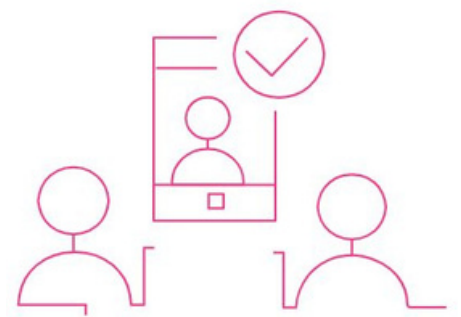


Resources for  
Post-Pandemic  
Effective Training

# Country Snapshot

## *Denmark*

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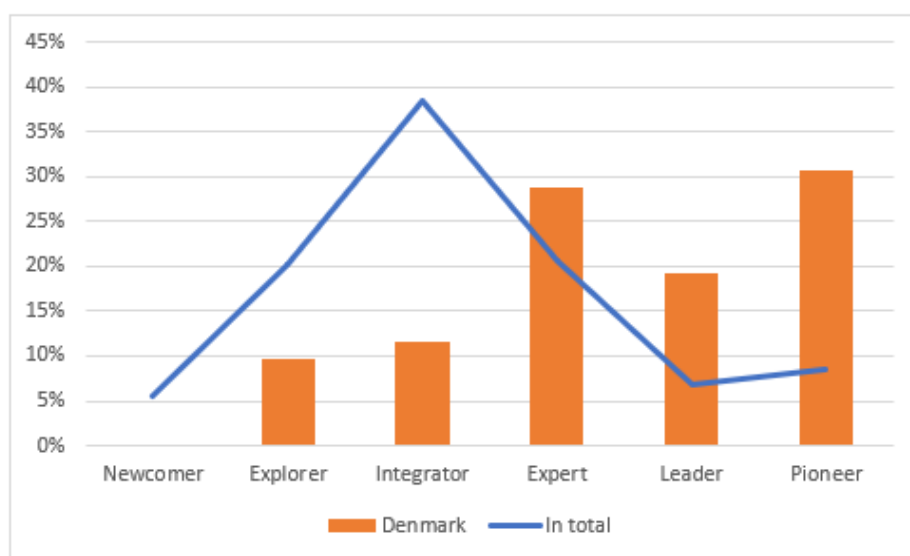


# A. Survey – primary level

The Danish response group consists of 52 respondents (response rate: 27%) out of the 308 respondents in total (17%). We highlight 5 results from the survey where the results from Denmark differ the most from the overall average.

## 1. Digital competences

The first focus area is how the respondents describe their VET institution in general regarding digital competences.



Newcomer – little contact with digital tools and in need of guidance to expand

Explorer – using digital tools without following a consistent approach

Integrator – skillfully using digital tools for a range of purposes

Expert – confidently, creatively and critically using a wide range of digital tools

Leader – using an extensive repertoire of flexible, comprehensive and effective digital strategies

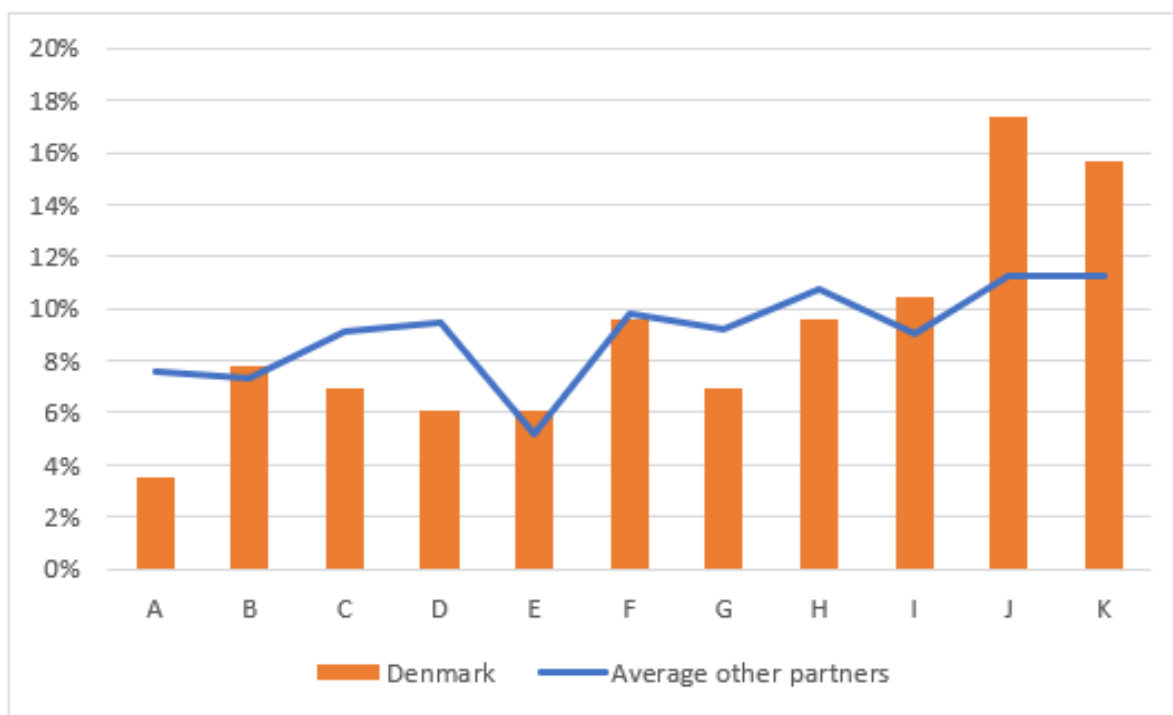
Pioneer – questioning the adequacy of contemporary digital and pedagogical practices and leading innovation

None of the Danish respondents describe their VET institution as newcomer (6 % of all respondents). 37% of the Danish respondents define their institution as either leader or pioneer, compared with only 15% of the overall response group.

## 2. Competences to improve the most

In three of the 11 listed competences, the Danish respondents differ significantly from the overall response group. Only 3% of the Danish respondents want to improve on “Selecting digital resources and devices for digital teaching and learning” (total average is 8%).

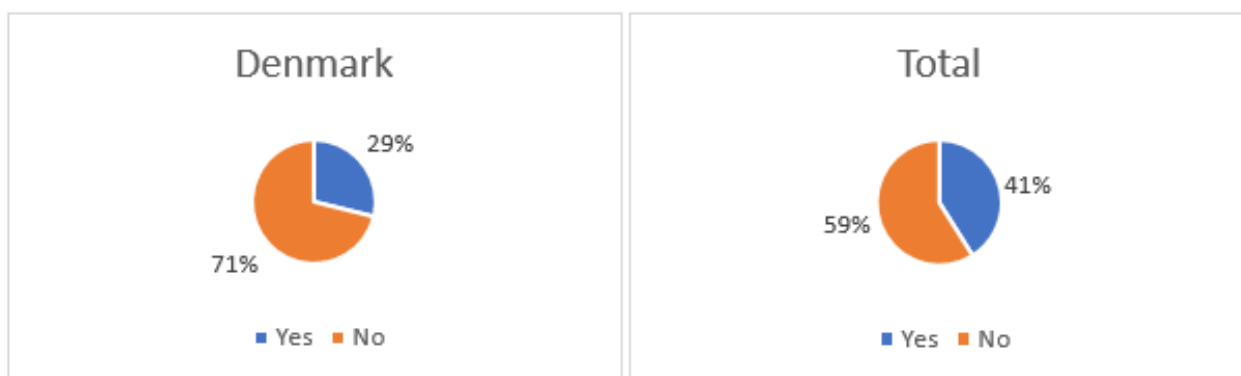
On the other hand, 17% of the Danish respondents want to improve on “Ensuring accessibility to learning activities for learners with special needs”, compared with the overall average of 11%. Likewise, 16% of the Danish respondents recommend “Ensuring learners know how to manage risks and to use digital technologies safely and responsibly”, compared with the total average of 11%.



- A - Selecting digital resources and devices for teaching and learning
- B - Modifying and building on existing digital resources and devices for teaching and learning
- C - Implementing digital resources and devices in the teaching process
- D - Organizing digital content and making it available to learners
- E - Using digital technologies to provide targeted and timely feedback to learners
- F - Using digital technologies to enhance learner communication and collaboration
- G - Using digital technologies to enable learners to reflect on their own learning and share insights
- H - Using digital technologies to address learners' diverse learning needs by allowing individual learning following different levels, goals and speeds
- I - Generating digital evidence on learner activity, performance and progress
- J - Ensuring accessibility to learning activities for learners with special needs
- K - Ensuring learners know how to manage risks and use digital technologies safely and responsibly

### 3. Participation in digital training activities to improve digital skills

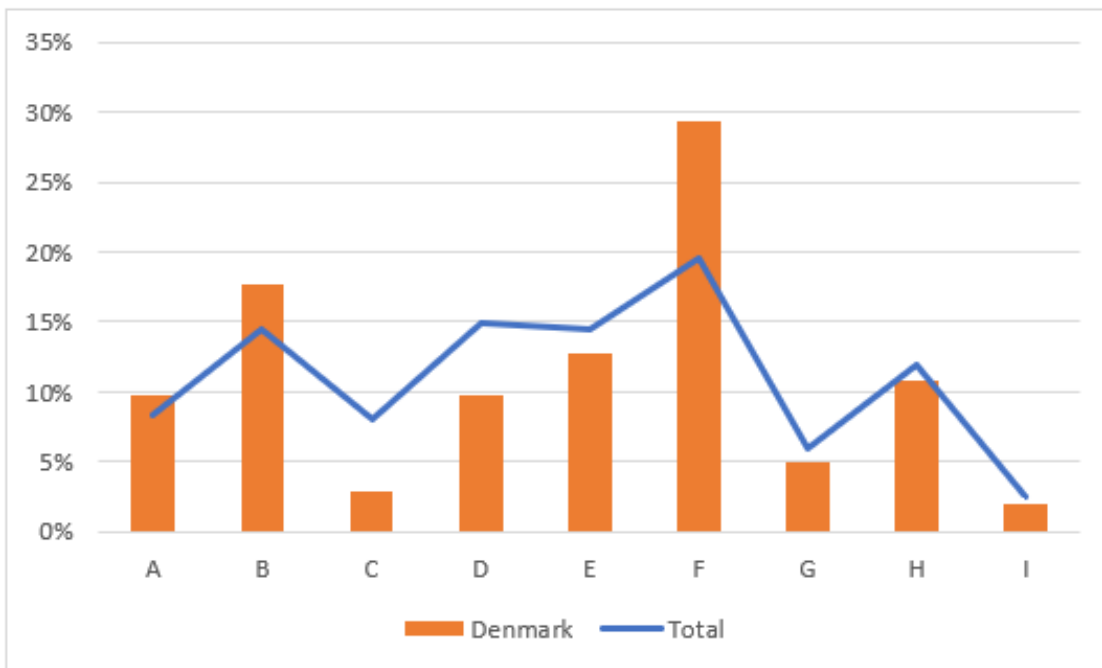
In total, 41% of all respondents have participated in digital training activities during the last 12 months, but only 29% of the Danish respondents have improved their digital skills.



### 4. Interesting training topics

When looking at which training topics the respondents are interested in during the coming 12 months, the results of the Danish survey are very similar to the result of the overall response group.

The Danish respondents differ on the question of “Digital competences for teachers and tutors”, as 29% compared with the overall average of 20% are interested. Also, digital pedagogy is mentioned as a topic for upcoming training.



**A - Digital marketing**

**B - Effectiveness of online VET - choosing the right digital tools**

**C - Analysis of digital resources and understanding of digital reliability**

**D - Classroom management within the virtual classroom**

**E - Teamwork and collaborative digital classroom**

**F - Digital competences for teachers and tutors**

**G - Cost effectiveness and budgeting of digital competences**

**H - Understanding and evaluating digital resources**

**I - Other - Please list topics below**

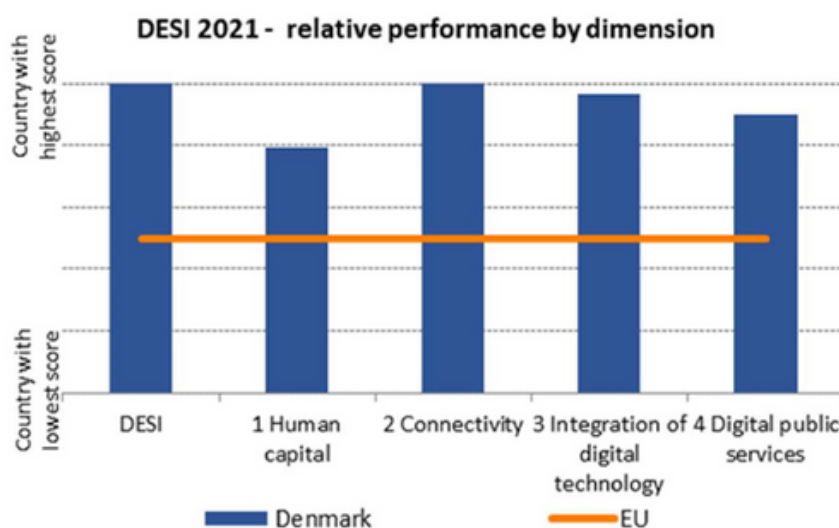
## 5. Knowledge of the DigCompEdu framework

Only 2% of the Danish respondents know the framework DigCompEdu. The result is very low compared with the average of 23% of all respondents. No one has knowledge of the framework being used by their VET institution - 85% have no knowledge of it and 15% are sure that DigCompEdu is not used.

## B. Desk research – secondary level

### Digital Economy and Society Index (DESI) 2021 Denmark

Denmark ranks 1st out of the 27 EU Member States in the European Commission's 2021 edition of the Digital Economy and Society Index (DESI). Denmark leads in Connectivity, ranks 2nd in Integration of digital technology and Digital public services and 4th in Human capital. Denmark has slightly improved its scores in all DESI dimensions, except for Connectivity which has improved significantly.



On Human capital, Denmark ranks 4th out of 27 EU countries and is thus well above the EU average. 70% of the adult population has basic digital skills and 49% has above-basic digital skills – among the highest in the EU. Nevertheless, 25% of the workforce still lacks basic digital skills (EU average 36%).

During the COVID-19 pandemic, all educational institutions were closed for 8 months to keep the spread of the virus under control. Schools could use established learning platforms. This meant a 200% increase in the use of online tools in education and an unprecedented load on the educational network infrastructures supporting schools and higher education.

Denmark launched several new successful initiatives in 2020 and 2021 to ensure that more public services were digitized, user friendly and accessible to all citizens and companies. Denmark is committed to continuing this effort of raising awareness among the public, businesses and authorities of the digital service offers. It is also committed to helping people not yet familiar with digital services to begin using them.

The Danish authorities continue to focus on ensuring the uptake and use of advanced digital technologies and accelerating the digital transformation, especially in small enterprises to reduce the digitization gap between large and small enterprises.

Danish Ministry of Education analysis: Evaluation of commercial education

The analysis highlights the differences between distance learning and traditional classroom learning. Focus is on commercial education as seven Danish VET providers currently offer 100% distance learning education and training courses. Further knowledge is required about the quality of distance learning in relation to:

- How schools work to ensure that distance learning meets the requirements concerning content and organization
- Students' reasons for choosing distant learning
- Student dropout rates within distance learning education and training courses
- How teachers and students assess distance learning

Distance learning is mainly organized as asynchronous education where students complete assignments via a learning platform, and where the teacher is available online for questions and feedback. Most schools offer real-time webinars during the learning period and some schools also offer blended learning.



The analysis shows that commercial education students withing distance learning have the same basis for differentiation and variation of the teaching, feedback, practice relevance, quality assurance and grade level.

Several of the interviewed heads of education and teachers estimate that distance learning students receive more feedback than classroom students, because the one-on-one relation between teacher and student creates good opportunities to give and receive individual feedback. At the same time, the distance learning students regularly have to hand in assignments (typically once a week or more), which frequently requires teachers to provide feedback. The teaching is continuously adjusted to suit the individual student's level – with feedback on assignments as the controlling element for the student's progress – and as such, distance learning has ideal conditions for differentiation.

Furthermore, the analysis shows that distance learning students have a higher-grade average compared with traditional classroom students.

Period 2017-2019

Education	Traditional classroom students	Online students
Retail	6,00	6,40
Trade	6,18	7,66
Office administration	7,65	8,10

The Danish grading scale goes from -3 to 12. For all three VET specialties (retail, trade and administration), the average grade level for distance learning students is higher. Well-educated teachers specialized in distance learning can plan their teaching using a range of different learning formats – e.g. podcasts, videos, e-books, animation, quizzes and training exercises. Constant focus on new and necessary qualifications are vital for success. Distance learning also creates opportunities to make the teaching more practice-related – e.g. companies can use online software such as MS Teams or Zoom for short presentations, virtual role-playing and case-based learning.

Distance learning students are a mixed group when it comes to age, sex, general experience and former schooling. The interviewed heads of education and teachers report that the age difference is generally large among distance learning students.

Overall, there are three predominant reasons for students to choose distance learning. Firstly, it is the possibility of starting an education at any time. Distance learning education starts every week, whereas classroom education begins only twice a year. Secondly, it is the high degree of flexibility. Where classroom teaching normally runs from 8am to 2pm on weekdays, distance learning can be completed in a much more flexible manner where each student decides the how many hours a day they want to spend and can make use of evenings and weekends as they wish. The flexibility also allows for a large geographical distance between school and student. Third, and lastly, it is the fact that distance learning accommodates students with special needs. Previous bad experiences with schooling and education, psychological challenges or diagnoses make it difficult for many students to function in a traditional classroom each day. Diagnoses such as anxiety and ADHD are common, but also physically handicapped students benefit highly from being able to complete an education or a training course from home.

It is a widespread opinion among the interviewed students that they do better with distance learning than they used to within the primary school system or other educations. At the same time, several of the students say that after starting a distance learning education or training course, they have regained their motivation for getting an education as well as their professional confidence.

The analysis also pinpoints, however, that the dropout rate is higher among distance learning students than among classroom students. 40% of the enrolled distance learning students complete their education, which is significantly fewer than classroom students where 70% complete their education. Distance learning is also limited in relation to teacher-controlled learning, the Danish requirement of 45 minutes of daily exercise, and the support to internship-seeking students who do not live within the school's geographical proximity.

Schools that offer distance learning education are very aware of ensuring the students receive proper guidance counselling prior to starting their education. Students are being made aware of the required IT skills, the rules of being continuously active on the learning platform, and that the education requires full-time commitment.

Interest in distance learning commercial education is rising. The table below shows that distance learning made up 0,6% in 2016 but has increased to 13,3% as of 2019.

	2016	2017	2018	2019
Online	20,6	104,8	262,3	447,7
Not online	3.164,9	3.200,3	2.919,1	2.912,9
<b>Total</b>	<b>3.185,5</b>	<b>3.305,1</b>	<b>3.181,3</b>	<b>3.368,6</b>
<b>Andel online</b>	<b>0,60%</b>	<b>3,2%</b>	<b>8,30%</b>	<b>13,3%</b>

# Danish Ministry of Education analysis: 7 suggestions for high quality in digital education

On the basis of an interdisciplinary analysis of good practice, this analysis points to seven initiatives crucial to creating quality education organized as distance learning or blended learning. That is, initiatives that are important for successful digital education and therefore central if distance learning and blended learning are to be implemented on a bigger scale. The analysis seeks to inspire institutions in their further work to develop and scale up digital education. Conclusions are relevant across various educational areas. The seven initiatives of importance to the quality of digital education are:

## **1. Clarification of the requirements for participating in digital education**

Distance learning is not a suitable learning format for everyone as the requirements are different from those within classroom learning. It is important to be aware of the fact that personal conditions and competences are highly decisive for learning outcomes. Technical skills, study competences, professional, personal and social conditions as well as technical equipment (including internet) are central factors.

## **2. Thorough introduction to the online learning platform**

It is of great importance to the students' motivation and learning process that they get off to a good start. A vital element of a good start is a thorough introduction to the online learning platform, and especially how to navigate within it. It has proved advantageous to develop video and other guides with clear step-by-step descriptions of how to use the school's systems.

### **3. Strong relations between teachers and students on the online learning platform**

A strong relation between teachers and students are crucial for the students to thrive and stay motivated to learn. This is also true of distance learning. A strong virtual relation is characterized by students feeling a teacher – a human – presence at the other end whose clear goal it is to teach them and support them during the learning period.

### **4. Support relations between students**

The needs students have for engaging in social relations with each other vary a lot. For some students the social community plays an important role in connection with their learning process. For these students, it is a disadvantage that social interactions within distance learning are minimized or non-existent because it is important to them to participate in activities and forums that support dialogue and collaboration. For others, the social role is much less outspoken, and they might even have chosen distance learning as a way of avoiding relations with fellow students. In support of students building social relations, schools may, for instance, facilitate presentations, chat rooms, group work and peer-to-peer feedback.

### **5. Support students professionally**

It is important for students' learning process and learning outcome that they receive the necessary professional support. E.g., getting help to advance to the next level in the learning process, getting an overview of the assignments within a distance learning course, or getting quick and clear feedback on assignments. Note that some students require help to stick to the plan and using it proactively even if there is a structured step-by-step overview. This could be in the form of assignment deadline reminders and prompt warnings if assignments are not handed in on time.

## **6. Make use of learning activities that involve students actively in the teaching**

It is vital to the quality of digital education that students are actively engaged during the teaching. They learn more when they actively work with and reflect upon the material, and simultaneously they are learning to reflect, discuss, argue, and collaborate in a general manner. Teaching organized as distance learning and blended learning creates the possibility of combining different digital learning activities, e.g., assignments and quizzes, games, discussions and reflections (synchronous or asynchronous) group work, presentations, peer-to-peer feedback and Q&A sessions.

## **7. Support teachers in the development of distance learning**

The transition from analogue to digital teaching is far-reaching and extensive. It changes the ways teaching can be facilitated and therefore affects both the role of the teacher and didactics. It requires development of new learning activities and courses, investment in learning platforms, conference platforms and digital resources, and that teachers learn to competently use a range of digital tools. Four focus areas are important for schools: (1) teachers must be familiar with existing possibilities within learning platforms and resources, (2) it is important to set aside dedicated time and resources to develop digital learning activities, (3) teachers are to be offered IT pedagogical training courses, and (4) the heads of education must likewise be knowledgeable of IT pedagogy.

The constant risk of falling behind digitally and a continuously present potential for development means there is a need for IT pedagogical management to have a clear knowledge of the teaching and an ability to have a dialogue with the teachers about when a significant revision of a course or an education is needed. Management must set aside resources for further development and be part of a hands-on prioritization of the balance between teaching time and development time.

## C. Partners' digital competences and needs

The Danish VET institutions have an advantage compared with other countries as ranked 1st of the 27 EU members in the European Commission's 2021 edition of the Digital Economy and Society Index (DESI). This advantage reflects on the survey results as the Danish respondents rank their VET institution high on digital competences.

Aalborg Business College has prioritized digital competences for almost 10 years now. Aalborg Business College has 4 locations in Aalborg. One of the locations (campus Langagervej) has specialized in distance learning with almost 10 years of growing online business and is currently one of the schools in Denmark with the highest number of students per year. The distance learning courses consist of both secondary education, professional training and single-subject courses.

Aalborg Business College educates students primarily for retail, trade and administration. Most of the students are young people directly from primary school, but also students in the range of 18 to 50 years enroll, many of them with the possibility of shortening the duration of the education based on merit.

Aalborg Business College uses Moodle as a learning platform, and we have knowledge of other platforms as well. Most of the systems have the same basic functionality. It is important, however, to have stability in terms of the platform, making the assessment and decision about supplier critical. The assessment is crucial and greatly influences the budget, for example student administration, security and access, general data protection, structure, administrator roles, monitoring of learning process, evaluation and tests, student feedback, warnings, etc.

Besides the learning platform, we see advantages in being independent of a specific product or supplier. The technology changes fast and we need to be able to use the most value-adding solution currently on the market. We have great knowledge of software solutions for video conferences and other supporting hardware and software solutions.

We have established a professional room for video production in which teachers provide live education sessions or produce learning material for the courses in the Moodle platform. We highly prioritize pedagogy and didactics. We have developed a model to secure these elements in our distance learning courses and we are also working with certification of our distance learning courses.

Therefore, Aalborg Business College was well prepared for the COVID-19 lock-down. After only two days of internal training of teachers in digital platforms and resources, all education activities were carried out as digital education.

During the COVID-19 lock-downs, Aalborg Business College facilitated internal training sessions within different digital solutions, learning methods and best practices. Competences of all the teachers were improved. After COVID-19 most of the teachers returned to classroom education, but many teachers have enhanced their form of learning with digital activities.



The number of digital students has grown during the COVID-19 pandemic. Some educations have experienced that the number of students has more than doubled. However, during the past 6 months, Aalborg Business College has registered a 20% decline in distance learning students. The decline is mainly due to the financial boom in the economy, leading education to be downgraded because of the need for manpower in the business community.

DigCompEdu has not been used at Aalborg Business College and the use of it in Denmark is very limited. The framework is highly useable for an overview of the digital competences of educators, that is, which competences the educators excel at as well as which competences need to be improved. The RESET project proves the DigCompEdu framework is a good tool to compare different countries and VET institutions regarding digital competences.

RESET has given Aalborg Business College insight in the use of DigCompEdu, and we will be using the framework to prioritize both investments in resources as well as digital training for employees in the coming years.

The results of the survey underline that the Danish VET institutions perceive themselves as leaders and pioneers within the area of digital competences, even though only 29% of respondents have participated in digital training for the last 12 months. The result might prove that digital education is a specialized function with dedicated teachers.

The respondents want to improve within the areas of “Ensuring accessibility to learning activities for learners with special needs” and “Ensuring learners know how to manage risks and to use digital technologies safely and responsibly”. This indicates that teachers and management have experienced some students having the need of basic digital training or additional support to complete their digital training successfully.

The evaluation of commercial digital education highlights some focus areas for VET institutions. One of the focus areas is the higher rate of dropouts within digital education. Aalborg Business College is constantly working on decreasing the number of students that drop out. We do this by way of upgrading information before startup, providing an introduction at the beginning of the education, following up on student activity, improving quality of the education, analyzing student evaluations, etc.

Aalborg Business College has developed a framework for certification of our digital training activities. The framework includes student pre-skills, training activities, learning objectives, working methods, organization, learning resources and evaluation. It is critical to focus on continued investment and competence improvement in an area of constant development.

## D. Summary

The desk research has uncovered both strengths and weaknesses as well as threats and opportunities in terms of digital competences and digital education.

The Danish analysis has discovered the following focus areas:

- **Learning activities for learners with special needs**

Learners with special needs are more likely to choose digital education. Psychological challenges or diagnoses make it difficult for many students to function in a traditional classroom each day. Diagnoses such as anxiety and ADHD are common, but also physically handicapped students benefit highly from being able to complete an education or a training course from home. The survey revealed that 17% of the Danish respondents want to improve on “Ensuring accessibility to learning activities for learners with special needs” compared to the average of 11% of all respondents.

- **Learners know how to manage risks and use digital technologies safely and responsibly**

25% of the workforce still lacks basic digital skills. Even though the EU average is 36%, the result is still a focus area in Denmark. 16% of Danish respondents recommend “Ensuring learners know how to manage risks and to use digital technologies safely and responsibly” in the survey – compared to the total average of 11%.

- **Knowledge and use of DigCompEdu**

Only 2% of Danish respondents know the framework of DigCompEdu. The result is very low compared with the average of 23% of all respondents. No one has knowledge of the framework being used by their VET institution - 85% have no knowledge of it and 15% are sure that DigCompEdu is not used. However, DigCompEdu is an applicable framework to prioritize both investments in resources as well as digital training for employees in the coming years.

- **High level of dropouts in digital learning**

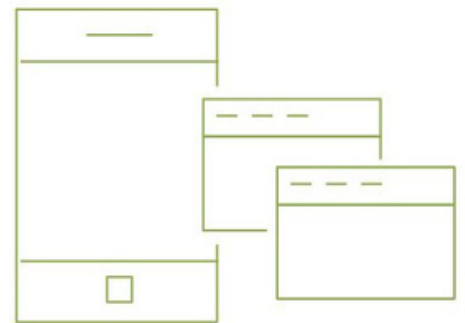
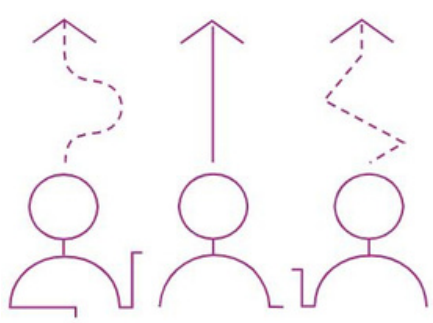
The dropout rate is higher among distance learning students than among classroom students. 40% of the enrolled distance learning students complete their education, which is significantly fewer than classroom students where 70% complete their education. Efforts are being carried out towards upgrading information before startup, providing an introduction at the beginning of the education, following up on student activity, improving quality of the education, analyzing student evaluations, etc.

For digital training of VET employees, it is a possibility that in-house digital experts teach their co-workers. E.g., Aalborg Business College has an IT-pedagogical consultant who organizes monthly workshops with different topics of relevance. Lots of colleagues participate every month. Examples are production of videos, pedagogical IT, interactive H5P elements and feedback to learners.

The Danish Ministry of Education is funding 10 knowledge centers. The centers are placed at VET institutions with special expert competences. The knowledge centers offer information, analysis and reports for all VET institutions in Denmark and develop learning materials for common use. Also, they carry out training sessions, workshops and conferences to increase knowledge and competences for employees at VET institutions.

The higher learning institutions - university colleges and universities - offer courses in digital learning as well. Typically, more theoretical studies than hands-on training, which our employees prefer.

Therefore, we look very much forward to the training sessions developed in this project. Training options that meet our focus areas and needs for digital competences.



## Partners



<https://project-reset.eu>

