[21] CZECH STATISTICAL OFFICE. Adult Education in the Czech Republic (AES survey) – 2022 [online]. Prague: Czech Statistical Office, 2024. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-dospelych-v-ceske-republice-setreni-aes-2022

- Non-formal education in the Czech Republic remains **markedly unevenly distributed across the social structure**. Participation is declared by 40% of adults, with work-related motives dominating.
- **Gender differences** lie not only in the rate of involvement in non-formal education (men 41%, women 38%), but also in the types of motivation: men more often fulfil a professional obligation, women more often have private reasons.
- **Age follows the typical working-life-cycle curve**: participation peaks in middle age (35–49: 49%), participation is relatively high in the 25–34 and 50–59 groups (45% in both cases), followed by a sharp decline after sixty. Among the youngest (18–24), work-related and private reasons are, moreover, balanced.
- There is a strong **educational gradient**: people with tertiary education participate twice as often as those with upper secondary education without maturita or lower (56% vs 28%), both for work-related and private reasons.
- Marked differences in participation can be observed by **economic status**: employees reach 54%, the self-employed only 35%, while the unemployed are almost absent (13%). Students over 18 participate more often for private reasons (24%).
- Also decisive is **household income**: from 23% in the poorest fifth of households to 55% in the richest quintile; work-related reasons for participation also rise with income, from 18% to 50%.
- **The spatial breakdown** points to higher participation among residents of the largest cities (45%) compared with smaller municipalities.

Inequalities in employees' participation in non-formal education

The 2022 Adult Education Survey in the Czech Republic[22] also offers a more detailed insight into the situation regarding participation in non-formal education for the sub-category of **employees**, i.e. an analysis of inequalities in this group according to various criteria:

- The participation rate **employees** in non-formal education in 2022 exceeded **54 %,** in the vast majority of cases this was non-formal education for work-related reasons (over 51%); 7% of employees took part in non-formal education for personal reasons.
- **Men** – male employees take part in non-formal education **very slightly more often** than female employees (55% vs just under 54%). A larger difference can be identified for work-related reasons for non-formal education (men 53%, women 49%); conversely, female employees participate in non-formal education for private reasons more often (9%) than employed men (5%).
- **The lowest level of participation** in non-formal education is shown by employees **with upper secondary education without maturita** or lower (just under 44%); among employees with maturita it stands at 57%, and among employees with post-secondary and tertiary education, participation in non-formal education reaches 68%.
- A similar trend also applies to the breakdown **by reason for participation** according to **educational attainment**. Employees with the lowest educational attainment take part in non-formal education for **work-related reasons** in 42% of cases, employees with tertiary education in more than 63%. The same is true of non-formal education for private reasons (just under 3% for employees with the lowest level of education, over 14% for those with the highest).
- Employees of **the smallest companies** with up to 9 employees take part in non-formal education **the least** compared with larger enterprises (45% in total, 41% for work-related reasons); by contrast, employees of the largest organisations with 250 or more employees show a participation rate of 59% (57% for work-related reasons).

[22] CZECH STATISTICAL OFFICE. Adult Education in the Czech Republic (AES survey) – 2022 [online]. Prague: Czech Statistical Office, 2024. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-dospelych-v-ceske-republice-setreni-aes-2022

- The vast majority of non-formal education in which employees took part for work-related reasons took place **entirely or mostly during working hours** and was also at least **partly paid for by the employer**. In 2022, over 51% of employees took part in non-formal education for work-related reasons. A total of 48% of employees took part in this education only (mostly) during working hours, and just under 51% had their education at least partly paid for by the employer.[23]

Based on the above findings, the following **inequalities in employees' access to non-formal education**:

- Among employees, **non-formal education** behaves **as part of the work regime**: professional motivation prevails, participation often takes place in paid working time and is at least partly paid for by the employer. This institutional support makes non-formal learning a benefit tied to one's position in the organisation, not a universally accessible resource.
- Overall, more than half of employees take part, with **men participating somewhat more often** – mainly through job-oriented activities – while women more often choose non-formal learning outside the work framework. These differences show that gender-conditioned pathways of access to non-formal education are reproduced even within the employee population: those more connected to work-related courses are advantaged in terms of time and money, while those learning privately usually have to find space outside the work regime.
- **The most pronounced dividing line is educational attainment**. Employees without maturita take part in non-formal education little, and their learning is almost exclusively functional, tied to work. Among employees with maturita, participation already rises, and with tertiary education it becomes almost the norm, including space for interest-based motives.

[23] CZECH STATISTICAL OFFICE. Adult Education in the Czech Republic (AES survey) – 2022 [online]. Prague: Czech Statistical Office, 2024. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-dospelych-v-ceske-republice-setreni-aes-2022

- Another line of inequality is **employer size.** In the smallest companies participation is lowest and purely operational learning prevails; in large organisations participation is highest. Employees in larger companies and with higher education accumulate competences and certificates, while workers in small enterprises and with lower qualifications face the reality of less frequent opportunities and less institutional support.

Further useful information is also offered by more detailed data on the participation of the category of **the employed**. Here, however, it should be emphasised that the "employed" category includes the subcategories **"employees" and "the self-employed"** and the data must be interpreted with this in mind.

The detailed data on the participation of the employed in non-formal education (with an emphasis on work-related reasons for participation) yield the following findings:

- The highest rate of participation in non-formal education for work-related reasons **by sector of the economy** (CZ-NACE) in which the respondents' enterprise operates is shown by "Financial and insurance activities" with 78%; this is followed by the sectors "Electricity, gas, steam and air conditioning supply" (62%), "Public administration and defence; compulsory social security" (59%) and "Information and communication" (57%).
- By contrast, workers in the "Accommodation and food service activities" (31%), "Construction" (35%) and "Administrative and support service activities" (37%) sectors are relatively the least involved in non-formal education for work-related reasons.

Table 11: Participation of the employed in non-formal education by economic activity of the enterprise (%, 2022)

Section of economic activity (CZ-NACE)	Participated in non-formal education		
	total	For work-related reasons	For private reasons
A Agriculture	42,4	40,1	:
B Mining and quarrying	47,2	47,2	:
C Manufacturing	51,2	48,4	5,8
D Electricity, gas, steam and air conditioning supply	71,9	62,4	:
E Water supply; sewerage, waste management and remediation activities	42,4	42,4	:
F Construction	37,8	34,6	:
G Wholesale and retail trade; repair and maintenance of motor vehicles	44,5	41,8	5,7
H Transportation and storage	55,5	54,2	:
I Accommodation and food service activities	34,9	31,0	:
J Information and communication	63,6	57,0	14,4
K Financial and insurance activities	81,3	77,9	:
L Real estate activities	62,1	54,8	:
M Professional, scientific and technical activities	52,0	45,3	11,6
N Administrative and support service activities	41,0	37,1	:
O Public administration and defence; compulsory social security	61,9	59,3	7,7
P Education	61,1	56,4	11,4
Q Human health and social work activities	55,4	53,4	8,0
R Arts, entertainment and recreation	47,2	42,3	:
S Other service activities	52,0	45,7	:

Source: Czech Statistical Office (AES, 2022)

*Notes: * = low reliability, : = insufficient number of observations*

- Of the individual categories by **major classes of the classification of occupations (CZ-ISCO)**, "Professionals" with 59% and "Technicians and associate professionals" (58%) are the most involved in non-formal education for work-related reasons. Participation above one half is also shown by the categories "Clerical support workers" (54%) and "Legislators and managers" with 52%.

- By contrast, the lowest participation is among workers in the category "Skilled agricultural, forestry and fishery workers" (only a one-third participation rate) and especially "Elementary occupations", where the participation rate reached only 28%.
- **The average number of hours of non-formal education for work-related reasons per employed person** (regardless of their participation in non-formal education) reached almost 11 hours in 2022.
- The averages for men and women were very similar (men 11 hours, women 10.5 hours).
- The average number of hours of non-formal education for work-related reasons declined with **workers' age**. In the 25–34 age category it was 13.5 hours, in the 35–49 category the average reached 11.6 hours, among 50–59-year-olds it fell further to 8.6 hours, and in the 60+ age group it was only 7.4 hours.
- **The lowest average number of hours** of non-formal education for work-related reasons was recorded among workers with upper secondary education **without maturita or lower**, who spent 5.3 hours on job-related learning. For workers with maturita it was double (10.6 hours) and for workers with post-secondary and university education even quadruple (almost 20 hours).
- **The lowest** average number of hours of non-formal education for work-related reasons per employed person per year was identified among people working in **the smallest companies** with up to 9 employees (just under 8 hours). In organisations with 10–19 employees the average already exceeded 10 hours, and in the largest organisations with 250 or more employees it reached almost 13 hours[24].

Based on the facts described above, **further dimensions of inequality** in access **the employed** to non-formal education can be delineated:

- Among the employed, non-formal education is unevenly distributed according to **sector and the institutional culture of work.** In sectors with high regulation and knowledge

[24] CZECH STATISTICAL OFFICE. Adult Education in the Czech Republic (AES survey) – 2022 [online]. Prague: Czech Statistical Office, 2024. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-dospelych-v-ceske-republice-setreni-aes-2022

intensity – finance, energy, public administration or IT – job-related non-formal education is provided considerably more often than in sectors such as accommodation and food services, construction or administrative services, where participation is noticeably lower.

- **A steep social gradient also appears across occupations**. Professionals and technicians and associate professionals learn frequently and systematically; clerical workers and managerial occupations follow close behind. At the opposite end are agricultural occupations and especially elementary and unskilled work, where job-related learning takes place sporadically and is mostly of an instructional, short-term nature. This hierarchy mirrors the division of knowledge work and access to corporate programmes.
- Inequalities concern not only who takes part, but also how much time and support they receive. Average time per employee is concentrated **in younger age groups** and **declines with age**; the early and middle career phases are thus the most investment intensive.
- **Education creates a cumulative advantage**: among workers without maturita, participation is low; with maturita, the volume of job-related non-formal learning increases markedly; and with tertiary education it expands further several times over.
- **Company size adds another layer**: the smallest enterprises provide the shortest instruction, while large organisations are able to offer a greater range of job-related learning activities.
- Gender plays no role in total time; what matters above all is the type of work, the sector and the institutional infrastructure.

4.4 Barriers to Education from the Citizens' Perspective

The Adult Education Survey in the Czech Republic (AES, 2022)[25] also analysed interest in participating in education by various socio-economic categories and identified the reasons why adult Czech citizens (aged 18–69) did not take part in any education. It also examined the reasons why people who did participate in education did not do so to a greater extent.[26]

Interest in participating in adult education

- The survey showed that **formal or non-formal education** was in 2022 **attended by 45 %** of Czech citizens aged 18–69.
- Education was **not taken up by 55%** of people in the given age range.
- Just under 6% of people involved in education wanted to participate to a greater extent than they did. Just under 40% did not want to participate in education to a greater extent.
- The vast majority of people who took part in neither formal nor non-formal education did not even **want** to take part in it. Only 3% of survey participants who did not learn stated that they had wanted to take part in education; the remaining 52% stated that they had no interest in participating.
- Among participants, involvement is slightly higher among **men** (47%) than women (44%), but women more often state that they would like to participate more (6% vs 5%). In the non-participant population, the share of women is marginally higher (56% of women vs 53% of men in "non-participation"); at the same time, women more often declare a willingness to take up education (5% of women vs 2% of men). This picture indicates **a latently higher demand for education among women**, even though their current involvement lags slightly behind.

[25] CZECH STATISTICAL OFFICE. Adult Education in the Czech Republic (AES survey) – 2022 [online]. Prague: Czech Statistical Office, 2024. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-dospelych-v-ceske-republice-setreni-aes-2022

[26] Methodological note: in this chapter the data concern adults' involvement in education in general, i.e. in both formal and non-formal education.

- Participation in education shows a marked association with **age**. Among participants, the 18–24 group dominates (81%) due to this group's intensive involvement in formal education, whereas among 60–69-year-olds involvement is considerably lower (17%). Additional demand for "even higher participation" is reported more often by younger and middle age groups (over 6% among 25–34-year-olds and 7% among 35–49-year-olds), while among 60–69-year-olds it is low (2%).

  Conversely, among non-participants the age profile is inverted: the 60–69 group consists mostly of non-participants (83%), whereas non-participants represent only a minority of the 18–24 category (19%). The willingness to "start participating" is most pronounced among non-participants aged 25–34 (5%) and relatively low among older people (e.g. 3% among 50–59-year-olds).
- Among adult participants in education, **the higher the education, the more frequent the involvement**: among people with tertiary education the participation rate is 58%, among those with maturita 46%, and among people with upper secondary education without maturita or lower it is 29%. Interest in "participating more" is also strongest among the most highly educated (12%) and lowest in the group without maturita (2%).

  Mirroring this, **among non-participants, non-participation falls as education rises** among people with upper secondary education without maturita or lower, the non-participation rate was 71%, among those with maturita 54%, and among people with university/post-secondary education only 42%. Among non-participants, the willingness to start learning is at the same time slightly higher among adults with tertiary education (5%) than in the lowest educational group (2%), which also illustrates differences in "aspirations" across educational categories.
- Among participants, more than half of the employed take part in education (52%), with employees achieving higher participation (55%) than the self-employed (36%). Students over 18 are fully involved given their student status; participation is low among the unemployed (17%) and among people on parental leave/homemakers (18%). Interest in "learning more" is evident among employees (7%), the self-employed (6%) and students (8%).

- In the non-participant population, by contrast, non-participation is pronounced among the unemployed (83%) and among people on parental leave/homemakers (82%), while among the employed the share of non-participants is lower (48%; of which employees 45% and the self-employed 64%). The willingness of non-participants to "start" is relatively highest precisely where non-participation is greatest: the unemployed 12% and parental leave/homemakers 12%, whereas among employees it is lower (2%).
- **Among participants, involvement rises with income**: from 32% in the lowest-income fifth (quintile) of households to 58% in the highest-income fifth of households; the wish to "participate more" is also stronger among the highest incomes (9%) than the lowest (4%).

  Among non-participants the picture is the opposite: non-participation is highest, at 69%, in the lowest-income fifth of households, and as income rises the rate of non-participation in education falls to 42%. The willingness of non-participants to start learning is relatively balanced, but slightly higher in the lower part of the distribution (5% in the lowest-income quintile vs 3% in the richest fifth of households), which may indicate the existence of barriers in accessibility rather than in motivation.
- Among education participants, **the share of those involved is higher in large cities** with 50 thousand or more inhabitants (51%) than in small municipalities with up to 2,000 inhabitants (42%). The willingness to "participate more" is also more typical of residents of larger cities: 8% in large cities vs 4% in the smallest municipalities.

  Among non-participants, by contrast, non-participation is higher in smaller settlements (58% in municipalities with up to 2,000 inhabitants) and lower in large cities (49%). Non-participants' interest in starting to learn is again greatest in large cities (4%) and weakest in the smallest municipalities (2%), suggesting the role of the education offer and infrastructure in cities.

The following two tables provide complete data on interest in participating in formal or non-formal education.

Table 12 presents data on adults involved in education and Table 13 on people who did not take part in education[27].

[27] CZECH STATISTICAL OFFICE. Adult Education in the Czech Republic (AES survey) – 2022 [online]. Prague: Czech Statistical Office, 2024. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-dospelych-v-ceske-republice-setreni-aes-2022

Table 12: Interest in participating in formal or non-formal education – adults aged 18–69 involved in education (%, 2022)

	Participated in formal or non-formal education		
	Total	Wanted to participate more	Did not want to participate more
Total 18–69 years	*45,3*	*5,6*	*39,8*
Gender			
Men	46,6	4,8	41,8
Women	44,0	6,4	37,7
Age group			
18–24 years	80,7	7,3	73,4
25–34 years	48,0	6,4	41,6
35–49 years	49,5	7,3	42,2
50–59 years	44,6	4,3	40,3
60–69 years	17,3	2,0	15,3
Educational attainment (25–69)			
upper secondary without maturita and lower	28,6	2,2	26,4
upper secondary with maturita	45,6	5,0	40,5
post-secondary and tertiary	57,9	11,5	46,4
Economic status			
employed	52,1	6,5	45,6
employees	55,3	6,6	48,7
self-employed	35,7	5,8	29,9
unemployed	17,2	:	:
students (over 18)	100,0	*8,0	92,0
on parental leave / homemakers	18,1	*4,5	13,6
Household income			
1st quintile (lowest)	31,5	3,5	28,0
2nd quintile	36,7	4,2	32,5
3rd quintile	48,4	5,3	43,0
4th quintile	51,7	5,4	46,3
5th quintile (highest)	58,3	9,3	49,0
Municipality size (population)			
less than 2,000	41,9	4,0	37,9
2 000–9 999	44,9	5,4	39,5
10 000–49 999	42,7	5,1	37,5
50,000 and more	51,1	7,6	43,5

*Source: Czech Statistical Office (AES, 2022). Notes: * = low reliability,: = insufficient number of observations*

Table 13: Interest in participating in formal or non-formal education – adults aged 18–69 not involved in education (%, 2022)

	Did not participate in formal or non-formal education		
	Total	Wanted to participate	Did not want to participate
Total 18–69 years	*54,7*	*3,2*	*51,5*
Gender			
Men	53,4	1,9	51,5
Women	56,0	4,5	51,4
Age group			
18–24 years	19,3	:	:
25–34 years	52,0	4,9	47,1
35–49 years	50,5	3,5	47,0
50–59 years	55,4	2,6	52,8
60–69 years	82,7	2,8	79,9
Educational attainment (25–69)			
upper secondary without maturita and lower	71,4	2,4	69,0
upper secondary with maturita	54,4	3,8	50,6
post-secondary and tertiary	42,1	4,8	37,3
Economic status			
employed	47,9	2,6	45,3
employees	44,7	2,3	42,4
self-employed	64,3	4,1	60,1
unemployed	82,8	*11,5	71,4
students (over 18)	0,0	0,0	0,0
on parental leave / homemakers	81,9	11,8	70,1
Household income			
1st quintile (lowest)	68,5	4,8	63,7
2nd quintile	63,3	3,3	60,0
3rd quintile	51,6	2,7	49,0
4th quintile	48,3	*2,2	46,1
5th quintile (highest)	41,7	3,1	38,6
Municipality size (population)			
less than 2,000	58,1	2,4	55,7
2 000–9 999	55,1	3,3	51,8
10 000–49 999	57,3	3,1	54,2
50,000 and more	48,9	4,0	44,9

*Source: Czech Statistical Office (AES, 2022). Notes: * = low reliability,: = insufficient number of observations*

The most common reasons why adults in the Czech Republic did not take part in any education

The most common reason why adults aged 18–69 did not take part in any educational activity in 2022 was **the absence of a need to learn.** This was how 82% of them justified their absence from education.

This is followed by **family responsibilities** and **health or age-related reasons** (4% each).

Lack of time, or **unsuitable timing of education** was mentioned by over 3% of non-participants.

The price of education was mentioned only exceptionally (1%).

A more detailed analysis of the reasons for non-involvement in education by individual socio-economic categories yields the following insights:

- **Men more often than women** say they did not need education (87% vs 77%). Conversely, family responsibilities constrain mainly women (7% of women vs 1% of men). Lack of time or unsuitable timing of education is acknowledged similarly by men and women (3–4%). Price is cited by a few per cent (men 1%, women 2%) and health or age-related reasons hover around 4% for both genders.
- With **age**, the share of those who feel no need for further education rises: from 74–80% among younger and middle age groups up to 88% among 60–69-year-olds. Lack of time or unsuitable timing of education troubles mainly 25–34-year-olds (7%) and 35–49-year-olds (4%), while family responsibilities peak among people aged 25–34 (9%) and 35–49 (5%).

  Health or age begins to play a role in later middle age (5% among 50–59-year-olds) and is most common in the older cohort (6% among 60–69-year-olds).
- With rising **educational attainment**, the conviction that education is not needed falls markedly: from 86% among people with upper secondary education without maturita or lower to 69% among people with tertiary education. Conversely, the importance of time-related and family reasons grows (9% each) precisely among university graduates, which

can be read as a manifestation of the difficulties of combining work and family responsibilities rather than an absence of motivation.

Health/age is mentioned by 3–4% of respondents across educational groups.

- Findings by categories of **economic status**: Among the employed, the reason "did not need education" prevails (85%), with employees citing it slightly more often (86%) than the self-employed (82%).

  Lack of time/unsuitable timing is mentioned more often by the self-employed (5%) and employees (4%) than by other groups; family responsibilities in the working population are around 2%.

  Price and health/age appear as reasons among the employed rather exceptionally (around 2%). The unemployed most often invoke the absence of a need to learn (68%). Among people on parental leave/homemakers, "no need" is relatively lowest (57%), but family responsibilities stand out markedly (24%) and time-related reasons are also mentioned more often than average (7%). For students over 18, values are not reported: they do not figure in the non-participant population.
- Respondents from the fifth (quintile) of households with the lowest **incomes** cite no need at 77%, and family responsibilities (6%) and health/age (6%) are voiced more often than elsewhere.

  As income rises, the share of "no need" tends to rise up to 86% in the 4th quintile, but in the highest quintile it falls distinctly to 79% – and here the time barrier (6%) emerges as the relatively most frequent reason across income groups.
- In the smallest **municipalities**, "no need" is declared most often (85% in municipalities with up to 2,000 inhabitants), while in large cities it falls to 74%.

  By contrast, time-related reasons and family responsibilities are most pronounced in cities of 50,000+ (6% and 5%), as is price (2%), which may reflect a faster pace of work as well as a broader but more demanding range of activities.

Health/age limits remain stable at around 3–5% across settlement types.[28]

SUMMARY

The dominant reason for non-participation across the population is a low subjective need for further education. Barriers often have a socio-structural character: for parents and carers it is family responsibilities, for older people health or age. In large cities, time and organisational constraints accumulate; in smaller settlements, the feeling that education is unnecessary dominates. This may reflect a narrower offer or a lower perceived usefulness of courses. For practice, this implies different types of intervention: motivational and information campaigns in environments with a strongly perceived lack of need for adult education, time- and logistically flexible forms of education (online, micro-courses) for workers and parents, and forms of learning adapted to the specific needs of older adults.

[28] CZECH STATISTICAL OFFICE. Adult Education in the Czech Republic (AES survey) – 2022 [online]. Prague: Czech Statistical Office, 2024. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-dospelych-v-ceske-republice-setreni-aes-2022

Table 14: The most common reasons for non-participation in education – adults aged 18–69 not involved in education (%, 2022)

	Did not need education	Little time, unsuitable timing	Family responsibilities	Price	Health or age
Total 18–69 years	*81,7*	*3,4*	*3,8*	*1,5*	*3,8*
Gender					
Men	86,6	3,1	1,0	0,9	3,6
Women	76,9	3,7	6,5	1,9	4,0
Age group					
18–24 years	79,7	:	:	:	:
25–34 years	73,6	6,6	8,5	:	:
35–49 years	78,9	4,3	5,2	2,1	2,6
50–59 years	84,5	3,0	:	:	4,7
60–69 years	87,7	:	0,9	:	5,9
Educational attainment (25–69)					
upper secondary without maturita and lower	86,1	1,5	1,8	1,5	4,4
upper secondary with maturita	81,6	3,9	4,0	:	3,5
post-secondary and tertiary	68,6	8,5	9,3	:	2,7
Economic status					
employed	84,6	4,2	2,2	1,5	1,6
employees	85,7	3,9	1,9	1,4	1,7
self-employed	81,6	5,1	3,3	:	:
unemployed	68,4	:	:	:	:
students (over 18)	x	x	x	x	x
on parental leave / homemakers	57,3	7,0	23,9	:	:
Household income					
1st quintile (lowest)	77,4	2,8	6,0	2,4	5,9
2nd quintile	82,6	3,3	3,6	1,8	3,8
3rd quintile	84,1	3,1	2,8	:	3,6
4th quintile	86,4	2,8	2,8	:	2,3
5th quintile (highest)	79,0	5,5	2,8	:	2,5
Municipality size (population)					
less than 2,000	85,4	2,5	3,5	:	3,1
2 000–9 999	83,3	2,7	3,7	:	3,5
10 000–49 999	83,3	2,8	2,5	:	4,3
50,000 and more	74,3	5,5	5,3	2,3	4,5

*Source: Czech Statistical Office (AES, 2022). Notes: * = low reliability,: = insufficient number of observations*

The most common reasons why education participants did not learn more

The most common reason why adults aged 18–69 did not take part in education to a greater extent than they did was the absence of a need to learn more. This reason was given by 69% of them. Over 10% cited lack of time or unsuitable timing of training. The price of education was cited as a reason by just under 4% of participants. The obstacle of family responsibilities was mentioned by 3%. Only 1% mentioned health or age-related reasons.

A more detailed analysis of the reasons for not engaging in education to a greater extent than completed, by individual socio-economic categories, yields the following insights:

- **Men** more often than **women** state that they did not need to learn more (73% vs 65%), while the time barrier is slightly more common among women (11% of women vs 9% of men). Family responsibilities are mentioned by women in roughly 5% of cases, by men in approximately 2%; price is cited by 4% of women and 3% of men; health/age hovers around 1% in both groups.
- With **age,** the share of those who feel no need for further (greater) involvement rises: from 63% among 18–24-year-olds to 78% among both 50–59 and 60–69-year-olds. The frequency of time-related reasons peaks among 25–34-year-olds (14%), while among 50–59-year-olds it falls to 7%. The obstacle of family responsibilities is most pronounced in the 25–34 and 35–49 age categories (5% each), while price is most frequent among 18–24-year-olds (8%). Health/age begins to play a role in middle to older age (3% among 50–59-year-olds, 6% among 60–69-year-olds).
- With rising **educational attainment**, the conviction that there is "no need" to learn more falls: this view was held by 82% of people with upper secondary education without maturita or lower, 73% of those with maturita and 58% of university graduates. Conversely, the time barrier is highest among university graduates (15%), as are family responsibilities (7%), which may reflect the strained work and family constellation among more educated

groups. Price plays a smaller role as a barrier (3% for lower and upper secondary education; 2% for post-secondary/university), and health/age reasons remain low (1–2%)

- In terms of **economic status** of respondents, it turns out that among the employed, the absence of a need to learn more prevails (72%). Time-related reasons were cited by the employed in 10% of cases and family responsibilities in 3%, the same as for price. Health/age reasons were mentioned by only 1% of the employed. The unemployed mention no need for a greater extent of education in 56% of cases. People on parental leave/homemakers mentioned no need for a greater extent of education least often – in 46% of cases.
- Respondents belonging to **the income-**richest fifth (quintile) of households mentioned no need for a greater extent of education relatively least often (62%), but on the other hand most frequently (almost 15%) cited time-related reasons. Family responsibilities remain around 3–5%, price is felt more in the lower part of the distribution (8% in the lowest-income fifth of households) and weakens as income rises.
- In the largest **cities** of over fifty thousand inhabitants, the feeling that a greater extent of education is unnecessary is lowest (65%), but at the same time the time barrier is highest here (14%). In smaller municipalities, "no need" is mentioned more often (71–72%), and the frequency of time-related reasons hovers around 9%. For family reasons, municipality size matters little: this reason is mentioned by 3–4%, the same as for the price of education.[29]

SUMMARY

The main "brake" on further (greater) participation among those already involved is the feeling that it is not needed; alongside this, among more educated, higher-income and urban groups, time and, to some extent, family responsibilities gain in importance, while price plays a greater

[29] CZECH STATISTICAL OFFICE. Adult Education in the Czech Republic (AES survey) – 2022 [online]. Prague: Czech Statistical Office, 2024. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-dospelych-v-ceske-republice-setreni-aes-2022

role among the young and people with the lowest incomes. This suggests two types of possible intervention: working with the perceived usefulness and goals of learning (especially among groups with a strongly perceived "lack of need" for further learning) and, at the same time, increasing the flexibility and accessibility of forms of adult education (micro-courses, asynchronous online, modular offer) for groups limited by time and care responsibilities.

Detailed results on the reasons for not engaging in education to a greater extent than completed, by individual socio-economic categories, are provided in the following table.

Table 15: The most common reasons why education participants did not learn more (%, 2022)

	Did not need to learn more	Little time, unsuitable timing	Family responsibilities	Price	Health or age
Total 18–69 years	*69,2*	*10,4*	*3,3*	*3,5*	*1,3*
Gender					
Men	73,1	9,4	1,8	2,8	1,2
Women	65,1	11,4	4,9	4,3	1,4
Age group					
18–24 years	63,1	11,6	:	7,9	:
25–34 years	67,1	13,5	4,6	:	:
35–49 years	67,4	11,6	5,3	2,8	:
50–59 years	77,5	6,6	:	:	2,6
60–69 years	77,5	:	:	:	5,7
Educational attainment (25–69)					
upper secondary without maturita and lower	81,6	5,2	:	2,6	1,6
upper secondary with maturita	72,9	9,5	3,0	2,7	1,2
post-secondary and tertiary	58,1	15,2	6,7	2,3	:
Economic status					
employed	71,5	10,1	3,1	2,5	1,1
employees	72,1	9,9	3,0	2,3	1,1
self-employed	66,6	11,3	:	:	:
unemployed	56,1	:	:	:	:
students (over 18)	61,9	12,8	:	8,3	:
on parental leave / homemakers	46,1	:	:	:	:
Household income					
1st quintile (lowest)	67,0	10,4	3,0	7,8	:
2nd quintile	69,4	8,9	4,0	5,0	:
3rd quintile	75,4	7,6	4,5	3,4	:
4th quintile	72,1	9,3	:	:	:
5th quintile (highest)	62,7	14,6	3,6	:	:
Municipality size (population)					
less than 2,000	71,0	8,8	3,3	3,2	2,1
2 000–9 999	72,1	8,5	3,0	2,9	:
10 000–49 999	70,5	8,7	3,0	3,5	:
50,000 and more	65,0	14,1	3,8	4,2	:

*Source: Czech Statistical Office (AES, 2022). Notes: * = low reliability, : = insufficient number of observations*

5. AI and Digitalisation: Impact on Employee Training

Employee training has been undergoing a fundamental transformation in recent years, related on the one hand to the ongoing digitalisation of work and on the other to the rapid spread of **artificial intelligence (AI) tools – including generative AI**. These technologies are changing not only **what** employees learn (content and skills), but also **how** they learn (methods, accessibility, individualisation and the organisation of development). At the same time, it is becoming increasingly clear that the benefits of digital transformation are not distributed evenly. New types of inequality are emerging, and existing differences may deepen if the introduction of AI and digitalisation is accompanied by insufficient support, missing infrastructure or selective access to skills development.

From the perspective of macro-trends, it is important that technological development itself increases the pressure for retraining and the continuous updating of skills. Artificial intelligence is not merely a "tool for education", but also a factor that accelerates the transformation of qualification requirements and thereby increases the importance of lifelong learning.

5.1 Use of AI in Czech and European Companies

With the spread of generative artificial intelligence in 2022, artificial intelligence (AI) technology has become much more accessible than in the past, and under its influence corporate processes are changing significantly. In the corporate sphere, the advent of AI is leading to changes in the organisation of production and the management of employees, and influences decisions taken and the direction of innovation. The extent and manner of AI use in enterprises varies depending on their size and the sector in which they operate.

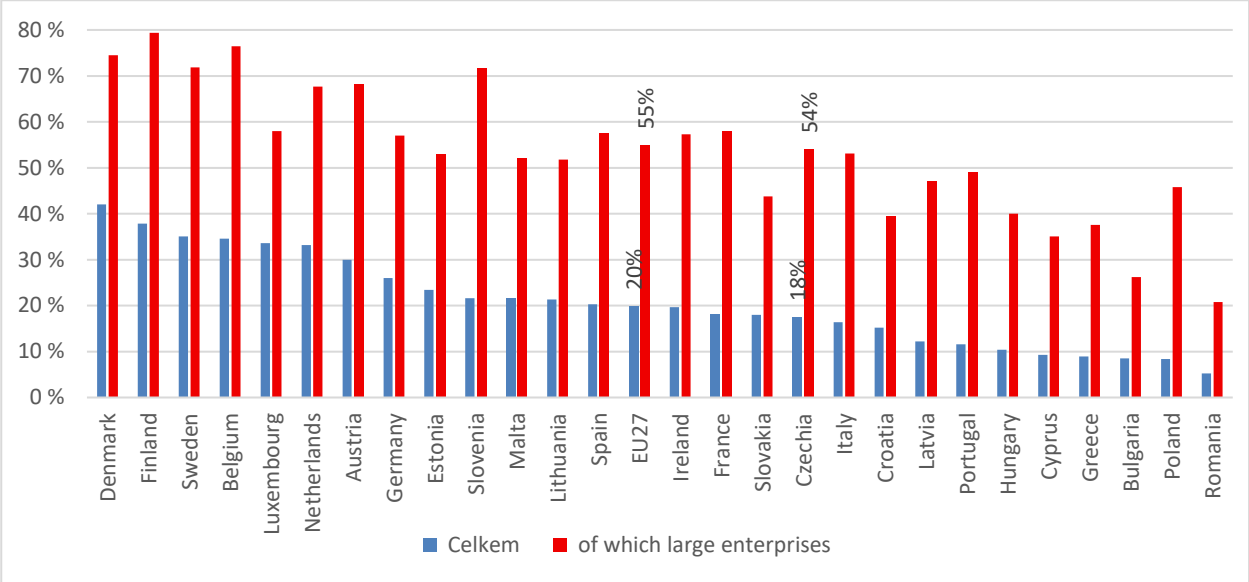
According to the findings of the European statistical office (Eurostat) on the use of ICT in enterprises[30], in 2025 artificial intelligence was used by **17.6% of Czech enterprises** with 10 or more employees, which places the Czech Republic **below the average of European Union countries**. The EU average reached **20 %,** i.e. 2.4 percentage points more than in the Czech Republic. Enterprises from northern European countries dominate in the rate of AI use (Denmark 42%, Finland 38%, Sweden 35%).

By contrast, AI is used least in corporate processes in Romania with 5%, Poland with 8% and Bulgaria with just under 9%.

The situation regarding the rate of AI use in European enterprises is illustrated in more detail in the following chart.

[30] EUROSTAT. Artificial intelligence by size class of enterprise [isoc_eb_ai] [online]. [accessed 2026-04-24]. Available at: https://ec.europa.eu/eurostat/databrowser/view/isoc_eb_ai__custom_20869103/default/table?page=time:2025

Figure 4: Rate of AI use in enterprises in EU countries (%, 2025)



Source: Czech Statistical Office (2025)

Detailed data at the level of the Czech Republic[31] show that the rate of use of artificial intelligence technologies is highly heterogeneous and varies by enterprise size and the sector of the economy in which the employer operates:

- **The rate of AI use in enterprises rises with enterprise size**. In Czech companies with fewer than 50 employees it reaches 13% (17% in the EU), in medium-sized enterprises it rises to 29% (EU: 30%), and among employers with more than 250 employees the rate of AI use already exceeds one half (54%, the EU average was 55%).
- The use of AI is most widespread in **the IT activities sector**. In 2025, AI was already being used in this sector by **60 %** of enterprises, while the EU average was just under 63%. In **manufacturing**, at least one artificial intelligence technology was used by just under **17% of enterprises** (which was 0.6 percentage points below the EU27 average), most often entities engaged in the manufacture of computers (30%) or the manufacture of cars and

[31] CZECH STATISTICAL OFFICE. Use of Information and Communication Technologies in the Business Sector – 2025 [online]. Prague: Czech Statistical Office, 2026. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vyuzivani-informacnich-a-komunikacnich-technologii-v-podnikatelskem-sektoru-2025

other transport equipment (28%). Czech enterprises use artificial intelligence least often in **transportation and storage (6%)** and in **construction (8%).**

- **40% of enterprises** in the Czech Republic using artificial intelligence stated that they use these technologies in **management, administration or human resources** (i.e. in the areas of enterprise activity most connected with the issue of employee training).
- The most frequently used AI technologies in Czech enterprises included generative AI for generating texts, programming code or natural-sounding human speech. These were used by a total of **13% of enterprises in our country,** which is **73% of enterprises that use AI.** Second place was taken by AI technologies capable of creating **new multimedia content**, i.e. for example an image, video or music – the technology was used by a total of 10% of enterprises in the Czech Republic (55% of those using AI). Third place in the Czech Republic belongs to AI technology for performing **advanced text analysis (**7% of enterprises in our country in total, 41% of enterprises using AI).
- In the EU as a whole, enterprises most frequently use **different AI technologies than in the Czech Republic.** At the European Union level, advanced text analysis is used most frequently (in the EU 59% of enterprises using AI, in the Czech Republic 41%), followed by the generation of images or sounds (in the EU 55% of enterprises using AI, in the Czech Republic 48%), and only third in order is the generation of text or speech, which is the AI

technology most frequently used by companies in the Czech Republic (EU: 44%, Czech Republic: 73% of enterprises implementing artificial intelligence).[32]

5.2 Potential Uses and Positive Effects of AI in Adult Education

According to the OECD[33], artificial intelligence (AI) can be used in adult education in the following ways:

- **Planning:** using artificial intelligence to assess the demand for and supply of skills and to map the offer of training courses.
- **Matching**: using artificial intelligence to match available training courses to individual skill areas.
- **Training content and assessment**: using artificial intelligence to adapt the content of education and to adjust to the user's progress.
- **Training delivery**: innovative channels for delivering training using artificial intelligence. Surveys show that companies using approaches based on continuous learning with the help of artificial intelligence technologies demonstrated 57% better problem-solving abilities and 42% fewer performance errors compared with companies using only occasional formal training.[34]

[32] CZECH STATISTICAL OFFICE. Use of Information and Communication Technologies in the Business Sector – 2025 [online]. Prague: Czech Statistical Office, 2026. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vyuzivani-informacnich-a-komunikacnich-technologii-v-podnikatelskem-sektoru-2025

[33] OECD. Opportunities and drawbacks of using artificial intelligence for training [online]. Paris: OECD, 2021. [accessed 2026-04-24]. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/12/opportunities-and-drawbacks-of-using-artificial-intelligence-for-training_dccca4fd/22729bd6-en.pdf

[34] RAMACHANDRAN, K. et al. Developing AI-powered training programs for employee upskilling and reskilling. Journal of Informatics Education and Research, 1, 1188–1193. [online]. 2024. [accessed 2026-04-24]. Available at: https://jier.org/index.php/journal/article/view/903

Appropriate use of artificial intelligence can improve adult education systems in particular by:[35]

- **Increasing participation in education** by minimising certain obstacles on the participants' side: adapting the time and place of learning, shortening learning time, increasing employer support (individualising the approach to learning helps address one of the main obstacles declared by employers, i.e. lack of time). Surveys report that personalised learning programmes optimised with artificial intelligence can shorten the time needed to reach the required level by up to 40% compared with standardised training.[36]
- **Increasing the inclusiveness of adult education systems** by helping to address the specific needs of groups under-represented in education (foreigners with a language barrier, people with insufficient skills, the low-qualified and adults with disabilities). Surveys show that when learners receive content tailored to their specific needs and learning styles, their engagement increases by 78% and course completion rates improve by 63% compared with standardised approaches.[37]
- Better **aligning vocational training with labour market needs:** it enables the assessment of changing skills requirements, the mapping of training content or the matching of participants with training. In connection with the growing need for retraining (upskilling, reskilling), the OECD considers AI's greatest contribution to be its potential to evaluate employees' existing capabilities in real time and at scale. Through skills assessment, performance analysis and behavioural profiling, AI can reveal hidden competences – those that are not necessarily known or utilised – and thereby tap into hidden potential within

[35] OECD. Opportunities and drawbacks of using artificial intelligence for training [online]. Paris: OECD, 2021. [accessed 2026-04-24]. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/12/opportunities-and-drawbacks-of-using-artificial-intelligence-for-training_dccca4fd/22729bd6-en.pdf

[36] DAVIS, J. What business leaders really think about generative AI [online]. INSEAD Knowledge, 2024. [accessed 2026-04-24]. Available at: https://knowledge.insead.edu/leadership-organisations/what-business-leaders-really-think-about-generative-ai

[37] ASHWANI, K. Generative AI and training employees with special needs [online]. Strategic HR Review, 2024. [accessed 2026-04-24]. Available at: https://doi.org/10.1108/SHR-05-2024-0039

the workforce. This function is particularly valuable for internal "talent pools", where AI can match employee profiles with new roles, projects or training programmes.[38]

- **Reducing prejudice and discrimination** in the workplace: e.g. empathy training through virtual reality – perceiving a situation "through other people's eyes", reducing bias in the provision of training and the assessment of participants.

Specific practical examples of the deployment of AI tools in employee training are given in the following boxes.

AstraZeneca

AstraZeneca's "Generative AI Certification" programme (offered in 12 languages) enabled employees from various departments to acquire basic knowledge of artificial intelligence. The certification uses a multi-level model with different study programmes for individual roles:

- AI fundamentals for everyone
- Using AI for project managers and executives
- AI development for technical teams

A distinctive feature of AstraZeneca's approach is that it combines social aspects with corporate learning. Forums, seminars and structured opportunities for peer learning enable employees to share practical experience and challenges. This social approach has proved effective: 87% of training participants were applying AI concepts in their work three months after obtaining the certificate. The company also developed a tailor-made module on AI ethics, addressing issues relevant to the pharmaceutical sector, including the protection of

[38] LANE, Marguerita; WILLIAMS, Morgan; BROECKE, Stijn. The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers [online]. Paris: OECD Publishing, 2023 [accessed 2026-04-24]. OECD Social, Employment and Migration Working Papers, No. 288. Available at: https://doi.org/10.1787/ea0a0fe1-en

patients' personal data, bias in clinical trials and regulatory compliance. Between 2022 and 2025, over 12 thousand employees went through the programme.[39] [40]

Ericsson

The case of Ericsson shows how artificial intelligence can turn workforce data into a practical learning strategy. Due to an insufficient overview of internal talent, Ericsson hired the services of TechWolf, an AI-based skills analysis platform. By comparing employees' capabilities with AI models, the company created more than 1,100 customised job profiles, enabling detailed workforce planning in real time. This step helped HR leaders align retraining initiatives with changing project requirements and strategic priorities. Beyond clarity, this deployment also provided a basis for dynamic career paths. Employees could be directed towards internal opportunities matching their skills, thereby increasing their engagement and reducing turnover.[41]

Accenture

Accenture is an example of integrating artificial intelligence into the training of a large number of employees. In 2024, Accenture launched LearnVantage, a multi-million-dollar AI-powered training platform offering personalised content, micro-credentials and simulation-based learning. The deployment of the platform led to a 32% higher rate of skills acquisition. Compared with traditional learning systems, it reduces the time needed to achieve proficiency in key competences by 47%. LearnVantage's main innovative tool is the Learning Simulation

[39] ASTRAZENECA. Upskilling our workforce to thrive in the age of AI [online]. 2025. [accessed 2026-04-24]. Available at: https://www.astrazeneca.com/media-centre/articles/2025/upskillingAI.html

[40] PAVLAKOU, E. et al. The Impact of Artificial Intelligence on Learning and Development – Case Studies in Companies of Different Sectors [online]. 2025. [accessed 2026-04-24]. Available at: https://journalofsocialsciences.org/pdf/vol8no1/CRJSSH_Vol08_No1_p_49-66.pdf

[41] TAYLOR, D., & VINAUSKAITĖ, E. AI in L&D: From talk to action. L&D Global Sentiment Survey. 2024 (GSS).

Creator, which allows employees to complete tailor-made role-playing exercises according to their department, level of experience and real-time performance data. The simulations mimic complex workplace scenarios – from client negotiations to crisis management – and provide a risk-free environment for practising demanding skills with immediate feedback. The tool features an intuitive interface for users without technical knowledge, making it easy to adapt to different work environments.[42]

5.3 Challenges and Barriers to Deploying AI in Employee Training

Despite AI's great potential to transform corporate learning ecosystems, its introduction is not yet without complications. These problems are interdisciplinary in nature, intertwining barriers of a technological, business and individual type. This creates challenging conditions for HR professionals and learning and development specialists when introducing AI-based corporate training.[43]

Technological barriers

Technological AI solutions, especially those integrated into systems for managing and training employees, depend to a large extent on the collection and analysis of employee data. This raises strong concerns about personal data protection, consent to use and security. Organisations must cope with increasingly strict legislation (e.g. GDPR) or sectoral requirements, which may slow down or complicate the introduction of these solutions.

[42] ACCENTURE. Building skills at scale with generative AI [online]. 2024. [accessed 2026-04-24]. Available at: https://www.accenture.com/us-en/blogs/business-functions-blog/generative-ai-skill-building

[43] DIXIT, Aparna Sameer; JATAV, Sunita. Evolving needs of learners and role of artificial intelligence (AI) in training and development (T&D): T&D professionals' perspective [online]. 2024. [accessed 2026-04-24]. Available at: https://www.emerald.com/jmd/article-abstract/43/6/788/1233424/Evolving-needs-of-learners-and-role-of-artificial?redirectedFrom=fulltext

In addition to regulatory obstacles, many companies also face problems with the integration of legacy systems. Older HR applications, including training platforms, do not necessarily support real-time data processing or have integrated machine learning algorithms, which complicates interoperability. Another problem is data quality: inconsistent data structure, missing information and outdated records lead to incorrect conclusions and poor-quality recommendations, undermining trust in artificial intelligence systems. Moreover, AI software often requires significant infrastructure upgrades – such as cloud computing capacity and cybersecurity features – which may not be readily available in every company, especially in enterprises with limited resources.[44]

Business barriers

From a financial perspective, the most frequently mentioned obstacle is uncertainty about a clear return on investment in AI tools. Although artificial intelligence systems can bring cost savings and productivity gains in the long term, the initial investment costs (software licences, hiring staff or training) can be extremely high. This applies especially to small and medium-sized enterprises with more limited budgets.[45]

The introduction of artificial intelligence may also provoke resistance. Employees and middle management may perceive artificial intelligence as a threat to job security or as a factor that depersonalises and disrupts the character of human interaction in training. This resistance goes beyond mere fear of job loss and also includes scepticism about the fairness, transparency and resulting suitability of AI recommendations for professional development.[46]

---

[44] RATHNAYAKE, Chaminda; GUNAWARDANA, Aruni. The Role of Generative AI in Enhancing Human Resource Management: Recruitment, Training, and Performance Evaluation Perspectives [online]. 2023. [accessed 2026-04-24]. Available at: https://norislab.com/index.php/ijsa/article/view/53/47

[45] QAZI, Sameer at al. AI-Driven Learning Management Systems: Modern Developments, Challenges and Future Trends during the Age of ChatGPT [online]. 2024. [accessed 2026-04-24]. Available at: https://www.techscience.com/cmc/v80n2/57584

[46] BOSTON CONSULTING GROUP (BCG). AI at Work: What People Are Saying [online]. 2023. [accessed 2026-04-24]. Available at: https://www.bcg.com/publications/2023/what-people-are-saying-about-ai-at-work

Individual barriers and limits of access to AI-based learning

Far from everyone feels comfortable working with AI-based platforms. This applies especially to workers who have spent most of their careers working in non-digital learning systems. For older employees or employees in positions that do not require working with digital technologies, this change may be too demanding and demotivating.[47]

Moreover, artificial intelligence tools themselves can be demanding to master. Employees may need training and time to learn to work effectively with the outputs of AI tools, evaluate recommendations or communicate with virtual assistants. If employees do not receive this support during adoption, they may reject AI tools.[48]

Surveys further point to differing opportunities for company workers to access AI training depending on their position. For example, according to a 2023 BCG survey, 44% of managers stated that they had undergone AI training in order to improve their skills and remain competitive. The same was mentioned by only 14% of employees in direct contact with customers. This survey was conducted on a sample of 13 thousand employees in 18 countries.[49]

5.4 Measures to Reduce Inequalities in the Field of AI

According to the United Nations (UN) report "Mind the AI Divide"[50], coordinated policy measures are needed to reduce current inequalities in the field of artificial intelligence. Their aim is to ensure

---

[47] ALHUSBAN, Mohammad Issa; ALSHURAFAT, Hashem; KHATATBEH, Ibrahim N. Exploring professional perspectives on integrating generative artificial intelligence into corporate learning and development: an organizational change perspective [online]. Development and Learning in Organizations: An International Journal. 2025, 39(2), pp. 21–24. [accessed 2026-04-24]. Available at: https://doi.org/10.1108/DLO-05-2024-0131

[48] INDEED. Breaking Barriers: How AI and Technology are Empowering Disabled Workers [online]. 2023. [accessed 2026-04-24]. Available at: https://www.indeed.com/career-advice/news/ai-technology-empowering-disabled-workers

[49] BOSTON CONSULTING GROUP (BCG). AI at Work: What People Are Saying [online]. 2023. [accessed 2026-04-24]. Available at: https://www.bcg.com/publications/2023/what-people-are-saying-about-ai-at-work

[50] UNITED NATIONS; INTERNATIONAL LABOUR ORGANIZATION. Mind the AI divide: shaping a global perspective on the future of work [online]. New York: United Nations, 2024. [accessed 2026-04-24]. Available at: https://digitallibrary.un.org/record/4061662?v=pdf

that as large a part of society as possible benefits from the advantages of this new technology. The measures should also contribute to expanding opportunities in the field of artificial intelligence while mitigating potential risks.

In addition to steps at the international level, the UN proposes two main types of measures:

- **Building national AI capacities**
- **Positive integration of AI into the world of work**

Building national AI capacities

In the area of building national AI capacities, the UN recommends:

- **Creating robust frameworks for education, skills development and lifelong learning with the aim of building a qualified workforce in the field of artificial intelligence**.
  This means:
  - Incorporating artificial intelligence and data science courses into existing education programmes while strengthening basic skills.
  - Establishing cooperation with universities and international organisations to support capacity building in education and training.
  - Supporting community and sectoral initiatives focused on AI education, with the aim of fostering local talent and practice-based innovation.
- **Investing in digital infrastructure and ensuring fair access to artificial intelligence resources and tools**.
  This means:
  - Starting with high-quality internet connectivity and strategic investment in data centres and cloud computing facilities, so that the infrastructure necessary for the development and deployment of artificial intelligence is available.
  - Supporting open data policies so that public sector data is available for research and development in the field of artificial intelligence, while ensuring privacy protection and security.

- Engaging in international cooperation to share resources and infrastructure, such as access to high-performance computing facilities and international research networks.

- **Developing and implementing comprehensive policies and regulations that support the development and use of human-centred artificial intelligence, including in the workplace**.

  This means:

  - Developing a national strategy for artificial intelligence outlining the vision, goals and action plans for AI development. This should include safety standards and aspects of the sustainable use of artificial intelligence in line with human rights and the sustainable development goals, as well as respect for fundamental principles and rights in the working environment.
  - Making use of social dialogue.
  - Introducing data protection and privacy laws that protect workers' rights and foster trust in artificial intelligence systems.
  - Raising public awareness of artificial intelligence, its benefits and potential risks.

Positive integration of AI into the world of work

In the area of the positive integration of AI into the world of work, the UN recommends:

- **Supporting social dialogue in connection with the introduction of AI in the workplace.**

  This means:

  - Supporting the active involvement of and consultation with employees and workers' organisations when introducing artificial intelligence systems in the workplace

- supporting social dialogue and collective bargaining on the design, introduction and monitoring of artificial intelligence and the use of technologies in the workplace
- supporting the development of AI-related skills among social partners.

- **Ensuring decent working conditions within the AI value chain.**

  This means:
  - Data management and categorisation represent a key part of the AI value chain and are at the same time an important source of new jobs.
  - Ensuring decent working conditions, including the protection of fundamental principles and rights at work for all workers within the artificial intelligence value chain, will contribute to a more even distribution of the benefits of artificial intelligence.
- **Using social dialogue and public-private partnerships to support training, retraining and transitions to other jobs**.

  This means:
  - For workers at risk of dismissal as a result of AI deployment, priority should be given to their reassignment to other jobs and increased investment in training focused on relevant skills. Employment support measures should be ensured for workers most at risk from the impacts of AI, and social security and access to retraining should be ensured for the workers concerned.
- **Taking into account the specific needs of women and men in the AI-related transformation process.**

  This means:
  - Explaining the significant gender dimension of the potential impact of generative AI on current labour markets.
  - Proposing measures that take into account the specific needs of different genders within the transformation process, including through investment in the

skills needed for emerging professions in the field of artificial intelligence or for other societal needs, for example in care or the green economy.[51]

[51] UNITED NATIONS; INTERNATIONAL LABOUR ORGANIZATION. Mind the AI divide: shaping a global perspective on the future of work [online]. New York: United Nations, 2024. [accessed 2026-04-24]. Available at: https://digitallibrary.un.org/record/4061662?v=pdf

6. What We Already Have: Policies and Instruments Supporting Adult Education in the Czech Republic and the EU

This chapter provides an overview of the available policies and measures in the field of adult education at the European Union level, such as the Union of Skills and the Council Recommendation on human capital in the European Union. The overview of policies for the Czech Republic is of two types: the education line represents activities in the field of the school system, while the second line of support for adult education presents policies in the field of employment. The individual instruments supporting adult education in the Czech Republic are described in more detail.

6.1 EU Policies in the Field of Adult Education

With the growing emphasis on strengthening Europe's competitiveness, the European Union has focused more on supporting the development of competences in recent years. In this context, in March 2025 it presented a plan called the **Union of Skills** and in November 2025, for the first time in history, it proposed an EU **Council Recommendation on human capital**, which also significantly touches on the field of adult education, including employees.

Union of Skills

Union of Skills[52] is the European Commission's plan to improve the quality of education, training and lifelong learning. The European Union is thereby responding to the need to maintain

[52] EUROPEAN COMMISSION. Union of Skills [online]. 2025. [accessed 2026-04-24]. Available at: https://commission.europa.eu/topics/competitiveness/union-skills_cs

competitiveness. However, many workers are unable to keep pace with changing job requirements and businesses cannot find employees with the right qualifications.

The goals of the Union of Skills relevant to the focus of this study include:

- ensuring a higher level of basic and advanced skills
- providing people with opportunities to regularly update their skills and acquire new ones.

The "Union of Skills" plan contains 4 key elements, of which the element of **regular upskilling and retraining** is particularly relevant to this study. The EU is aware that acquiring new skills should be a regular part of people's professional lives in order to keep pace with economic developments and ensure lifelong learning. Specifically, the European Commission has set itself the following tasks:

- to propose expanding the use of micro-credentials as a flexible way of learning;
- to strengthen the Pact for Skills so that a greater number of workers can acquire new skills in strategic sectors;
- to introduce a pilot project, the Skills Guarantee, offering workers at risk of unemployment the opportunity to acquire new skills.[53]

Council Recommendation on human capital in the European Union

In the context of the topic of this study, the EU Council Recommendation on human capital[54] represents a strategic framework aimed at strengthening workers' skills in the context of rapid technological, demographic and economic change. Its aim is to encourage Member States to ensure more equal and more effective access to lifelong learning, especially at a time when labour and skills shortages threaten the competitiveness of European economies.

[53] EUROPEAN COMMISSION. Union of Skills [online]. 2025. [accessed 2026-04-24]. Available at: https://commission.europa.eu/topics/competitiveness/union-skills_cs

[54] EUR-Lex. Proposal for a Council Recommendation on human capital in the European Union (COM/2025/959 final) [online]. 2025. [accessed 2026-04-24]. Available at: https://eur-lex.europa.eu/legal-content/CS/TXT/HTML/?uri=CELEX:52025DC0959

The document highlights **marked inequalities** in who participates in education. In 2022, only 39.5% of adults in the EU took part in education, far from the EU target (60% by 2030). Low-qualified adults have a participation rate of only 11.3%, even though they are the most threatened by restructuring. Participation is lower in less developed, rural and remote areas. These factors contribute to the reproduction of social and regional inequalities on the labour market.

Work-related vocational training accounts for 80% of adult education, with employers covering 90% of the costs. Nevertheless, on average in the EU, a third of companies provide no training, most often due to costs and lack of time. Employees of small enterprises or in less stable sectors have objectively worse access to skills development, which deepens inequalities between groups of workers. The document underlines long-term gender inequalities, particularly in STEM fields, which remain key for the future labour market. At the same time, it draws attention to differences between regions – less developed areas have poorer access to quality education and to modern forms of retraining.

The Recommendation calls on Member States, among other things, to **accelerate the provision of skills** relevant to the labour market and to provide accelerated learning pathways designed for adult workers.

The complete text of the Council Recommendation on human capital is annexed to this study.

6.2 Policies supporting adult education in the Czech Republic

POLICIES SUPPORTING ADULT EDUCATION IN THE CZECH REPUBLIC – EDUCATION LINE

Support for adult education is not among the political priorities in the Czech Republic. At present, the Czech Republic has no strategy or similar document defining the state's position and, above all, its plan of measures to support adult education. This can be illustrated, for example, by the fact that the last lifelong learning concept focused on this topic was created under the title

Lifelong Learning Strategy of the Czech Republic in 2007 at the Ministry of Education, Youth and Sports (MEYS) and was planned until 2015.[55]

The currently valid policies are devoted primarily to formal initial education and address the topic of adult education only marginally. For example, the **Strategy for the Education Policy of the Czech Republic up to 2030+**"[56] did not include adult education among the strategic lines set out by the document and support for further education is merely declaratory, formulated as support for secondary schools and universities in their role as providers of further education. The intention to revise the National Register of Qualifications is also mentioned.

The MEYS document **Long-Term Plan for Education and the Development of the Education System of the Czech Republic 2023–2027**"[57] is the implementation document of the above strategy and addresses the topic of further education in more concrete terms. It proposes 4 measures for creating conditions for the further education of citizens:

- Creating an environment for the development and innovation of the structure of further education:
    - to further develop and optimise the National Register of Qualifications (NSK)
    - to increase the number of authorised persons and holders of professional qualification certificates
    - to draw up a proposal for the use of the Central Competence Database (CDK), e.g. for the creation of framework educational programmes or the introduction of micro-certification processes.

[55] MINISTRY OF EDUCATION, YOUTH AND SPORTS. Lifelong Learning Strategy of the Czech Republic [online]. Prague: MEYS, 2007. [accessed 2026-04-24]. Available at: https://msmt.gov.cz/vzdelavani/dalsi-vzdelavani/strategie-celozivotniho-uceni-cr

[56] MINISTRY OF EDUCATION, YOUTH AND SPORTS. Strategy for the Education Policy of the Czech Republic up to 2030+ [online]. Prague: MEYS, 2020. [accessed 2026-04-24]. Available at: https://msmt.gov.cz/uploads/Brozura_S2030_online_CZ.pdf

[57] MINISTRY OF EDUCATION, YOUTH AND SPORTS. Long-Term Plan for Education of the Czech Republic 2023–2027 [online]. Prague: MEYS, 2023. [accessed 2026-04-24]. Available at: https://msmt.gov.cz/vzdelavani/skolstvi-v-cr/dlouhodoby-zamer-cr-2023-2027

- Supporting flexible pathways to acquiring, upgrading, extending and confirming qualifications:
    - to propose the implementation setup for the modularisation of retraining educational programmes
    - to support the introduction of so-called micro-credentials
    - to support the development of career guidance in a lifelong perspective.
- Supporting schools in providing further education:
    - To support schools in providing further education, including professional education in line with the NSK.
    - To support schools in the use of newly designed micro-credentials, in the creation of modular educational programmes for adults and in the activities of authorised persons for examinations in professional qualifications (NSK)
- Development and support of further non-professional education
    - Support for schools and other institutions (e.g. libraries) in providing further non-professional education (civic education, education for sustainable development and the development of citizens' functional literacy, including digital competences).

Preparation of a national harmonised approach to micro-credentials in the Czech Republic

The Czech Ministry of Education is currently preparing a unified national strategy for micro-credentials across the education and training sectors. The creation of a national strategy in the field of micro-credentials is the subject of a project entitled "Towards a Harmonised Approach to Micro-credentials in the Czech Republic"[58], which is being carried out in cooperation between the MEYS, the OECD and the European Commission. Its aim is to create a harmonised approach to micro-credentials linking higher education, vocational education and training, and non-formal

[58] MINISTRY OF EDUCATION, YOUTH AND SPORTS. Towards a Harmonised Approach to Micro-credentials [online]. Prague: MEYS. [accessed 2026-04-24]. Available at: https://msmt.gov.cz/vzdelavani/dalsi-vzdelavani/smerem-k-harmonizovanemu-pristupu-k-mikrocertifikatum-v

education and training. The project timetable envisages presenting the draft strategy and implementation plan by the end of the first half of 2026.

POLICIES SUPPORTING ADULT EDUCATION IN THE CZECH REPUBLIC – EMPLOYMENT LINE

Under the responsibility of the Ministry of Labour and Social Affairs of the Czech Republic (MoLSA), the document **Strategic Framework for Employment Policy up to 2030** was created in 2020. It is a key document determining the direction of Czech employment policy in a time of technological, economic and demographic change. Its aim is to ensure that the Czech labour market can respond to digitalisation, automation and population ageing while promoting equal access to decent work and the necessary education.[59]

The strategy shows that adult participation in education in the Czech Republic is low and uneven. **The greatest disadvantage** according to the document is faced by the following **groups:**

- older workers over 55, whose participation in education at the time the framework was drawn up was only 3.2% (the EU average was 5%). Older workers, moreover, have difficulties with digital competences and with returning to the labour market.
- people with low educational attainment, where participation reached only 2.4%. The low-qualified are the most vulnerable to automation and at the same time have the least access to courses.
- residents of structurally affected regions (the Ústí, Karlovy Vary and Moravian-Silesian regions), where there is a high share of low-qualified jobseekers. The strategic framework identifies marked regional differences in the availability of educational activities. In regions with a low-qualified workforce, the offer of retraining is also limited, as is the presence of

[59] MINISTRY OF LABOUR AND SOCIAL AFFAIRS. Strategic Framework for Employment Policy up to 2030 [online]. Prague: MoLSA, 2021. [accessed 2026-04-24]. Available at: https://mpsv.gov.cz/strategicky-ramec-politiky-zamestnanosti-do-roku-2030

employers willing to invest in training. This leads to a "trap" of workers stagnating in low-paid positions without a real possibility of qualification growth.

- people with disabilities often cannot make use of retraining due to health limitations or the unavailability of suitable jobs.

The strategic framework designates **retraining** as a necessary adaptation tool, which, however, exhibits significant limits that reinforce inequalities:

- overly strict accreditation requirements – people without completed primary education cannot take many courses, even though legislation would allow it
- the low flexibility of procured retraining courses, which, due to public procurement, respond to labour market needs with a delay,
- weak employer involvement and an insufficient practical component of instruction,
- the low use of employee retraining, which would enable continuous learning for the employed.

The result is that people with a higher level of human capital benefit most from retraining, while the low-qualified have considerably worse access to it – which deepens existing inequalities.

The document warns that without intervention, the Czech Republic may face more intense marginalisation, polarisation and growing income inequality, because it is precisely the groups with the lowest qualifications that receive the fewest opportunities for professional development.

In its implementation section, the document assumed that the strategy would be given concrete form and, above all, fulfilled through implementing action plans. These were to describe the specific measures through which employment policy would be implemented over a two- to three-year span. However, the follow-up action plans were never created or implemented.

6.3 Instruments Supporting Adult Education in the Czech Republic

Incentives for employers to support education and training

- **Retraining of employees.** Full or partial compensation of the costs of employers who retrain their employees at risk of job loss in the interest of their continued employment with the current employer (source: active employment policy funds).
- **Support for employee education and training from the ESF.** A significant source of support for the upskilling and reskilling of employees in various types of organisations is the European Social Fund. Employers regularly take part in employee qualification development programmes co-financed by the ESF (funding source: Operational Programme Employment+).
- **Investment incentives for employee training and retraining.** For selected new investment projects, material support for employee training/retraining can be obtained under certain conditions pursuant to the Investment Incentives Act[60].
- In the Karlovy Vary, Ústí and Moravian-Silesian regions, significant subsidy support for employee retraining is available through **the Operational Programme Just Transition.**[61] Support may be requested by enterprises that are modernising or undergoing transformational change, across all fields, provided they have their registered office or an establishment in the region. For example, in the Moravian-Silesian Region, companies can obtain up to EUR 2 million for their training projects. The supported activities here focus primarily on upskilling and retraining workers and cover a wide range of education – from technical and professional courses through the development of digital competences and AI skills to language training.
- The development of employees' competences can also be financed from the **National Recovery Plan**[62], particularly in connection with **the digitalisation and modernisation**

[60] MINISTRY OF LABOUR AND SOCIAL AFFAIRS OF THE CZECH REPUBLIC. Employment Support [online]. Prague, © 2026 [accessed 2026-04-19]. Available at: https://www.mpsv.cz/podpora-zamestnanosti

[61] OPERATIONAL PROGRAMME JUST TRANSITION. Operational Programme Just Transition [online]. [accessed 2026-04-24]. Available at: https://opst.cz/

[62] MINISTRY OF INDUSTRY AND TRADE OF THE CZECH REPUBLIC. National Recovery Plan (NPO) [online]. [accessed 2026-04-24]. Available at: https://planobnovy.gov.cz/

of enterprises. Employers can obtain support either directly through published calls or indirectly by participating in programmes financed from this programme.

- **Tax deductions**: pursuant to Section 24(2)(j)(3) of the Income Tax Act, employee training is a tax-deductible expense (specifically, the operation of the employer's own training facilities or expenses/costs associated with the professional development of employees and the retraining of employees). An important condition for tax deductibility is that the training is related to the employer's business activity.

Incentives for citizens to support non-formal adult education

The Labour Office of the Czech Republic uses funds earmarked for active employment policy, among other things, to support citizens in the area of retraining:

- **Procured retraining**: This type of retraining is fully arranged by the Labour Office of the Czech Republic. Procured retraining takes place on the basis of an agreement between the Labour Office and a jobseeker or a person interested in employment, if their placement on the labour market requires it. The Labour Office pays the retraining costs on behalf of the retraining participant and may provide them with a contribution towards proven necessary costs associated with the retraining.
- **Chosen retraining:** A jobseeker or a person interested in employment can arrange retraining themselves – they choose both the course and the facility that will carry out the retraining. The Labour Office carefully assesses the expediency of the chosen retraining and decides on its reimbursement. The selected and approved course can be reimbursed up to **CZK 50,000**, which is **the limit for 3 years.**[63]
- **Tax reliefs**:
    - if the employer pays the provider of training/a course related to the employer's business directly (i.e. a non-monetary benefit), the employee's income is exempt from tax (Income Tax Act, Section 6(9)(a)).

[63] MINISTRY OF LABOUR AND SOCIAL AFFAIRS OF THE CZECH REPUBLIC. Retraining [online]. Prague, © 2026 [accessed 2026-04-19]. Available at: https://mpsv.gov.cz/up-cz/rekvalifikace

- for training unrelated to the employer's business, the organisation may compensate the employee for training costs in the form of a non-monetary benefit from resources such as the cultural and social needs fund (FKSP), a social fund, after-tax profit, etc. The income is exempt for the employee up to the statutory limits for leisure benefits (Income Tax Act, Section 6(9)(d)).

- On the other hand, the recent period saw the abolition of **the income tax allowance** related to **the costs of professional qualification examinations** (National Register of Qualifications). As of the tax period, it is no longer possible to deduct from the tax base up to CZK 10,000 paid for a professional qualification examination (National Register of Qualifications).

7. What Works Elsewhere: Foreign Examples of Good Practice

The following text describes several foreign examples of good practice in supporting the education of working people, which are the result of local social dialogue and collective bargaining. These examples show that where trade unions change the "rules of the game" (agreements with the employer, sectoral funds, joint institutions), education becomes more accessible and less dependent on the individual capital of the employee.

7.1 The Competence Development Fund in Industry – Denmark

The Industry Competence Development Fund (IKUF)[64] is one of the sectoral education funds in Denmark. The fund is based on a sector-level collective agreement concluded between some of the largest trade unions and employers' organisations in Denmark. This education fund is a legal entity financed by manufacturing enterprises through the relevant employers' interest organisations in the sector. Under the collective agreement, manufacturing enterprises are obliged to pay a fixed amount per employee into the vocational training fund and, in return, can receive contributions towards their vocational training costs. Eligible activities also include adult vocational education. The reimbursement can be transferred directly to the employee or to the employer. It depends on whether the employee applies for funding for education of their own choosing, or whether the employer and employee agree to apply for funding for mutually agreed education. The education fund provides compensation of 85% of lost wages for a maximum of 74 hours (10 working days) and 100% of course fees. Learning participants may also receive reimbursement of travel costs if the journey time exceeds 2.5 hours. If an employee has not drawn

[64] INDUSTRIENS KOMPETENCEUDVIKLINGSFOND (IKUF). IKUF – Få tilskud til din efteruddannelse [online]. [accessed 2026-04-24]. Available at: https://ikuf.dk/

on the education fund's resources in the previous two years, they can accumulate hours in the given calendar year and draw compensation for up to 222 hours.[65]

The fund should be seen as a complement to the employer reimbursement system, allowing employees to freely choose learning activities according to their own interests, while employers obtain co-financing of training costs mainly through the reimbursement system. From the perspective of inequalities, the fund's key element is wage compensation. For low-income groups, the main obstacle is often not just the course fee itself, but the loss of earnings during participation in instruction. IKUF thus removes two barriers at once and creates a real possibility of participation even for those who could not otherwise afford it. It is also important that the fund supports both education "agreed" with the employer and education chosen by the employee, which strengthens individual autonomy in skills development.

7.2 Sectoral Education and Development Funds (O&O) – Netherlands

In the Dutch case, the core of good practice is the existence of sectoral education and development funds (O&O funds), established through collective agreements and managed by the social partners, including trade unions. These funds set strategic goals based on collective agreements: for example, the specific skills that workers need, the skills needed to meet future developments in the sector, etc. The aim of these funds is to help improve the sectoral labour market through the training and education of workers in the given sector. They subsequently finance or reimburse the education of employees working in the sector. The funds are private initiatives managed by sectoral organisations and the social partners.

An important mechanism is universal financing: once a collective agreement is binding for the sector, all employers in the sector contribute to the fund and employees have access to support under the rules agreed by the social partners. The funds themselves are financed mainly from the

[65] CEDEFOP. Industry competence development fund (Financing adult learning database) [online]. [accessed 2026-04-24]. Available at: https://www.cedefop.europa.eu/en/tools/financing-adult-learning-db/search/industry-competence-development-fund-0

contributions of employers and employees (with the exact amount of these contributions set in collective agreements), while some funds are financed through the European Social Fund or other social partners. A 2017 report by the Dutch Ministry of Social Affairs and Employment showed that for the 85 collective labour agreements examined, 87% of O&O fund financing came from enterprises.[66]

The Netherlands has approximately 100 O&O education and development funds[67]. In 2023, the Dutch government also enabled O&O funds to apply for education subsidies from the European Social Fund. Projects could last up to two years, with the European Social Fund covering 40% of the costs and the applicant financing the remaining 60%.[68]

7.3 UAW-Ford: Jointly Managed Training Programmes of Trade Unions and the Employer – USA

In the American automotive sector, the case of cooperation between the UAW trade union (*United Automotive Workers*) and Ford shows how trade unions can establish education as part of a collective agreement and create an institution that reduces inequality of access, especially through financial mechanisms. The UAW union and Ford jointly created the *Education Tuition Assistance Plan* (ETAP) education programme, which offers up to USD 8,000 per year for education from GED level[69] up to university degrees, including allowances for books and selected development

[66] EUROFOUND. Sectoral training and development funds (NL-1973-1/2478) [online]. 2022. [accessed 2026-04-24]. Available at: https://static.eurofound.europa.eu/covid19db/cases/NL-1973-1_2478.html

[67] OOVERZICHT. OOverzicht – zicht op O&O fondsen [online]. [accessed 2026-04-24]. Available at: https://ooverzicht.nl/

[68] RIJKSOVERHEID.NL. 70 miljoen voor scholing en begeleiding van mensen met een kwetsbare arbeidsmarktpositie [online]. 2023. [accessed 2026-04-24]. Available at: https://www.rijksoverheid.nl/actueel/nieuws/2023/07/17/70-miljoen-voor-scholing-en-begeleiding-van-mensen-met-een-kwetsbare-arbeidsmarktpositie

[69] GED (General Educational Development) is the equivalent of a high school diploma in the American education system. It is a set of tests demonstrating that a person has knowledge at the level of a high school graduate, even if they did not complete high school in the standard way.

courses.[70] From the employees' perspective, it is important that ETAP does not target only the "career growth" of more elite segments of employees, but also includes education that, in the American context, is typically associated with catching up on basic qualifications (GED). The programme thereby contributes to reducing inequalities: it is an opportunity to "catch up" on capital that was denied or not attained in the past.

Employees on long-term forced leave *(indefinite layoff)* enrolled in the ETAP programme can also use a supplementary benefit of up to USD 9,400 in education and retraining support (the NVRAP programme)[71]. This addresses a typical inequality of access to education – inequality increases dramatically precisely at the moment when people lose their stable employment anchor and, with it, the usual channels of support.

The programme's institutional anchoring is important for its success and sustainability. The American Council on Education (ACE) states that the UAW and Ford established the education and training programme as early as 1982 as part of collective bargaining and that it is administered by a joint union-company governing body. The collective agreement stipulates that the programme will respond to the personal, educational and training needs of the hourly employees of Ford Motor Company represented by the UAW union[72]. Joint governance is crucial from the perspective of inequalities: it reduces the risk that education will serve only the narrow needs of the enterprise and strengthens the possibility that it will also reflect the interests of employees in a weaker position.

[70] UAW-FORD JOINT TRUSTS. Tuition Assistance Program (ETAP) [online]. [accessed 2026-04-24]. Available at: https://uawford.org/programs/tuition-assistance-program-etap/

[71] UAW-FORD JOINT TRUSTS. Tuition Assistance Program (ETAP) [online]. [accessed 2026-04-24]. Available at: https://uawford.org/programs/tuition-assistance-program-etap/

[72] AMERICAN COUNCIL ON EDUCATION. Organization (ACE National Guide) [online]. [accessed 2026-04-24]. Available at: https://www.acenet.edu/National-Guide/Pages/Organization.aspx?oid=91a53002-75c4-ea11-a812-000d3a378a3a

7.4 The UTAP Programme – Singapore

The Singaporean trade union confederation NTUC acts as an agent of redistribution of financial support for the education of its members. Through the *Union Training Assistance Programme* (UTAP), it reduces the direct costs of education for its members: UTAP is an education allowance intended for NTUC members, helping them cover education costs. Specifically, it is support amounting to 50% of the "uncovered" fee after state support has been applied, with annual caps. The aim of this allowance is to motivate more members to expand their skills and retrain.

The NTUC trade union highlights that NTUC union members aged 18 to 25 (NTUC Starter) gain a head start when entering the labour market thanks to the allowance, as well as support in the transition from school to employment.

NTUC members are entitled to a 50% contribution towards course fees (the course price remaining after deduction of the state contribution) up to $250 per year if they enrol in courses supported under the UTAP programme. NTUC Starter members are entitled to a 50% contribution towards course fees (with no own financing required) up to $200 per year if they take part in courses supported under the UTAP programme. NTUC members aged 40 and over receive a higher contribution, from $250 to $500.

The expansion of support for union members in middle and older age creates significant added value for the UTAP programme. The age dimension is important from the perspective of inequalities: as illustrated by the data on adults' involvement in education in the previous chapters of this study, older workers take part in education to a lesser extent and face higher barriers to further education (lower return on investment, a higher barrier of family commitments, fear of technology, etc.). The Singaporean model here transfers part of the costs in a targeted manner for this category of workers.

Those interested in courses can choose from an extensive database of UTAP-supported courses.[73]

[73] NTUC. Find a course [online]. [accessed 2026-04-24]. Available at: https://www.ntuc.org.sg/uportal/how-we-help/find-a-course

7.5 Union Learning Representatives – United Kingdom

In the British context, an inspiring element of efforts to mitigate inequalities in access to education is the network of union learning representatives (*Union Learning Representatives*, ULR).[74]

These union "ambassadors" for learning are union representatives in workplaces who help their members develop knowledge and skills. They also work with employers to ensure that their employees receive the necessary training and support. Their role is not to organise courses, but to act as an intermediary authority on the ground in workplaces. They are neither managers nor external consultants, but colleagues whose legitimacy stems from the shared experience of work. This is particularly important for groups who avoid education out of embarrassment or low self-confidence (e.g. in the area of literacy and numeracy skills).

The British trade union confederation TUC describes trade unions and ULRs as having a proven ability to reach people for whom the effort to develop these skills is sensitive, and it is precisely this supportive "peer" model that is seen as good practice. The TUC states that union members are considerably more likely to receive training and other development opportunities (37%) than non-members (22%). The TUC attributes most of this effect to the role trade unions play in negotiating with employers on education and qualifications, and further to the support that union representatives provide with the aim of widening access to employer-organised training.

British surveys on the positive effects of the education and training that employees received thanks to union-led ULF projects yielded, for example, the following findings:

- 70% of participants state that without the support of their trade union organisation they would not have taken part in the education or training offered.

[74] TUC. Learning and skills [online]. 2017. [accessed 2026-04-24]. Available at: https://www.tuc.org.uk/resource/learning-and-skills

- Nine out of ten participants acquired at least one new skill, almost two thirds gained a qualification and one in four achieved a promotion or greater responsibility in their current job.
- Each year of ULF projects contributes GBP 1.65 billion to the economy through increases in jobs, wages and productivity.
- ULF projects also have a very positive impact on union membership, as half of the non-members who took part in this union-led education or training subsequently became union members.

Further research on the impact of trade unions showed that in workplaces where union activity in the field of education and skills development brings a "learning bonus", the employees concerned are more likely to have higher wages and report a higher degree of job security. This research also revealed significant benefits for employers, particularly in the form of improved overall organisational performance:

- an increase in the volume of training for individual colleagues (75%)
- help for colleagues with little or no experience of learning (81%)
- improved dialogue between management and unions on education (70%).[75]

These findings from the United Kingdom provide important arguments about the "attainability" of education: in the context of inequalities, this means that trade unions can act as an agent that genuinely extends the boundaries of participation towards people who are otherwise excluded from the education market.

[75] TUC. Learning and skills [online]. 2017. [accessed 2026-04-24]. Available at: https://www.tuc.org.uk/resource/learning-and-skills

References

ACCENTURE. Building skills at scale with generative AI [online]. 2024. [accessed 2026-04-24]. Available at: https://www.accenture.com/us-en/blogs/business-functions-blog/generative-ai-skill-building

ALHUSBAN, Mohammad Issa; ALSHURAFAT, Hashem; KHATATBEH, Ibrahim N. Exploring professional perspectives on integrating generative artificial intelligence into corporate learning and development: an organizational change perspective [online]. Development and Learning in Organizations: An International Journal. 2025, 39(2), pp. 21–24. [accessed 2026-04-24]. Available at: https://doi.org/10.1108/DLO-05-2024-0131

AMERICAN COUNCIL ON EDUCATION. Organization (ACE National Guide) [online]. [accessed 2026-04-24]. Available at: https://www.acenet.edu/National-Guide/Pages/Organization.aspx?oid=91a53002-75c4-ea11-a812-000d3a378a3a

ASHWANI, K. Generative AI and training employees with special needs [online]. Strategic HR Review, 2024. [accessed 2026-04-24]. Available at: https://doi.org/10.1108/SHR-05-2024-0039

ASTRAZENECA. Upskilling our workforce to thrive in the age of AI [online]. 2025. [accessed 2026-04-24]. Available at: https://www.astrazeneca.com/media-centre/articles/2025/upskillingAI.html

BOSTON CONSULTING GROUP (BCG). AI at Work: What People Are Saying [online]. 2023. [accessed 2026-04-24]. Available at: https://www.bcg.com/publications/2023/what-people-are-saying-about-ai-at-work

CEDEFOP. Industry competence development fund (Financing adult learning database) [online]. [accessed 2026-04-24]. Available at: https://www.cedefop.europa.eu/en/tools/financing-adult-learning-db/search/industry-competence-development-fund-0

CZECH STATISTICAL OFFICE. 2501322506 [online]. Prague: Czech Statistical Office. [accessed 2026-04-24]. Available at: https://csu.gov.cz/docs/107508/138ead9f-1d9b-59b7-9e78-89c22c298d8f/2501322506.pdf?version=1.1

CZECH STATISTICAL OFFICE. Adult Education in the Czech Republic (AES survey) – 2022 [online]. Prague: Czech Statistical Office, 2024. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-dospelych-v-ceske-republice-setreni-aes-2022

CZECH STATISTICAL OFFICE. Use of Information and Communication Technologies in the Business Sector – 2025 [online]. Prague: Czech Statistical Office, 2026. [accessed 2026-04-24].

Available at: https://csu.gov.cz/produkty/vyuzivani-informacnich-a-komunikacnich-technologii-v-podnikatelskem-sektoru-2025

CZECH STATISTICAL OFFICE. Employee Training – 2020 (CVTS survey) [online]. Prague: Czech Statistical Office, 2023. [accessed 2026-04-24]. Available at: https://csu.gov.cz/produkty/vzdelavani-zamestnancu-2020

DAVIS, J. What business leaders really think about generative AI [online]. INSEAD Knowledge, 2024. [accessed 2026-04-24]. Available at: https://knowledge.insead.edu/leadership-organisations/what-business-leaders-really-think-about-generative-ai

DIXIT, Aparna Sameer; JATAV, Sunita. Evolving needs of learners and role of artificial intelligence (AI) in training and development (T&D): T&D professionals' perspective [online]. 2024. [accessed 2026-04-24]. Available at: https://www.emerald.com/jmd/article-abstract/43/6/788/1233424/Evolving-needs-of-learners-and-role-of-artificial?redirectedFrom=fulltext

EUR-Lex. Proposal for a Council Recommendation on human capital in the European Union (COM/2025/959 final) [online]. 2025. [accessed 2026-04-24]. Available at: https://eur-lex.europa.eu/legal-content/CS/TXT/HTML/?uri=CELEX:52025DC0959

EUROFOUND. Sectoral training and development funds (NL-1973-1/2478) [online]. 2022. [accessed 2026-04-24]. Available at: https://static.eurofound.europa.eu/covid19db/cases/NL-1973-1_2478.html

EUROSTAT. Artificial intelligence by size class of enterprise [isoc_eb_ai] [online]. [accessed 2026-04-24]. Available at: https://ec.europa.eu/eurostat/databrowser/view/isoc_eb_ai__custom_20869103/default/table?page=time:2025

EUROSTAT. Participation rate in education and training (last 4 weeks) [trng_lfse_01] [online]. 2026. [accessed 2026-04-24]. Available at: https://ec.europa.eu/eurostat/databrowser/view/trng_lfs_09__custom_20632184/default/table

EUROPEAN COMMISSION. The DIGITAL Europe Programme – Work Programmes [online]. [accessed 2026-04-24]. Available at: https://ec.europa.eu/newsroom/dae/redirection/document/116928

EUROPEAN COMMISSION. Union of Skills [online]. 2025. [accessed 2026-04-24]. Available at: https://commission.europa.eu/topics/competitiveness/union-skills_cs

INDEED. Breaking Barriers: How AI and Technology are Empowering Disabled Workers [online]. 2023. [accessed 2026-04-24]. Available at: https://www.indeed.com/career-advice/news/ai-technology-empowering-disabled-workers

INDUSTRIENS KOMPETENCEUDVIKLINGSFOND (IKUF). IKUF – Få tilskud til din efteruddannelse [online]. [accessed 2026-04-24]. Available at: https://ikuf.dk/

LANE, Marguerita; WILLIAMS, Morgan; BROECKE, Stijn. The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers [online]. Paris: OECD Publishing, 2023 [accessed 2026-04-24]. OECD Social, Employment and Migration Working Papers, No. 288. Available at: https://doi.org/10.1787/ea0a0fe1-en

MINISTRY OF LABOUR AND SOCIAL AFFAIRS OF THE CZECH REPUBLIC. Employment Support [online]. Prague, © 2026 [accessed 2026-04-19]. Available at: https://www.mpsv.cz/podpora-zamestnanosti

MINISTRY OF LABOUR AND SOCIAL AFFAIRS OF THE CZECH REPUBLIC. Retraining [online]. Prague, © 2026 [accessed 2026-04-19]. Available at: https://mpsv.gov.cz/up-cz/rekvalifikace

MINISTRY OF LABOUR AND SOCIAL AFFAIRS. Strategic Framework for Employment Policy up to 2030 [online]. Prague: MoLSA, 2021. [accessed 2026-04-24]. Available at: https://mpsv.gov.cz/strategicky-ramec-politiky-zamestnanosti-do-roku-2030

MINISTRY OF EDUCATION, YOUTH AND SPORTS. Long-Term Plan for Education of the Czech Republic 2023–2027 [online]. Prague: MEYS, 2023. [accessed 2026-04-24]. Available at: https://msmt.gov.cz/vzdelavani/skolstvi-v-cr/dlouhodoby-zamer-cr-2023-2027

MINISTRY OF EDUCATION, YOUTH AND SPORTS. Towards a Harmonised Approach to Micro-credentials [online]. Prague: MEYS. [accessed 2026-04-24]. Available at: https://msmt.gov.cz/vzdelavani/dalsi-vzdelavani/smerem-k-harmonizovanemu-pristupu-k-mikrocertifikatum-v

MINISTRY OF EDUCATION, YOUTH AND SPORTS. Lifelong Learning Strategy of the Czech Republic [online]. Prague: MEYS, 2007. [accessed 2026-04-24]. Available at: https://msmt.gov.cz/vzdelavani/dalsi-vzdelavani/strategie-celozivotniho-uceni-cr

MINISTRY OF EDUCATION, YOUTH AND SPORTS. Strategy for the Education Policy of the Czech Republic up to 2030+ [online]. Prague: MEYS, 2020. [accessed 2026-04-24]. Available at: https://msmt.gov.cz/uploads/Brozura_S2030_online_CZ.pdf

MINISTRY OF INDUSTRY AND TRADE OF THE CZECH REPUBLIC. National Recovery Plan (NPO) [online]. [accessed 2026-04-24]. Available at: https://planobnovy.gov.cz/

NTUC. Find a course [online]. [accessed 2026-04-24]. Available at: https://www.ntuc.org.sg/uportal/how-we-help/find-a-course

OECD. Opportunities and drawbacks of using artificial intelligence for training [online]. Paris: OECD, 2021. [accessed 2026-04-24]. Available at:

https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/12/opportunities-and-drawbacks-of-using-artificial-intelligence-for-training_dccca4fd/22729bd6-en.pdf

OOVERZICHT. OOverzicht – zicht op O&O fondsen [online]. [accessed 2026-04-24]. Available at: https://ooverzicht.nl/

OPERATIONAL PROGRAMME JUST TRANSITION. Operational Programme Just Transition [online]. [accessed 2026-04-24]. Available at: https://opst.cz/

PAVLAKOU, E. et al. The Impact of Artificial Intelligence on Learning and Development – Case Studies in Companies of Different Sectors [online]. 2025. [accessed 2026-04-24]. Available at: https://journalofsocialsciences.org/pdf/vol8no1/CRJSSH_Vol08_No1_p_49-66.pdf

QAZI, Sameer et al. AI-Driven Learning Management Systems: Modern Developments, Challenges and Future Trends during the Age of ChatGPT [online]. 2024. [accessed 2026-04-24]. Available at: https://www.techscience.com/cmc/v80n2/57584

RAMACHANDRAN, K. et al. Developing AI-powered training programs for employee upskilling and reskilling. Journal of Informatics Education and Research, 1, 1188–1193. [online]. 2024. [accessed 2026-04-24]. Available at: https://jier.org/index.php/journal/article/view/903

RATHNAYAKE, Chaminda; GUNAWARDANA, Aruni. The Role of Generative AI in Enhancing Human Resource Management: Recruitment, Training, and Performance Evaluation Perspectives [online]. 2023. [accessed 2026-04-24]. Available at: https://norislab.com/index.php/ijsa/article/view/53/47

RIJKSOVERHEID.NL. 70 miljoen voor scholing en begeleiding van mensen met een kwetsbare arbeidsmarktpositie [online]. 2023. [accessed 2026-04-24]. Available at: https://www.rijksoverheid.nl/actueel/nieuws/2023/07/17/70-miljoen-voor-scholing-en-begeleiding-van-mensen-met-een-kwetsbare-arbeidsmarktpositie

TAYLOR, D., & VINAUSKAITĖ, E. AI in L&D: From talk to action. L&D Global Sentiment Survey. 2024 (GSS).

TUC. Learning and skills [online]. 2017. [accessed 2026-04-24]. Available at: https://www.tuc.org.uk/resource/learning-and-skills

UAW-FORD JOINT TRUSTS. Tuition Assistance Program (ETAP) [online]. [accessed 2026-04-24]. Available at: https://uawford.org/programs/tuition-assistance-program-etap/

UNITED NATIONS; INTERNATIONAL LABOUR ORGANIZATION. Mind the AI divide: shaping a global perspective on the future of work [online]. New York: United Nations, 2024. [accessed 2026-04-24]. Available at: https://digitallibrary.un.org/record/4061662?v=pdf

List of Tables and Figures

LIST OF TABLES

LIST OF FIGURES

Annex I:

Recommendation for

COUNCIL RECOMMENDATION

on human capital in the European Union

THE COUNCIL OF THE EUROPEAN UNION[76,]

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 148(4) thereof,

Having regard to the opinion of the Employment Committee,

Whereas:

(1) The European Pillar of Social Rights, proclaimed by the European Parliament, the Council and the Commission in 2017, provides guidance for upward convergence of working and living conditions in the EU. Its first principle affirms that "everyone has the right to quality and inclusive education, training and lifelong learning in order to maintain and acquire skills that enable them to participate fully in society and successfully manage transitions in the labour market".

(2) The Competitiveness Compass, adopted by the Commission in January 2025, sets out a plan to restore the EU's economic dynamism and revive growth. It identifies support for skills as a key factor, recognising that a highly qualified workforce is the backbone of the European economy, a driver of productivity, innovation and quality jobs, and a prerequisite for a fair green and digital transition. In March 2025, the Commission adopted a communication on the Union of Skills, in which it stressed the key role of human capital and future-oriented skills in strengthening the Union's competitiveness and strategic autonomy, enhancing preparedness and supporting

[76] https://www.consilium.europa.eu/en/press/press-releases/2026/03/09/tackling-the-skills-shortage-council-adopts-recommendation-on-human-capital/

sustainable prosperity. In 2025, the Commission also published two communications on artificial intelligence (AI), emphasising that people and skills play a key role.

(3) As recognised in the Union of Skills, an integrated approach to policy coordination and strengthened multilateral surveillance within the European Semester provide a framework for guiding the necessary structural reforms of labour markets, education and training systems and investment in human capital development, while also taking intergenerational fairness into account. This Recommendation on human capital is therefore designed to complement the guidelines for the employment policies of the Member States. It identifies areas of common interest for the EU. Where relevant in the context of individual Member States, these areas will later be analysed in national reports and may be addressed in country-specific recommendations issued within the European Semester cycle. These issues also have a significant territorial dimension, with considerable territorial disparities in skills and human capital endowment across Europe.

(4) Each year, within the Employment Committee pursuant to Article 150 TFEU, having regard to the joint annual report on the employment situation in the Union and the implementation of the employment guidelines (Article 148(5) TFEU) and taking into account the information received from Member States through their annual progress reports (which also serve the purposes of Article 148(3) TFEU), the Member States assess all aspects related to employment outcomes in the EU.

(5) The EU faces persistent labour and skills shortages. These shortages are considerable in all Member States, regions and sectors, and affect enterprises of all sizes. The job vacancy rate in the EU, which serves as an indicator for measuring labour shortages, remains high, approaching its pre-pandemic level of 2.2% (Q1 2025). The shortage of qualified labour is also holding back investment and innovation: 68% of medium-sized enterprises cited a shortage of qualified workers as a serious problem in 2023, and 77% of enterprises stated that the shortage of qualified workers represented an obstacle to long-term investment in 2024.

(6) Certain sectors and occupations face high labour and skilled-worker shortages across the EU. In 2024, the most widespread labour shortages in the EU concerned technical profiles in

manufacturing and construction (including welders and flame cutters, electricians in construction and related fields, plumbers and pipe fitters, sheet metal workers), healthcare professions (nurses, general and specialist doctors, healthcare assistants and physiotherapists, with an estimated shortage of 1.2 million doctors, nurses and midwives in OECD countries in 2022). At the same time, only 12% of farmers in the EU are under 40, potentially threatening the EU's food security. The transport sector also faces widespread shortages of qualified workers across all modes of transport (drivers of heavy goods vehicles, lorries, buses and trams, as well as seafarers, especially officers). There are also widespread shortages of information and communication technology (ICT) specialists, civil engineers and teaching staff. ICT specialists made up only 4.8% of the workforce, well below the "Digital Decade 2030" target of 10%, with considerable gender imbalances. In connection with the green transition, 24 occupations with labour shortages were identified in several Member States, including insulation workers, civil engineers and air-conditioning and refrigeration mechanics (in 14 Member States), civil engineering technicians (in 12 Member States) and roofers (in 11 Member States). Europe will need to develop capacities in key areas of the circular economy, which must adapt to the transition from linear to circular systems and markets. These skills are found at all levels, from architects and engineers to waste collectors and sorters.

(7) Technological progress and the green and digital transitions will further increase the demand for new skills and deepen existing shortages and mismatches. As a result of the boom in artificial intelligence, renewable energy technologies, biotechnology, defence, space and security, as well as complex data analysis, demand for professionals in science, technology, engineering and mathematics (STEM) is growing.

(8) The report "*The State of the Digital Decade 2025*" (SDD25) stresses that the gap between labour market demand and available talent continues to widen, particularly in areas such as artificial intelligence, cybersecurity, data analysis and semiconductor technologies. By 2027, the EU will need 6.2 to 7 million workers in AI-related fields, with approximately 60% of the workforce requiring artificial intelligence skills. In cybersecurity, a shortage of approximately 300,000 specialists was identified, while in semiconductors, current trends indicate a shortage of almost 100,000 new experts will need to be addressed. Member States' national plans show an increasing

focus on digital education and lifelong learning, but efforts remain fragmented and uneven, with limited reach to low-qualified and under-represented groups. Forecasts suggest that without stronger joint action and sustained investment, the EU will not achieve its digital skills targets.

(9) Since 2023, the number of restructurings and planned redundancies has been gradually increasing. Various restructurings and short-term changes have contributed to a growing awareness of the need for urgent action. In 2024, planned job losses across the EU amounted to approximately 65,000, concentrated in specific sectors and regions. The automotive industry, telecommunications and postal services were hit hardest. Between 2019 and 2024, the car manufacturing sector across the EU lost approximately 240,000 jobs. The European steel sector is also facing growing pressure, with 18,000 jobs to be cut in 2024, while the chemical sector reduced jobs by approximately 15,000 in 2023 and 2024. This is particularly worrying given the sector's key role in producing defence and space capabilities. Overall, disruptions to trade flows, weakened global demand and higher energy costs are having a negative impact on the labour market.

(10) The transition to climate neutrality, which is already affecting employment growth, is expected to create 1 to 2.5 million new jobs by 2030 if accompanied by effective measures. The Net-Zero Industry Act estimates an increase of 350,000 jobs in manufacturing in net-zero sectors by 2030. In addition, achieving the EU's wind and solar energy targets by 2030 will require approximately 130,000 to 145,000 additional qualified workers and associated skills investment of EUR 1.1 to 1.4 billion by 2030. In connection with building renovations, 7 million job vacancies in construction are expected by 2035. The armed forces and the defence industry are also expected to significantly increase the number of jobs, especially for people with education in STEM fields and vocational education and training (VET).

(11) The considerable labour and skilled-worker shortages in the above-mentioned sectors and in regions across the EU are likely to deepen in the coming years as a result of the ageing of the population and growing labour demand in sectors of strategic importance to the EU, namely (i) advanced digital technologies; (ii) the clean energy transition and the decarbonisation of industry, including the circular economy; (iii) healthcare and biotechnology, agriculture and fisheries and aquaculture and the bioeconomy; and (iv) the defence industry and space. These challenges will

exert considerable pressure on economies and labour markets, underlining the urgent need for proactive action. It is therefore essential to maintain and strengthen the EU's human capital today through targeted and flexible policies and investment in education, upskilling and retraining. By supporting a workforce that is ready to embrace technological progress, adapt to changing industry needs and seize new opportunities, the EU can not only mitigate current and future labour market shortages, but also strengthen its long-term economic resilience and global competitiveness. In addition, access to affordable housing can facilitate labour and learning mobility and support the development of human capital and competitiveness.

(12) European education and training systems face challenges in providing solid skills foundations to all pupils and students, especially those from disadvantaged socio-economic backgrounds, migrants, people with disabilities and Roma, enabling them to participate actively in the labour market. Results in mathematics, reading and science have deteriorated in recent decades, with approximately 30% of fifteen-year-olds underachieving in mathematics and 25% in reading and science in 2022. Only 16% of disadvantaged students achieved good results in reading, mathematics or science in 2022, down from 21% in 2015. Pupils from families with a migrant background are twice as likely to leave the education and training system with low or no qualifications. These challenges are further compounded by inequalities in access to quality and inclusive education and training in less developed regions and disadvantaged, rural and remote areas. More than 40% of eighth-grade pupils lack basic digital skills. Childhood difficulties carry over into adulthood: one in five adults has difficulties with reading and writing. Education and training play a key role in preparing pupils and students to become active citizens, participate in democratic life, recognise disinformation and use digital technologies safely, responsibly and sustainably . 73% of young people (aged 15–30) stated that their education gave them the necessary level of skills to recognise disinformation.

(13) Despite the high employment rate of recent vocational education and training graduates (four out of five in 2024), vocational education and training and apprenticeships continue to face challenges regarding their attractiveness, with many vocational programmes suffering from stereotypes and generally limited recognition. In 2023, 3.75 million vocational education and

training students were enrolled in STEM programmes across the EU, representing 36.3% of all upper secondary vocational education and training pupils. This is still far from the proposed EU-level target of at least 45% by 2030, which – at current enrolment levels – would correspond to an additional 900,000 vocational education and training students moving into STEM fields. In upper secondary vocational education and training, female students are significantly under-represented in STEM fields.

(14) At the tertiary level, approximately half of the Member States recorded a decline in the number of students in STEM fields between 2015 and 2023, despite high demand in many STEM areas. These students currently make up 26.9% of all students, far from the 2030 target of at least a 32% share of students in STEM fields at the tertiary level. Compared with other advanced economies, the EU has the second lowest share of tertiary STEM graduates per thousand young people (14.3%). At the doctoral level, almost four in ten students study STEM fields, but only a very small share study ICT. The problem is exacerbated by the under-representation of women in STEM fields. ICT is the field with the lowest share of women of all fields of education, where only one in five students is a woman. Early dropout from higher education remains a problem, especially at the bachelor's level, where only 63% of tertiary students complete a STEM degree within three years of the theoretical end of their studies.

(15) The shortage of qualified teachers in many Member States, regions, cities and remote and rural areas poses a significant risk to the quality of education. In 2024, approximately one in five teachers worked in schools facing a shortage of qualified teachers, limiting the quality of instruction. Moreover, an ageing teaching workforce will reduce the number of available teachers in the coming years. In 2023, 25% of primary and secondary school teachers were aged 55 and over (corresponding to more than 1,300,000 people). In addition, the shortage of teachers across the EU is contributed to by the perceived unattractiveness of the profession and low incomes (compared with other professions to which a university degree can provide access). An acute shortage of STEM teachers adds to these challenges. The unattractiveness of certain territories may also affect teacher retention in disadvantaged, rural and remote areas. A further concern is teachers' readiness to work with pupils with disabilities and/or special educational needs and/or

from socio-economically disadvantaged backgrounds. Moreover, the inconsistent use of technology in schools, insufficient assessment of digital skills and varying teacher readiness hinder improvements in young people's digital skills levels, despite increased investment in digital infrastructure and education in Member States and regions.

(16) Aligning curricula with changing labour market demand remains a challenge for education and training systems across the EU. Sectoral skills academies and similar initiatives can play an important role in this regard, as also called for in the communication on the Clean Industrial Deal. Some Member States have carried out curriculum reforms, yet considerable gaps persist between the competences students acquire and those employers require. For example, while 90% of jobs require basic digital skills, only 55.6% of adults in the EU have these skills. This is also a challenge for young people in the EU. Given that 42.5% of eighth-grade pupils have insufficient basic digital skills, considerable progress is needed to achieve the EU target of less than 15%. With the development of artificial intelligence, basic digital skills are increasingly insufficient, and more and more new entry-level jobs for young graduates require advanced artificial intelligence skills and strategic thinking. In this situation of mismatch between the skills demanded on the labour market and those available, it is crucial to ensure that vocational education and training curricula match labour market needs, including with the active participation of the social partners; the same applies to higher education. Academic curricula should evolve to promote future-oriented, multidisciplinary and interdisciplinary skills that are essential for developing and using new knowledge and technologies. As regards young people, the inclusion of work-based learning in curricula generally increases graduates' employability: the employment rate of recent vocational education and training graduates who completed work-based learning was 84.3% in 2024, compared with 69.7% for those without this experience. In addition, only 73% of young people (aged 15–30) stated that their education gave them the necessary level of skills to recognise disinformation.

(17) Lifelong learning, upskilling and retraining are essential for individuals to keep pace with a rapidly changing labour market, including transitions from declining to growing sectors. In 2022, however, only 39.5% of adults had participated in education in the previous year, more than 20

percentage points below the EU headline target of 60% by 2030. Low-qualified adults, who would benefit most from training, participate considerably less (11.3%). Participation is lower in less developed regions and stagnating areas, including rural and remote areas, as well as among vulnerable groups facing additional barriers to accessing training. Bridging this gap is essential to make lifelong learning a tangible reality for all and requires accelerated and coordinated action by Member States, businesses and the social partners. The level of financial literacy in the EU is currently very low. According to a 2023 Eurobarometer survey, less than a fifth (18%) of EU citizens have a high level of financial literacy.

(18) Future-ready education and training systems require adequate funding. Inaction is costly: the annual social costs associated with early school leaving will reach USD 6 trillion globally by 203027. The declining level of young people's basic skills could reduce long-term multifactor productivity growth in OECD countries by approximately 3%. Investment in human capital, including investment in population health and policies that support it, contributes to higher productivity and sustainable economic growth.

(19) Given the transformational challenges facing the EU, the extensive upskilling and retraining needs cannot be covered by public funds alone. For adults, work-related training is the main form of education (four out of five adult learners participated in it in 2022). Such training is financed mainly by employers (almost 90% of all work-related adult training). Nevertheless, one in three companies does not provide its employees with any courses or other forms of training, with costs cited as one of the main obstacles (along with workload and time constraints). Motivating effective private spending on skills, including by linking public procurement to training commitments, encourages companies to take greater responsibility for developing their employees' skills. State aid rules allow support for training, upskilling and retraining by service providers, including small and medium-sized enterprises, subject to the relevant conditions. The communication "*Union of Skills*" calls for an assessment of the relevant provisions to ensure that they provide better incentives for industry, including the social economy, to invest in the upskilling and retraining of workers. Public-private partnerships can mobilise additional investment in skills, foster

cooperation and provide better incentives for industry, including the social economy, to invest in the upskilling and retraining of workers and to promote cooperation.

(20) Despite considerable public investment in initial education over the past few decades, the quality of education in some Member States and regions has stagnated or deteriorated. Impact assessments and evaluations are key to maximising the effectiveness and efficiency of investment in education and skills; ideally, they should be carried out before, during and after implementation, with the participation of all relevant stakeholders and using up-to-date and reliable administrative data whenever possible. The establishment of a knowledge centre for social investment and the incorporation of internationally agreed (UNECE) satellite accounts for education and training into national accounts can improve policy evaluation and provide a more accurate quantification of the return on investment in human capital. The Commission has also set up a "Learning Lab" focused on investment in quality education and training, supporting Member States in carrying out evaluations of education policies with the aim of increasing the cost-effectiveness of their public spending on education and training and ensuring that it is evidence-based.

(21) Accessible, comprehensible, targeted and up-to-date skills intelligence is essential for effective and future-proof education and training policies. However, skills intelligence in the EU remains fragmented, hindering informed decision-making. Despite the use of skills forecasting methods in all Member States, significant challenges persist, including the diversity of taxonomies, the complexity of data sources and methods, and limitations regarding data reliability and granularity, which may limit the usability of the information. Forecasts of future demand for a given occupation usually vary considerably, reflecting different assumptions about the extent of task automation and the broader economic and demographic context. Comparing and combining these sources is essential for better-informed policy.

(22) Almost one in three employees in the EU works in positions that do not match their skills, indicating a suboptimal use of labour potential. Overly strict regulation of certain professions and cumbersome qualification recognition procedures create barriers to labour market entry and limit labour market mobility, contributing to skills mismatches and labour shortages at both national and Union level.

(23) European employers face difficulties in recruiting workers from outside the EU. Fewer than one in ten small and medium-sized enterprises has hired employees from third countries in response to skilled labour shortages, and most of them found the process difficult. Third-country nationals often face fragmented and lengthy procedures for the recognition of their qualifications and experience, the problem of over-qualification and a mismatch between qualifications and labour market demand. The over-qualification rate among third-country nationals can be twice as high as among EU nationals.

HEREBY RECOMMENDS that Member States, in the period 2026–2027:

1. **Address the shortage of qualified workers in strategic sectors**

    - Direct measures to address the shortage of qualified workers with a focus on professions requiring, in particular, skills in science, technology, engineering and mathematics (STEM), including ICT and AI, in sectors of strategic importance (digital and clean technologies, the circular economy and the decarbonisation of industry, healthcare and biotechnology, agriculture and fisheries – aquaculture, the bioeconomy, the defence industry and space).
    - Strengthen both accelerated and longer-term provision of labour-market-relevant and future-ready skills in areas of strategic importance by supporting partnerships between education and training providers, public employment services, the social partners and individual enterprises, as well as (local) public authorities.
    - Reduce barriers to entry into professions and ensure faster recognition of qualifications in strategic sectors for EU and third-country citizens.

2. **Strengthen basic skills to build solid foundations for greater competitiveness**

    - Strengthen the acquisition of numeracy, literacy, science, digital skills, civic literacy and financial literacy from an early age and at all levels of education, with particular attention to socio-economically disadvantaged groups and people with disabilities, with the aim of ensuring that fewer than 15% of fifteen-year-olds underachieve in basic skills.

- Ensure sufficient incentives to increase the attractiveness of the teaching profession, especially for STEM subjects.
- Strengthen the digital skills of students and lifelong learners, including artificial intelligence (AI) literacy, use digital testing tools to monitor progress and train teachers in computer-assisted learning.
- Promote the effective and responsible use of AI. Address the impact of the use of digital devices on learning outcomes and mental and physical well-being.

3. Strengthen vocational education and training (VET) for competitiveness

- Increase the quality and attractiveness of vocational education and training and apprenticeships, including by countering negative perceptions, strengthening the inclusion of disadvantaged groups and combating gender stereotypes, particularly in STEM programmes.
- Develop and implement strategies to achieve the 2030 targets of at least 45% of initial upper secondary vocational education and training students enrolled in STEM fields, at least one in five students being a woman, and at least 12% of vocational education and training students taking part in study stays abroad.
- Support a sufficient supply of STEM teachers and trainers and encourage work-based learning in cooperation with enterprises.

4. Improve tertiary education outcomes in STEM fields

- Increase the capacity, relevance and attractiveness of tertiary education programmes in STEM fields (including higher vocational education programmes) for young people, in the areas of information and communication technologies and artificial intelligence, in areas with significant labour shortages and in strategic areas.
- Promote graduates' artificial intelligence literacy and strategic thinking, support interdisciplinary approaches and strengthen the internationalisation of STEM

programmes at the tertiary level, in particular by strengthening joint transnational study programmes in engineering and STEM fields.

5. **Invest in education and skills**

- Support effective and efficient public spending on education and skills commensurate with the identified challenges and agreed goals and targets, including by using cohesion policy funds, including the European Social Fund Plus.
- Support private investment in upskilling and retraining and the use of the social investment and skills policy window under InvestEU.
- Regularly monitor and evaluate investment in education and skills at national, regional and local level using reliable and tailored impact assessment and evaluation methodologies. Where considered useful, build on the voluntary guiding principles endorsed by the Council31 to inform evidence-based policy-making.
- Increase the use of administrative data to assess the effectiveness and efficiency of public and private spending on education and training.

6. **Provide skills intelligence to manage labour market change**

- Develop and apply methodologies for the use of big data and artificial intelligence to provide better-quality and more up-to-date skills intelligence, building on and complementing existing quantitative and qualitative sources of such information.
- Further integrate and increase the regular use of skills intelligence in the (re)design of national, regional and local skills and economic development strategies, in the areas of career guidance, professional reorientation and job transitions, as well as in the design and development of future-oriented curricula.