

Baseline Report Key Questions

- 1. In your partner country what is the state of play regarding digital skills and competencies? What is the level of attainment and gaps identified by employers and/or young people? What is the national strategy to support development of these strategies?**

Germany is performing quite well when it comes to digital skills and competences, but there is still much space for improvement.

The Europe's Digital Progress Report released in 2017 comprises collected data on coverage of broadband services, Internet use, basic and advanced digital skills, citizen's use of content, online transactions, business digitalisation and e-commerce, and eGovernment. The report states that Germany ranks 11th out of all the 28 EU Member states in general, and 7th when it comes to digital skills¹. The digital hubs are appearing in different cities and regions. They aim to create a space for cooperation between start-ups, businesses, enterprises, administration and scientists.

At the same time, a significant number of schools in Germany do not have broadband access and the use of computers by young people is below the OECD average². The section in which Germany has the worst performance is digital public services. It is one of the EU countries with the lowest online interaction between authorities and citizens – only 19% of Germans actively use eGovernment services³. For competitiveness of small and medium-sized enterprises, digital competences are key factors and will become even more defining in the following years. In 2018, 28% of commercial enterprises are already digitalised and 39% of them are using Big Data⁴. According to the OAB Global's research based on LinkedIn data, the digital skills which companies in Germany need the most in 2019 are ability to work with artificial intelligence, scientific computing, cloud computing, interpreting data, and UX design⁵. Acquiring these advanced digital skills is possible only when having some basic range of digital skills. This only highlight how important are educational opportunities and open access to them.

Concerning the national strategy, the Federal Government developed the Digital Strategy 2014-2017 in summer 2014, which was a government's roadmap in implementing digital policies and comprised actions on the adoption of funding programs for the expansion of nation-wide, high performance networks as well as Plattform 4.0, which is Germany's central network for implementing digitalisation in manufacturing. The network provides guidelines for companies on how to implement digitalised manufacturing processes in a secure way, cooperates with

¹ Europe's Digital Progress Report (EDPR) 2017, Country Profile Germany

² Europe's Digital Progress Report (EDPR) 2017, Country Profile Germany

³ Europe's Digital Progress Report (EDPR) 2017, Country Profile Germany

⁴ <https://www.bmwi.de/Redaktion/EN/Dossier/digitisation.html>

⁵ <https://oeb.global/oeb-insights/the-skills-germany-needs-most-in-2019-and-how-to-learn-them/>

lawmakers and does a research on what new digital skills employees need to develop.

In 2016, the Federal Ministry for Economic Affairs and Energy published the Digital Strategy 2025 setting the priorities for next years. One of the sections is “Introducing digital education to all phases of life”. The goals in Digital Learning Strategy include introducing appropriate courses in primary and secondary schools so every school pupil will have a basic knowledge in information science, programming, on how algorithms work; making Germany one of the leaders in digital infrastructure in the education sector by 2015; all publicly financed educational institutions having essential teaching material available online and others⁶. To sum up, in order to move with the times in a world that becomes more and more digitalised, the German educational system should be adapted to it.

2. What are the key statistics regarding YW in the partner country (numbers, growth, employed/unemployed, school leaver statistics, undertaking part-time work, volunteering, etc)?

According to PwC Young Workers Index report published in 2017, the number of young people not in education, employment or training in Germany is 9.3%, which is one of the lowest among European countries⁷.

The German Federal Government report from 2016 states that the percentage of early school leavers in the age group from 18 to 24 is 10,3%, 18,3% percent of them have migration background⁸.

Concerning volunteering, in 2017 Federal Ministry for Family Affairs, Senior Citizens, Women and Youth published a report “Volunteering in Germany. Key Findings of the Fourth German Survey on Volunteering”. According to it, 43.6 percent of resident population of Germany aged 14 and older are engaged in voluntary work. This number significantly increased over the last fifteen years. Also, people with higher level of educational attainment are much more likely to be involved than those with a lower level of education⁹.

3. What types of non-formal digital education exists in the partner country and what qualifications are offered?

Initiatives:

Go MINT – a national German project to increase female participation within MINT (Mathematics, Informatics, Natural Sciences and Technology). The initiative was launched in 2008 and has over 220 partners. According to information from the Federal Office of Statistics and the calculations of the "Go MINT" office of the National Pact for Women in MINT Careers, over 40,000 female beginning students

⁶ Digital Strategy 2025 (<https://www.de.digital/DIGITAL/Redaktion/EN/Publikation/digital-strategy-2025.pdf?blob=publicationFile&v=9>)

⁷ PwC Young Workers Index 2017 (<https://www.pwc.co.uk/economic-services/YWI/pwc-young-workers-index-2017-v2.pdf>)

⁸ <https://www.gut-leben-in-deutschland.de/static/LB/indicators/education/early-school-leavers/>

⁹ <https://www.bmfsfj.de/blob/115604/2606f2c77c632efddd61b274644c2f06/vierter-deutscher-freiwilligensurvey---englisch-data.pdf>

opted for a degree in engineering in the academic year 2014, which is much more than before¹⁰.

SINUS transfer Thuringia ¹¹

In July 2007, the BLK program "Increasing the Efficiency of Mathematics and Science Education" (SINUS Transfer) expired after nine years. The program was initiated by the results of the TIMSS study, which did not produce satisfactory results for Germany. The study showed clear weaknesses in mathematical and scientific understanding for German students. After five years of sinewave, new school grids were introduced to the SINUS work in two waves (over two years each). At the beginning of the school year 2003/04 the first wave started in Thuringia with 60 schools. The following second wave is already 117 schools. The further goal is to spread the SINUS approach across the board.

4. What types of formal digital education exists in the partner country and what qualifications are offered?

The Federal Government is responsible for arrangements in the following areas, whereas legislation and financial competence vary in part:

- Non-school vocational training and CET
- Training grants
- Protection of participants in distance learning
- Measures to promote employment
- Labour market and occupational research.¹²

This means that education policy has largely been transferred to the Länder. The Federal Government is still responsible for regulating higher education admission and qualifications, although the Länder may choose to deviate from federal legislation, and for the company part of vocational training in the dual system as a part of economic law. In cases of cross-regional significance, the Federal Government and the Länder can work together on the basis of agreements on research promotion, as well as on activities to determine the effectiveness of the education system in international comparison.

In comparison to international initiatives, current initiatives in Germany are having a different focus than their international counterparts. The goal of most German universities is the use of substantive synergies within the university network. The current platforms and initiatives are usually focused on a range of subjects and therefore often have a limited scope - also due to language. Against this background, much emphasis is placed on thematic planning, reliable and legally feasible offers.

¹³ Overall, development of online education in Germany seems hampered by legal, political (federalism) and cultural barriers as well as lack of (financial) incentives

¹⁰ Komm nach MINT - <https://www.komm-mach-mint.de/Komm-mach-MINT/English-Information>

¹¹ <https://www.schulportal-thueringen.de/info/projects/16>

¹² <https://www.oecd.org/germany/41679496.pdf>

¹³ <https://hochschulforumdigitalisierung.de/de/scalability-online-education-germany-national-platform>

at the level of higher education institutions and lecturers. Marketing aspects, reach and "massive character" are of secondary importance.

One could question if educational innovation is lacking in Germany as well. At European universities three areas of provision emerge: (I) degree education as the backbone of a university; (II) continuous education and continuous professional development, which probably will exceed the number of degree students; and (III) recently forms of open education like OER and MOOCs. Furthermore, in all three domains, new pedagogies have evolved, strongly enabled by the innovation/ICT push and facilitated by different support structures at various levels.

Universities start to develop visions and strategies to position themselves at the national and international level in each of these areas. The German study recognises that digital modes of teaching and learning can solve problems higher education is facing today and will offer new opportunities for teaching and learning in each of the mentioned areas.

The MOOC platforms already offer possibilities to get (ECTS) credits even at the level of short programs and to get those credits recognised as part of post-graduate masters. In this international and German context an additional focus on Virtual mobility schemes both for traditional students and those in continuous education would be expectable.

In this context, the pre-requisite for admission to a university/ college or university of applied science is evidence of higher education entrance qualifications. Annually, around 40 % of the German and foreign population resident in Germany obtain an entry qualification at a general or vocational school.

In principle there are four types of higher education entry qualification:

- General certificate of aptitude for higher education, which facilitate admission to a university of applied science (FHS) or university/college in any subject
- Subject-specific certificate of aptitude for higher education,
- General certificate of aptitude for higher education, which facilitate admission to a university of applied science (FHS) in any subject
- Subject-specific certificate of aptitude for higher education.

5. What types of formal learner (FL) digital education providers exist within the partner country? Who are these including size, location, ownership, educational offering, activities organised, etc.

At the federal level in Thuringia there are nine state universities and universities of applied sciences or technology with many different programmes. Universities of cooperative education and private colleges add to the university landscape in Thuringia. They all offer great digital education programmes and laboratories as well as well-equipped libraries which leads to short programme durations. Many university locations in Thuringia also offer cheaper cost of living and studying.¹⁴

¹⁴ <https://www.thueringen-hilft.de/en/information/migrants/language-education-work/university/>

The minimum requirements to take up a study programme are a recognized university entrance qualification as well as sufficient command of the language of the programme. Every year more than 50,000 young adults study at universities in Thuringia.

According to the Central Office for Distance Learning (ZFU), a total of 1,946 distance learning courses leading to a final examination were being conducted in the 2015 reporting year (2014: 2,188 programmes). Just under two thirds (65.0%) culminated in the award of a certificate by the provider. Just over a fifth (22.1%) facilitated access to an examination under public law, and 11.5% led to a school or trade and technical school examination. A further 1.4% concluded with the award of an internal certificate by the association.¹⁵

Both in 2014 and 2015, the most popular courses offered were programmes in the thematic area of “business and commercial practice”, which accounted for 27.1% (2014: n = 1,574 distance learning programmes) and 22.2% respectively (2015: n = 1,119 distance learning programmes). However, whereas in 2014 courses in the area of “health, gymnastics, body care and housekeeping” were second with 12.9% and “IT courses” came in third with 11.7%, these two positions were occupied in 2015 by provision in the field of “technology and logistics” (14.3%) and programmes in “healthcare, nursing and nutrition (9.0%).

According to data from the Federal Statistical Office (DESTATIS), the number of distance students rose in the WS 2015/2016 reach 156,946 (WS 2014/2015: 154,325). 73,009 (46.5%) of these were women, and 12,291 (7.8%) were new registrations. In the case of the new registrations, the proportion of women was as high as 51.4%. The distance students were registered at a total of 72 institutes of higher education.¹⁶

6. What types of non-formal learner (NFL) digital education providers exist within the partner country? Who are these including size, location, ownership, educational offering and activities organised, etc.

Non-formal learning providers in Germany are not so widely popular due to difficulty of recognition of qualifications of the education providers, as well as diversity of free higher education providers. Due to this fierce competition, non-formal learning providers have used more non-conventional methods of learning. After a general focus on eLearning in the first decade after 2000, there are new opportunities since 2010 with regard to Blogs, Wikis and mobile Learning or mLearning and the use of mobile devices for learning purposes. The German ministries as well as the economy and the educational system in enterprises and schools are currently focusing on the challenges in the field of industry 4.0 and the

¹⁵ https://www.bibb.de/dokumente/pdf/2018_12_11_vet_data_report_germany_2016_2017_bf.pdf

¹⁶ <https://www.oecd.org/germany/41679496.pdf>

accompanying aspects of digitalisation. This will be a revolution in German education in the next years and comes with both, chances and risks, the teachers and trainers as well as the learners have to deal with.

One example of qualification system in German education system is:

The ProfilPASS system - While at the turn of the century it was possible to ascertain an increasing degree of formal recognition of informally acquired competences in educational policy and practice in European countries, it was stated that in Germany there was a need to gain ground in practical terms in the area of recognition of informally acquired competences. This is the background against which the BLK collaborative project “Lifelong learning passport with certification of informal learning” was set up in 2002.

The ProfilPASS system is used to ascertain and document your own abilities and competences in a systematic way. The concomitant preparation of an individual competences record raises individual self-awareness and enables users to enter into a dialogue with themselves and others. Insofar as it is motivating to take steps to get to grips with the competences used and to foster awareness of personal strengths, it is also an incentive and stimulus for lifelong learning, for example with a view to preparing for (re-)entry into working life, a professional or personal (change of) direction or planning future learning projects.

Another example of qualification:

ANKOM – Credit of vocational competences towards higher education study programmes. The basis for the Federal Ministry of Education and Research’s “Credit of vocational competences towards higher education study programmes” initiative (ANKOM) is the acknowledgement that a dynamic and globally-oriented economy is continually developing new requirements for executives while at the same time, German universities are producing too few qualified graduates. The Federal Government is acknowledging this situation with the ANKOM project, in which by regional projects the development of framework conditions and concrete procedures for crediting learning performance on study programmes is supported. Furthermore, there are efforts towards development of a reference framework for crediting vocational competences towards higher education admissions and the development of recommended action plans for institutions of higher education, for education and educational policies.

7. What is the National Youth Work Strategy (or similar policy provision) in your partner country and the key priorities regarding work? How does this policy support develop digital competencies?

In 2016, the Federal Ministry for Economic Affairs and Energy published the Digital Strategy 2025 setting the priorities for next years. One of the sections is “Introducing digital education to all phases of life”. The goals in Digital Learning Strategy include introducing appropriate courses in primary and secondary schools

so every school pupil will have a basic knowledge in information science, programming, on how algorithms work; making Germany one of the leaders in digital infrastructure in the education sector by 2015; all publicly financed educational institutions having essential teaching material available online and others¹⁷. To sum up, in order to move with the times in a world that becomes more and more digitalised, the German educational system should be adapted to it.

The Strategy of the Conference of Ministers of Education names the goal that "if possible, by 2021, every pupil should be able to use a digital learning environment and access to the Internet from a pedagogical point of view." This is the orientation of the digital strategy TMBJS by this time we want to:

- The educational infrastructure have developed the approximately 850 state schools in Thuringia in such a way that digital through Media and Technology Assisted Learning is possible for every student in every school,
- The necessary curricula for the acquisition of skills in the digital world and for learning in digital competences
- Teachers have been trained to use forms of teaching and learning that include the use of digital media for all students
- Thuringian school portal have developed the into a nationwide digital education platform including a learning management system accessible to all schools.

Under the terms of the Digital Pact School 2019 to 2024, based on Article 104c of the Basic Law and the Administrative Arrangement BLV concluded with the Länder on May 16, 2019, the federal government grants state-wide investments in the area of digital municipal educational infrastructure in Thuringia from 2019 to 2024 Grants of € 132.368.000. The Free State of Thuringia will, subject to the funding provided by the Thuringian Landtag, provide a further € 14,707,556 in the period from 2019 to 2024 as co-financing. Overall, this means funds of up to € 147,075,556 are available. Of these, five percent each have to be used for transnational investment measures as well as nationwide / regional projects of the state / school authorities. Ninety percent of these funds will go directly to schools to improve IT education infrastructure, including IT equipment.

The federal government and the Free State of Thuringia are thus supporting the public and private schools in Thuringia in their investments in networking schools and equipping them with IT systems. This is in line with the interest of the general government in creating future-ready digital education infrastructures. The Federal Government and the Free State of Thuringia want to create the necessary conditions for the educational system to enable participation and maturity for all adolescents and equal opportunities for every single child in times of digital change.

¹⁷ Digital Strategy 2025 (https://www.de.digital/DIGITAL/Redaktion/EN/Publikation/digital-strategy-2025.pdf?_blob=publicationFile&v=9)

The funding program will be implemented in Thuringia on the basis of the administrative regulation of the Thuringian Ministry of Education, Youth and Sport on the implementation of the Digital Pact School 2019 to 2024 (Digital Pact Directive) of 12 July 2019.

8. What is the type and size of marginalised communities in your partner country? What support is being developed/provided by government, social economy and voluntary sector to support these communities in their learning?

It is clear that social inequality is one of the biggest drivers of poor health within a population in Germany. Where inequality is large, the corresponding range in life expectancy is also high. It is not poverty itself, but social marginalisation and exclusion that results in more segregation in society.

Different groups of the population are affected by exclusion processes in different ways. The first is the unemployed, where the unemployment solidifies, which is reflected in rising numbers of permanent unemployed; secondly, growing relapsing risks arise from the change in family and household structures, because in the face of ever shrinking families and the increase in individualised lifestyles, the opportunities to catch up through the informal networks of family and kinship are diminishing; therefore, single mothers are among the groups threatened by enduring poverty; thirdly, immigrants and ethnic minorities may be exposed to processes of exclusion because of their lack of political rights and social or cultural marginalisation (see Bremer / Gestring, 1997).

In addition to the social risks, recent developments in German cities have led to the emergence of socio-spatial constellations that may themselves be the cause of deprivation and exclusion: greater spatial segregation linked to a concentration of marginalised populations in specific neighbourhoods. Exclusion processes through greater social segregation in the big cities result from the interaction of three trends that result from the economic and social change of the big cities:

- the employment opportunities for unskilled workers are low in the cities, because industrial jobs in large numbers were dismantled; the growing service sector does not absorb enough or not those who have become unemployed as a result of deindustrialisation;
- the financial difficulties of the cities, resulting from the growing need for social transfers with declining tax revenues, reduce or at least do not increase social benefits to the extent needed in the face of growing emergency;
- the state's withdrawal from housing provision and increasing housing choices for households with stable incomes will lead to the dissolution of socially mixed

neighbourhoods and a greater segregation of the resident population by income, lifestyle and nationality in different neighbourhoods.

Currently, a discussion about the integration and inclusion of learners with specific backgrounds is going on in Germany. The focus is on two groups (a) learners with disabilities and (b) migrants. Already in 2009, Germany has committed itself to the inclusion of learners with disabilities. This has its basis in the United Nations Disability Equality Convention, signed by Germany in 2007. Since that time the instruction of handicapped and non-disabled pupils are the aims of German education. The traditional German special education system does not fit into these new ideas. Moreover, common lessons of disabled and non-disabled learners pose new challenges for the general educational system and the teachers. Usually, the general teachers are not trained for this. There is an ongoing discussion about this in Germany because the idea and implementation of 'integration' in Germany had already been tested at the end of the eighties and was not as successful as everybody hoped.

A lot of effort has been made so far regarding the education of migrant children. After the experiences with the migration from Syria and other non-European countries the newest element integrated in German education was introduced in 2015 and a decree about teaching for newly arrivals / immigrant learners was established in North Rhine-Westphalia in 2016. For a long period of time, immigration of children and adolescents has been declining. In the years 1997 and 1998 the migration balance was even negative. But since 2008 refugees from different war zones all over the world are coming in much higher numbers than before. Therefore, preparatory classes for children without knowledge of German within the process of integration of migrants into the National and the European system should be enhanced. Such classes can be taught by interested former teachers, volunteers or trained current teachers.

9. What accreditation is given for Formal (FL) and Non-Formal (NFL) in digital Learning in your partner country? Are these widely recognised by employers? Are there any digital competencies frameworks for young people to use to accredit their skills, learning and/or experiences?

In the field of education Thuringia is considered as one of the most prominent federal states of Germany. The attendance rate of 19.2 pupils per teacher is significantly better than the national average of 23.5 pupils per teacher (Destatis, 2016b). Thuringian teachers are increasingly using digital media to design lessons. Thuringia is ranked fourth in the nationwide use of digital media in the classroom (Deutsche Telekom Stiftung, 2015). The use of digital media can support the learning process.

From a young age, children can playfully gain their first experiences with the digital world and train numerical, linguistic and motor skills. Early contact with information and communication technologies as well as with the natural sciences sensitizes and qualifies children and adolescents early on for a possible choice of occupation and study in these areas. The communication between parents, educators or teachers can also be simplified by digital administrative formats. On the basis of the Thuringian media education concept, the various offers of media education should be better integrated and aligned with the digital transformation of society.

Digital learning and teaching formats also offer great potential for building competence in vocational education and training. They enable trainees and employees to learn independently of location and time. Flexible educational offers can be modularly integrated into the daily work routine and minimise occupancy phases as needed.

Different educational formats convey basic digital skills in the dual system and in further education and enable specialists and executives to continue their education, which is necessary in view of the forthcoming changes in the world of work. In addition, they sensitise the learners to deal consciously and independently, but also critically and creatively with digital media. In order to maintain and enhance competitiveness in the long term, employers are increasingly in demand to provide their employees with development opportunities and scope for training.

Digitalization poses a double challenge for universities: Digital media and issues are increasingly becoming subjects of scientific study or content of the curriculum. At the same time, digitisation is fundamentally changing the way universities disseminate knowledge and generate new insights in research.

The state of Thuringia and its universities have therefore developed a joint strategy for digitisation at the Thuringian universities. This shows the key areas of action in order to successfully and sustainably implement the mega trend in higher education and in research processes.

The strategy builds on a variety of initiatives and research priorities that already exist at the universities in the Free State Thuringia.

The aim is to integrate a large number of individual projects and the experience gained from them into an overall concept that can be used to exploit the potential of digital technologies for the further development of Thuringian universities. The individual universities benefit from such a common strategy because they can use synergies and compensate for structural deficits in cooperation. Thuringia benefits as a modern and progressive educational and research location, which develops national and international traction.

10. Are there any examples of best practices/learning cities/learning maps within your partner country?

One of the examples of learning mapping in Germany is <https://sachsen-anhalt.regionoflearning.eu/> in the eastern part of Germany, Sachsen and Sachsen-Anhalt. A City or Region of Learning is an approach of connecting learning opportunities across territories and making them more visible and accessible to all learners.¹⁸

Cities and Regions of Learning use the latest digital technology to map learning opportunities, offer local and digital experiences combined into playlists, and use digital Open Badges to value and recognise learning and achievements. Cities and Regions of Learning build on the interests of learners and connect them with opportunities in a territory. It promotes open and inclusive learning for all. The digital platform for Cities and Regions of Learning has the following functionality:

Interactive map for learners and organisations to easily navigate through the learning pathways in a territory searching and filtering learning opportunities
Learning playlists created by local partners by combining local and digital experiences organised into thematic learning pathways
Digital open badges for learners and organisations to record, certificate and showcase experiences, skills and achievements on their digital portfolio. The digital platform has integrated the European Skills, Competences, Qualifications and Occupations (ESCO) database of the European multilingual classification of Skills, Competences, Qualifications and Occupations.

Other platforms:

<https://www.schulportal-thueringen.de/schulportal/start>

www.preply.com

<https://iversity.org/>

<https://education.salesmanago.com/>

Lecturio.

They have two platforms:

.com — specialized for (US?) medical education: Online Medical Courses | Lecturio Medical Education

.de — a broader portal covering multiple subjects: E-Learning mit Lecturio - Jetzt flexibel online lernen!

They are based in Leipzig, Germany.

¹⁸ <https://www.citiesoflearning.eu/faq/>